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JOURNAL

OF THE

Royal Institution of Cornwall.

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VOLUME VI.

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1878—1881.

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1881.

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# JOURNAL

OF THE  
ROYAL INSTITUTION OF CORNWALL.

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No. XXI.

MAY.

1879.

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## SPRING MEETING AT TRURO,

*May 27th, 1879.*

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### THE PRESIDENT'S ADDRESS.

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"Where the great Vision of the guarded Mount  
Looks toward Namancos and Bayonna's hold  
Look homeward, Angel, now, and melt for ruth."

WORDS like these, when once they have fallen from the lips of the poet, become forthwith the common property of each succeeding generation, and may be transferred, irrespective of their original application, to any event which calls for expression in metaphor at once so vivid and sublime. We are all of us familiar with the passage and with the circumstance to which it relates. On the 10th of August, 1637,—the weather at the time being calm and fair,—a vessel bound for Ireland struck on a sunken rock on the Cornish coast and went down with all hands. Amongst the number of the drowned was Edward King, a youth whose early genius gave promise of a great career,—a fellow of Christ's College, Cambridge, and the bosom-friend of Milton. On hearing the news of his death the poet gave expression to his grief and at the same time immortalised the memory of his friend (whom he speaks of as Lycidas) in an ode in many respects unmatched in the English tongue. In that portion of this poem from which the above lines are taken, the author is describing the coast of Cornwall, somewhere beneath the cliffs of which the body of



his friend is lying. Coming round to St. Michael's Mount his bold rich fancy rises at once to the battled summit of that wave-washed crag, and discerns there the majestic vision of the tutelary Angel himself, just as legends of old time had shaped him,—seated as in trance, his gaze fixed seaward over the southern waters where no land was nearer than the northern shores of Spain. This vacant mood,—this cold Sphinx-like indifference on the part of the celestial being is out of keeping, however, with the warm pulse of sorrow throbbing in the poet's breast. With exquisite pathos, and with that fearlessness in addressing himself to the supernatural so characteristic of all his poetry, he suddenly dismisses the narrative form in which his verse had hitherto proceeded, and boldly taking his stand, as it were, before St. Michael, bids him wake from his enchanted dream to the practical issues of life and death, to the scene of misery and woe which lies at his very feet; bids him turn his face landward, "look homeward" and shed tears of pity.

That vision may no more be granted to our unromantic sight; still we cannot shut our eyes to the singular force and beauty contained in the conception. Let us separate, then, for once those lines from their context, and let us apply them—with what appears to me to be an even more complete appropriateness, and an even greater force of meaning, to that which has of late been uppermost in every sympathetic Cornish heart,—to those times of bitter distress through which our county has been passing since last we were assembled here in the Spring of 1878. Well might those of us especially who dwell westward of that 'guarded mount,'—on the very spot where the poet takes his stand, and who see beyond its gaunt outline the hills of Germoe and of Breage beyond, strewn with mines deserted and with hamlets that might well be so too,—have again and again recalled, during the year which has just gone by, with feelings never felt before, that last most touching line:—"Look homeward, angel, now, and melt with ruth." Aye, scan from your vantage ground the landscape far and near: in the features of it there is little variety;—the hollow crumbling tower, the roofless account-house, the piles of 'attal' smothering the soil, the ring fence inclosing the abandoned shaft,—these same objects repeat themselves whichever way you turn. In every case it is the self-same tale they tell—the tale of an industry which for the present at least, if not for ever, has

departed from amongst us, carrying with it the loss of surplus wealth to one class (which is a small matter), but well nigh of life itself to another (which is a great one.)

So accustomed have the majority of Cornish people become to the sight of these ruinous heaps, that as they pass to and fro in the train they take little heed of them. They almost come to regard them as "the common objects of the country;" as the natural phenomena proper to the surface. On strangers, however, they often leave a lasting impression,—an impression, as I have more than once been assured, of indescribable melancholy. They see them in a broader and a truer light even than those do who can point in detail to the causes of each individual failure. They take in the whole range of view at once, and they recognise in it the sad memorials of energy and enterprise, intellectual and physical alike, expended without intermission during a period of twenty centuries at least, by the inhabitants of this country, on the development of a branch of commerce which, while it made some rich, was sufficient to feed and clothe them all. This state of things they see has passed away, "and what," they naturally inquire, "has become of the people themselves?" Where is that proud race of stalwart tanners of whom we have read that in ancient days they formed a separate caste above the common tillers of the soil, and who lived under direct royal protection—(though that was another name for royal spoliation)—with manners, and customs, and laws all peculiarly their own?" The answer is that the very name of a tinner has long passed away, and as to the Cornish miner, if his circumstances have not permitted him to cross the seas to the Rocky Mountains or to Australasia, he is at the present moment clinging to a forlorn hope at home, hanging like a ghost around the piles of refuse he himself has helped to raise, poor probably, and sometimes very poor, waiting, still waiting for those better times which do not now come back again so quickly as they used to do, after former periods of depression such as he can call to mind.

We may ourselves have travelled in countries only recently devastated by the scourge of war; we may ourselves have witnessed the terrible effects which volcanic eruptions have produced not many years ago; we may have found ourselves in a city the largest and finest portion of which has been laid in ruins by a

conflagration ; but of all these experiences none is in my thinking so calculated to depress the passer by as the sight of a country suffering under the desolating influences of a decaying industry, more especially when (as is the case in Cornwall) the cause of that decay arises not from within but from without ; not from any lack in the material produced ; not from feebleness or senility in the method of working or on the part of the operators, but from certain external conditions over which it would seem there can be no control. On battle fields the corn will sprout again with more than wonted strength next spring ; on lava beds the vines will trail the more luxuriantly ; from the ashes of her former self a city will arise more splendid and symmetrical than ever. In each of these cases there has been no time for speculation as to whether the event would come about or not. Suddenly and with crushing effect the doom has fallen, it is true ; but the conditions of existence around have meanwhile remained unaltered, and the blighting storm once passed, there has been no reason why life should not be lived again.

But on the other hand, with the decline of an industry such as mining, the reverse of all this holds good. In the first place, the plague spot shows no certain sign by which the commencement of the fatal mischief may be fairly known to have set in ; in the second the progress of the malady is slow, and insidious, treacherous, and deceptive ; in the third and last, actual dissolution having supervened, all power of regeneration is seen to have passed away. So subject, indeed, to vicissitudes has the Tin Trade always been, that there cannot but be uncertainty as to the precise moment when a persistent downward tendency has actually begun. Interested parties will naturally be the last to admit the fact ; adventurers, because they have had previous experience of the freaks of the metal market ; miners, because they have ocular proof that in quantity and quality the ore has suffered no great diminution. As the process of decline goes on, its progress is of course most variable, since Commerce, in common with the other factors of high civilization, passes over us in waves,—prosperity riding on the crest ; adversity swimming in the trough. At last, to continue this latter simile but one step further, a long ground swell sets in : the surface seems calm enough for the while, but there is disturbance in the depths, and trouble in store. People

now begin to seek for causes; and these being recondite, if not absolutely incomprehensible, a fallacious method of personification is made use of by such as pretend to know, for the purpose of bringing down such great and intricate subjects to the level of the understanding of those who do not. The market is spoken of not only as a living organism, but as a person lying on a bed of sickness. So "sensitive" is this patient at one time that those who approach should do so on tip-toe; so "tender" at another as to require the utmost care in endeavouring to lift him; so "inflated" at a third that food must be kept from him for a while at least. Meanwhile, be it remarked, that at this stage it is avowed on every side that all hope must be abandoned of the invalid ever *quite* regaining all his former vigour. The next phase is stagnation, which is the worst of all, followed by the stoppage of all the functions, after which nothing remains but the winding-up, which means the paying of the doctor's bill. Then the engine-house is disembowelled, and its contents sold for old iron; the company has ceased to exist, and one person alone remains to be thought of, who unfortunately has not ceased to exist, and that is the poor miner, who hoping against hope and nobly and faithfully clinging to the sinking ship, is now cut adrift from the rigging and left to shift for himself. Whether at home or abroad his means of livelihood are henceforth precarious, and where this is the case, not with an individual but with the whole population of a district, more or less of destitution and misery must be the inevitable consequence.

So, with sorrow be it mine to say, has it been with Cornwall during the year that has just passed by. Have I, perhaps some may say, been taking too gloomy a view? Have I been justified in hinting that the good times will not come back? Will these dilapidated engine-houses (which a German lady who had been travelling here once told me she had mistaken for the fine old ruined castles of the Cornish barons), ever throw out their iron arms again? Will the rattle of the stamps and the song of the bal-maidens sound in our valleys once more, or are they silent for ever? It is hard to say. The future, as Plato says, is dark; on few subjects is it darker for us than on this. One thing is certain and that is that never before has the cloud hung so long over our land; never before have the baneful effects of the darkness been felt as they have been felt now: never before in the

annals of Cornwall has there been so much necessity for assuaging the present distress and for guarding against its recurrence in the future. Of a temporary recovery now and then,—of a ray of light to break the gloom here and there, I should think there was every probability. The precedents of history and the conditions of the trade alike point in this direction. It is to be hoped, however, that Cornwall will now have learnt her lesson of caution once for all, and that these will-o-the-wisps when they come next time will fail to allure her on. Fixed and steady and at the same time remunerative prices are as chimerical as ever, and without them no reliance is to be placed on the permanence of Cornish mining.

It is true that in past ages the history of Tin Mining has been a continuous series of fluctuations and vicissitudes; but there is this all important difference between what happened then and what is happening now. The causes to which we can trace the troubles of those early times are not only clear and apparent, but they are in their nature shifting and of short duration. At one time it was the king, using his royal prerogative of pre-emption to fill his exchequer at the cost of the poor Tinnners; at another it was the lessees of the tin-farm whose rent was so high that they in turn had to grind down the producers: in both these cases the aggravation, as soon as it became unbearable, set bounds to itself: sometimes again it was a war with France, as in the middle of the last century, when we read of the Tinnners being in great distress, and of the then Sir John St. Aubyn coming generously to their relief by a large loan of money to keep them from starving and plundering their neighbours: in this case the high price of corn had much to do with the suffering, and this naturally righted itself when peace was concluded. Now-a-days on the contrary the sinister influences at work are by no means always either so clear or so apparent, and when we *can* catch a glimpse of them,—as in case of the large importation now possible from newly-discovered tin grounds in our own colonies,—they seem likely to become even more stable and lasting as time goes on than they are at present.

I have touched upon this subject here to-day at the risk of re-awakening memories of sadness, because it forms part and parcel of the history of our county, to which at the Spring Meeting it

has generally been the custom for your President to refer. To groan over the past, however, is of little avail ; let us look then for a moment to the future. Taking it for granted that no certain means of subsistence are any longer to be obtained in Cornwall for a large resident mining population, two prominent considerations suggest themselves with regard to what is to become of the miner himself.

1. If he chooses still to follow his calling solely,—that calling in which, among men of other nations, he has won for himself acknowledged pre-eminence,—he must become a *cosmopolitan*. Where the ore is there must he be. From country to country he must follow the price. There will surely in these days always be work for a first-rate miner somewhere : but meanwhile his wife and family must not be left behind. Rough though the life may be, they must be content to share the hardships of the miner's camp.

2. If, on the other hand, he elects to remain at home, and either to change his calling, or follow it when the price permits, great difficulties at once present themselves : other industries must be devised not only for himself but for his wife as well. Even could he turn his mind to agriculture, the farmers have hands enough already and to spare. Owing to the patriotism of some of our principal landlords, hundreds of men have been employed during the past twelve months in breaking crofts, in building fences, and in bringing waste land into cultivation. Such work, however, is temporary in itself, and in its results cannot be expected to add so materially to the acreage under cultivation as to create a largely increased demand for labour. We must look then in some other direction for the permanent industry which is to be of service to the Cornish miner. He who shall devise it and set it afloat will be the greatest benefactor Cornwall has ever known. At present it is far to seek. In saying this, however, I must not pass by the fact that an attempt has been made by some gentlemen in the Helston district to quarry and break for export some of our harder killas stone for roads, and that in this manner employment has been found for some few men at least ; nor can this society forget the efforts of the late Mr. C. M. E. Collins to inaugurate a manufactory of porcelain in connection with our china-clay. In more than one

part of our county too, ladies have been busily engaged in training the wives and daughters of miners to gain something by industries such as knitting and the like, and I cannot see for my part why at some future day Gwennap should not be as famous for socks as Honiton for lace or Kidderminster for carpets. At all events these are practical methods of meeting the difficulty, so that our best thanks should be given to all who interest themselves in such work, and our best wishes attend them that success may crown their endeavours even beyond their fondest expectation.

One fact must be borne in mind by all who take into consideration the question of new industries for Cornwall, since it may prove one day a factor of the first importance; and that is the extraordinary water-power which, in proportion to its size, the country west of the Tamar possesses. If we could but find work for them to do, who knows what our mill-streams in the future might not effect?

One of the most striking features in the history of the recent destitution has been the excellent, I may fairly say the noble manner in which the men have conducted themselves all through their troubles. Allusion was made to this at a recent county meeting by Sir John St. Aubyn, and it will not be without interest to compare the eulogium justly passed upon them by him on that occasion with the passage in a letter written in 1752 by a former Sir John, in which it was stated, as quoted above, that one of his reasons for advancing money was to prevent the tinnerns from "plundering their neighbours." The following extract from a contemporary Journal will shew the consequences of distress amongst the miners in December, 1756, and will afford additional reason for congratulating ourselves on the improvement which has taken place in the aspect of Cornish society to day:—

"From Padstow in Cornwall we hear, that on Friday the 3rd instant the inhabitants were all alarmed with an account that several hundred Tinnerns were assembled at a Place call'd St. Agnes, in order to proceed to Padstow to plunder the Town of what Corn was in it, and afterwards to set it on Fire. The next Day ten of them actually came into the Place, but committed no Riot, but the Day after sent away two of their Number, as it was supposed, to give Notice to the rest that the Inhabitants

were not capable to resist them, as likewise that there was some Barley in the Town, which had been bought up for malting: accordingly on Monday the 6th instant, in the Afternoon, about five or six hundred of them, with several Women, and upwards of 100 Horses, came into the Town, and immediately began plundering, breaking open Warehouses, &c., and carrying away all the Grain they could meet with; and tho' the Proclamation was read to them by the Civil Magistrate, it was all in vain, for they loaded all their Horses, and what they could not carry off with them they either sold or gave away: After they had broken open the Warehouses, they proceeded to the Key, where there happened to be a Sloop bound to Guiney, which they imagined had Corn on board, and several of them endeavoured to board her, but on firing some Swivel Guns, tho' only with Powder, they thought proper to desist; however, for their Satisfaction, the Captain suffered two to come on board to see there was no Corn in the Vessel. They staid all night in the Town huzzaing and carousing, and the Town was not quite clear of them until Ten next Morning. The Inhabitants some Time before had petitioned the Secretary at War for a Party of Soldiers, which was immediately ordered, but they could not march Time enough to prevent the Town's being plundered: The Party came in two or three Days after the Riot, and, it is to be hoped, will stay there during the Time their Regiment is in the County."

Ten years later, in August, 1766, a similar state of things was going on, and the tinnerns were clearly overawing the agriculturists in the market towns. The following is a newspaper cutting of that date:—"Last Wednesday a party of tinnerns assembled at Truro, where the farmers insisted upon twenty-one and twenty-two shillings per Cornish bushel for wheat, and twelve shillings per bushel for barley, which is three Winchester bushels. By the prudence of the magistrates, they were prevailed upon to be quiet; and corn was sold to them at the following prices, viz.: wheat at fourteen shillings per bushel, and barley at seven shillings. On Friday they came into Redruth, where the farmers demanded the same prices as at Truro for their corn; sevenpence half-penny per pound for butter; and four-pence per gallon, Winchester measure, for their potatoes; but the tinnerns obliged them to sell the wheat and barley at the same price as at Truro,



that is to say, butter at six-pence per pound, and potatoes at two-pence half-penny per gallon." With occasional intermissions marking more prosperous times, riots continued to be of common occurrence until comparatively recent dates. There are many members of this society who remember the troublous times of 1847, and how at St. Austell the presence of mind and gallantry of one of the most deservedly popular men that Cornwall has ever known, I mean Mr. Kendall, prevented the spread of an outbreak which must otherwise have been attended with most serious results. They will remember how on one occasion he stood for three hours between a corn dealer and a mob of 300 miners, and dared them to come on except over his body; how on another he intrepidly seized the ringleaders of the revolt; and how often the love that those poor fellows bore him was the only thing that saved the life he never scrupled to risk in the discharge of his duty. It is one of the saddest things of this sad year that Mr. Kendall should have been taken from us just when Cornwall's "need was the sorest" of so good an adviser and so true a son.

It is pleasing, then, to contrast those riotous times with the calm air of resignation which has been maintained throughout the present depression. Not one finger has been stirred against the authorities, and indeed in many cases, as I can myself testify, the sufferings of the people have been so closely veiled by genuine modesty, not unmixed with pride, that it has been a delicate and difficult task to discover the real state of things at all, or to get at the class which has been most in need. Meanwhile the number of undeserving beggars has enormously increased. Mendicity and mendacity, in close companionship as usual, have tramped the country far and near, taking, under false pretences, that which should be bestowed on those who sometimes cannot be induced to ask for charity at all.

As to the other principal branch of Cornish trade, namely the fishery, all I can tell you is that the investigations of the relief committees whose funds were at first supposed to be needed for miners alone, have brought to light the fact that among fishermen the poverty was at one time quite as bad if not in some instances actually worse than in the former case. One source of consolation seems all that remains, and that we must look for in the fair and

logical conclusion that since all things are shifting, when they come to be as bad as they can be, they must begin to mend. May it be the happier lot of him who fills this chair next year to paint a brighter picture of our commercial situation than I have been able to do to day. When, once upon a time, Cornwall was traduced by Henry of Aurench, chief poet to King Henry the Third, as being an unprofitable country, the Cornish poet Michael Blaunpain answered him in a Latin poem, wherein is the following bright specimen of his art:—

*Non opus est ut opes numerem quibus est opulenta,  
Et per quas inopes sustentat non ope lenta,  
Piscibus et Stanno nusquam tam fertilis ora,*

the which with some of the doggrel retained may be rendered:—

*No need, where no need is, to number o'er  
The sources whence our country feeds her poor,  
No sea so full of fish, of tin no shore.*

May the repartee be as appropriate, under similar conditions, next year, as it doubtless was when Merry Michael, as Camden familiarly calls him, launched it at his rival, to the amusement of the court of the English king six centuries ago.

I have now to speak of the literary productions of our county during the past year.

You will remember that at the time when H.R.H. the Princess Alice,—whose devoted attachment to learning and whose broad philanthropic views call for a special remembrance in societies such as ours,—laid down her life for her loved ones in the land of her chosen home, Cornwall was not behind-hand in conveying her tribute of loyal sympathy to our beloved Queen. Amongst the poetical compositions which appeared in print at the time, one or two possessed no little merit. One in especial I cannot fail to mention since to Cornish ears it conveyed a sound which is always welcome. The same old poetic ring, the same tasteful versification, the same genuine sentiment to which it gave expression would have left no question as to the authorship even had it not been issued by a Bodmin printer, and marked with the initials H. S. S.\*

One stanza in that poem I am going to read to you, since it recalls in a most remarkable manner an event which has happened since it was written, but to which I particularly wish to

---

\* Henry Sewell Stokes.

refer,—an event which while it has plunged one Cornish home into sorrow inexpressible, has shed a lustre over the county in which the subject of it had spent his early life, and with the history of which his family has been connected in olden days. I refer to the glorious death of Lieutenant Melvill. Mr. Stokes's verse reads like a prophecy :

“ What means it ? Have sad tidings from afar  
Now reached the western limits of our Isle ?  
Has some famed Captain earn'd with his last scar  
A place in the Cathedral's trophied pile ? ”

It has been so indeed. To the very letter these words have been fulfilled, on the mountain path by the banks of the Tugela over which the rescued colours had been so safely borne,—far away in that well-named ‘ Natal ’ country where many a British soldier cleft for himself a passage into the life that lies beyond the shadows of the dusky ‘ Drift.’

Though the prophetic words are fulfilled, a corollary to them still remains. When the beautiful pile, which it is proposed to erect in this city shall be nigh completion, true Cornish hearts shall not have forgotten that the memory of their gallant countryman be amongst the first recorded there.

The first place amongst the works written by Cornishmen on subjects connected with their county during the year must be given to that of our President for the years 1868 and 1869, Mr. J. J. Rogers. In taking up “ Opie and his Works,” we shall all of us join in heartfelt congratulations to the author that his health has been sufficiently re-established to enable him to complete so arduous a task. After a preface containing a graphic sketch of the artist's life, there follows a list of between seven and eight hundred of his paintings, on the compilation of which it is manifest that no trouble has been thought too great, so that accuracy in detail could be combined with care and conciseness in description.

To another of our former Presidents, Mr. Rashleigh, we are indebted for having recently brought back to our county the long lost Cartulary of the College of St. Thomas the Martyr at Glasney, a MS. containing entries made at various dates ranging from 1265 to 1435. In my last year's address I had to notice the discovery by Mr. Jenner of a fragment in the old Cornish language which I stated to be the earliest hitherto known. It is

interesting to add that Mr. Rashleigh's MS. supplies us with one earlier still, and that the words appear to me to be translatable not in the Cornish of the Miracle Plays, but in the far more ancient phase of the language when it assimilated closely (perhaps absolutely) to that spoken in the Armorican peninsula.

I am pleased to add that Mr. Rashleigh has placed a translation of the whole of this MS at the disposal of this Society,—himself bearing the cost of its publication.

To our Secretary, Mr. Collins, we owe our thanks for a pleasing memoir of Robert Were Fox, supplemented by a list of all his published works.

The Editors of the *Bibliotheca Cornubiensis* have not completed their work even at the end of the letter Z. They contemplate adding an appendix to the mass of material already collected, containing not only a list of works previously omitted, but a copious store of biographical and genealogical information as well. Speaking of biographies of Cornishmen, I am glad to have this opportunity of calling your attention to a notice of one of the oldest friends of this society, Mr. Charles W. Peach, which will be found in Smiles's life of "Robert Dick," and read with interest and gratification by many who remember how zealously he has worked amongst us, and how ably he has contributed to our Journal. The sketch is accompanied by a portrait.

The few "chips from a Cornish workshop" which I have appended to this address, and which will appear more fitly in that form than if I read them to the meeting, are derived from MSS in my possession, and are severally of value in a bibliographical, biographical, and philological point of view. The first is a perfect list of the Tonkin MSS as received from their owner by Dr. Borlase in the year 1761. Since only the two last volumes on this list are known to exist at present, this full account of them may perhaps stimulate the inquiry as to what has become of the remainder, and I trust may lead to the discovery of their whereabouts. The second fragment is a quaint autobiographical notice of William Gwavas, the Cornish linguist, of whom next to nothing was known before, but of whom Tonkin says that "he was the only gentleman now living (*c.* in 1733) who hath a perfect knowledge of the Cornish language,"—that is, in its modern and colloquial phase. The third piece, which I venture to place

at your disposal, is a treatise in original Cornish on the subject of the decline of the language, and (together with its English translation) believed to be the composition of Mr. John Boson, the author also of a lost romance referred to in the text, entitled "The Duchess of Cornwall's Progress to the Land's End." From this source not a few words may be added to our Cornish lexicon.

Before I bring my ship to shore at the close of my second year's address, let me crave your leave to say a word or two,—though with great deference to the senior members of this Society,—on the special sphere of labour which appears to me to be ours by right, and on the progress and prospects of this Institution in the future. The birth-name of this Society in 1818, before it was christened under Royal sponsorship in 1821, was, as you all know, "The Cornwall Literary and Philosophical Institution." "The special branches of knowledge," as your Council reminded us two year's ago, "whose cultivation has been aimed at from the first, are Natural Philosophy, Natural History, and Antiquities." On the ground occupied by the one society older than itself, viz., the Royal Geological Society at Penzance, our earliest reports profess that it was never our intention to encroach. Since then young Nimrods have gone forth from our midst and founded other cities; but such enterprises have, as far as I can see, neither trenched on our ancient domain, nor sapped the vigour of the parent plant. The Polytechnic at Falmouth, dividing its time between mechanics and fine arts has its own part to play in a sphere which is beyond our own: the Miner's Association and the Mining Institute in like manner must naturally restrict themselves to the practical issues which their names imply: meanwhile I maintain that the Royal Institution of Cornwall holds the undisputed right to be considered *the centre and the mainspring of all the historic literature of this county*. Towards it should flow the records of all phenomena, meteorological, astronomical, and the like; observations in natural history; results of antiquarian investigations; collections that would otherwise be dispersed; copies of all books or MSS bearing on our county annals;—all these should find their appropriate place within our walls; while from it should proceed a Journal, capacious enough to contain all such material, and of sufficiently high standing to diffuse its information not through Cornwall alone, but among the literary and scientific men of other countries, as

well, who look now-a-days to each individual district to do its own work for itself. The patronage bestowed on us by our Queen has not been bestowed in vain: we have done what we could, and a local prestige is ours already. But more—much more—may yet be done, on one condition, that the county of Cornwall and this city of Truro in particular will grant us more extended support. For a reason which I will proceed to give, there seems to me no time like the present to make an advance in the right direction. Just before the term of my Presidency began “the town of three streets” as the old proverb calls it, had been acknowledged in a special manner to be (what indeed she always was) the natural and proper centre of the district this side the Tamar. The prudent selection of a seat for the new see had incidentally placed a civic crown upon her brow and given her rank above her fellow towns. Two years have now passed away since that event took place, and we have had time to realize that it was no mere empty title then bestowed. Proofs of increased vitality in many directions,—in spite of heavy and unforeseen drawbacks,—have not been wanting both on the part of the citizens themselves, and of those also who—actuated by a common and a noble aim,—have come amongst us from other parts of England. Especially do we mark the change in an educational direction. The caps and gowns we meet in Lemon Street make Dr. Jago and myself almost fancy we are back in Oxford again, only that “the High” must have crawled up Heddington Hill; signs these are of collegiate life amongst us forming part and parcel of that organised system so lucidly set forth in the Bishop of Truro’s excellent little work on the Cathedral;—signs they are that a new intellectual movement has been brought into our midst,—a movement which an old county Society like ours must not be slow to recognise, while its members cordially welcome the culture, and the talent, and the literary capabilities which the forces at work have already drawn and are still drawing to Truro. It is a good omen for our future prosperity that the Lord Bishop of this diocese has become one of our members, and that several of the other members of the Cathedral body have followed his example. It will be almost superfluous for me to remind you that in ancient days,—long before this Western Christendom of ours was hopelessly riven in twain;—long before the religious houses had heaped on themselves their own destruction,—the Minster

was the centre of all local life. Around it grew up the market-town soon to bloom into the city, where buyers and sellers alike found protection for their property: under its walls dwelt the merchant-founders of our ancient Cornish families: thither from far and near the student repaired to gain the only immunity then possible from the lawless world without: wealth came flowing in, and wealth gave room for leisure, and leisure in turn gave birth-ground for science and literature and art. Wherever religion entered there literature entered too;—the cell became the nursery of a most precocious child. The Ecclesiastical foundations, in short, whether Cathedrals or Minsters,—were the only literary centres of the land, and had it not been for their presence, the history of mediæval Europe would have been a blank as great as that of the Palæolithic age, the very existence of which Mr. Whitley fails to find at all. The key to the early history and antiquities of Cornwall, and that which to a great extent differentiates them from those of other districts and renders them a puzzle to some writers, is to be found in the fact that our country is more than any other—the country of survivals. Let it be so in this particular. Let the Cathedral city reassert her right to be the fountain-head of our literary life, the centre and the mainspring of such intellectual effort as unquestionably exists amongst us. One word more about ourselves and our work. I think it is a proud thing for your President to be able to say that, so far as he is aware, no member of this Institution has either in word or deed participated within these walls in those periodical attacks which modern science makes upon established faith. I think it is no less pleasing to add, on the other hand, that fruitless discussions, such as carry no conviction with them—upon the tedious question of the relation of science to religion, have never intruded themselves into our pages. Our aim has always been purely historical. To collect facts, to catalogue observations illustrative of local history,—such will be found to be the purport of nine-tenths of the papers published in our Journal. In this work none can help us like the clergy. If in the stray moments of leisure,—from their different fixed centres of parochial work,—following in the steps of dear old White of Selborne, they would make notes of such phenomena as from time to time must certainly occur to them, and if they would transmit such notes to us, they would be assisting us in building up a history of our county, such as still remains to be written.

There is much we might do if our subscription list were a little longer than it is. Let us not lose this opportunity of trying to make it so. The Royal Institution of Cornwall has, during the 60 years of its existence, deserved well of the *Town* of Truro, let us see that it is not unworthy of the *City*—of that city in which it finds its home, nor indeed of the county outside it to whom it looks for support, and whose intellectual attainments it may fairly claim to foster and to represent.

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#### ADDENDA.

##### *List of the Tonkin MSS in 1761.*

The following is taken from a MS volume in the handwriting of Dr. Borlase, entitled "Collectanea," p. 262 et seq: the notes are derived from Dr. Borlase's extracts from the MSS, except in cases where I have initialed them "W. C. B," in which case they are mine.

"Ludgvan, Feb: 26, 1761. Mem: Yesterday at the Instance of Sir J<sup>a</sup> S<sup>t</sup> Aubyn Bart: by his servant I rec<sup>d</sup> from the heir of the late Thos: Tonkin Esq<sup>e</sup> his MSS containing Extracts, Observations and Notes with other materials intended for compiling the Nat: History and Antiquities of the County of Cornwall, a subject which Mr. Tonkin had many years in view. I had never seen them before: they consisted of nine Volumes, five Folios and 4 Quartos partly written upon. To examine them more methodically I mark them at the back with Capitals A B C D E F G H I, and they contain as follows:—

A. 1<sup>st</sup>. Copy of Leland's Itin<sup>r</sup> in Cornwall 2<sup>nd</sup> Vol; with marginal notes by T T to pa: 22.

2<sup>nd</sup>. a fragment call'd the Hist<sup>r</sup> and Antiq: of C<sup>ll</sup> Illustrated, Vol: 2; The Hund: of Penwith, Burian, Sennen 4 pages,—a large Hiatus of unwritten paper.

3<sup>rd</sup>. The Hund: of Powder—parochial Observ: of (but not in an Alphabetical order) on the Churches, Manors and Pedigrees, in the manner of Sir W<sup>m</sup> Dugdale's Warw<sup>sh</sup> N.B. This Hund:



consists of near 50 pages; some imperfect—immethodical but many family and patrimonial Observ<sup>ns</sup>\* [See more of this Hundred in C.]

B. A thin Folio written throughout containing:—

1<sup>st</sup>. Harrison's Desc<sup>n</sup> of Britain from Holinshed's Chronicle Vol, 1.; Of the Isl<sup>ds</sup> of C<sup>n</sup> with marginal names and some Notes. D<sup>o</sup> of the Rivers and Streams *ibid*:—7—14.

2<sup>nd</sup>. Sheriffs of C<sup>n</sup> from 1139 to 1730; Knts: of the Shire from Edw: I to George II.

3<sup>rd</sup>. Some Lds. Lieuten<sup>ts</sup> pa. 38, 39: Lds. Wardens of y<sup>e</sup> Stannaries pa. 42, 43

4<sup>th</sup>. First book of Carew's Survey with notes and Additions from pa. 45—167.

5<sup>th</sup>. So much of the 2<sup>nd</sup> book of D<sup>o</sup> as relates to y<sup>e</sup> County in Gen<sup>l</sup> from pa. 167—170.

6<sup>th</sup>. Copy of Cotton Corn<sup>h</sup> Vocab. with the English, and Modern Cornish pa. 171—192.

7<sup>th</sup>. Letters &c. from Mr. Ed. Lhuyd, in the years 1730, &c. to Mr. Tonkin pa. 192; Of Iron money found at Boconnock;—and some letters from Mr. Lhuyd—pa: 193—204.

8<sup>th</sup>. Lord's Prayer and Creed and 10 Comm<sup>ts</sup> in Modern and Ancient Cornish. 1<sup>st</sup> Ch<sup>r</sup> of Gen<sup>l</sup>: fragments of Cornish, M<sup>t</sup> Calvery.

9<sup>th</sup>. Mr. Tonkin's lett<sup>r</sup> to Gibson Bp. of London with the Answer 223: 224. A coat of Arms confirm'd to Henry Carnsew of Trewoone in S<sup>t</sup> Budock pish. [*ib.* N.B. see C. p. 128.]

10<sup>th</sup>. A Copy of the Tinner's Charter Exempl<sup>d</sup> by Qu: Elizabeth 226. Stannary Letters and proceedings of Convocations to pa: 260.

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\* After making some extracts from this volume, Dr. Borlase observes that it contains "many personal reflexions": that the author's "commendations are poor in language, and his blamings low and not fit for the publick." "His accounts of manors and families are not to be contemn'd but must be cautiously relied upon." Among other pedigrees it contained those of Carminow of Fenton-gollan, and Boscawen. W. C. B.

11<sup>th</sup>. Index. Question—"Which be they that be Tinnars" betw : H. Boscawen Esq<sup>r</sup>, and Mr. Farnaby—pa : 271\*

C. A narrow Folio, mostly written, containing :—

1<sup>st</sup>. A continuation of Harrison of y<sup>e</sup> Isl<sup>ds</sup> on y<sup>e</sup> Coast of C<sup>th</sup> p. I—IV with notes.

2<sup>nd</sup>. Parochial Antiquities of the H<sup>d</sup> of Penwith—imperf. to p. 54.

3<sup>rd</sup>. Parochial Antiquities of the H<sup>d</sup> of Kerrier, pa. 54 (short observ<sup>ns</sup> from Leland, &c.) to pa. 110.

4<sup>th</sup>. Pedigrees—Darrell, Code of Breage, St. Auhyn, Kempe of Rosteage, Spry, Hoblyn, Gregor, Polwhele, Vincent, Tonkin of Hendra, Beauchamp, Hallep, Fortescue of Philly, Vyvyan, Vivian, Carew, Trehane, Vivian, Coryton, Robarts, Molesworth, Arundell of Trevice, Do. of Lanhern, Cowlin of Trengwenton, Borlase of Treludra ("His among more than 100 others was omitted in the last Visitation, viz. : 1620"), Busvargus, Bosavarne, ("no arms at the Visitation"), Haweis, Bawden, Beauchamp, Trefuses, Worth of Tremogh, Pendarves of Roscrow, Penwarn of Penwarn, Pendarves of Pendarves, Roscrow of Roscrow, Penrose of Penrose, Tregian, Trewolla, Saule of Penrice, Chyverton of

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\* This volume Dr. Borlase appears to have considered the most important of the nine. He makes lengthy extracts from it, at the close of which he observes that in it "there are many things worth the notice of the Publick but (that it) may admitt of some corrections in most pages." The author calls this volume "Materials for a new Survey of the History and Antiquities of Cornwall." He "thought fit" at first "to write a new Survey, but on Review of Carew thought" that that "with Notes and Appendix would be better than one of his own." It would seem to have contained numerous original and other observations on Natural History, as well as a continuation of Carew's list of noted Cornishmen. Amongst the latter he mentions "John Luffe, author of a small Accidents of Armory in Q<sup>uo</sup> dedicated to Sir Reinold Mohun dated 1604; in it some Arms of the Cornish Gentry not found elsewhere." "I have it," he says "now by me in M<sup>ss</sup>." "In the Appendix to this MS," says Dr. Borlase (Notes on Tonkin's M<sup>ss</sup> p. 13, No. 140) are some original papers, usefull and judiciously there preserv'd,—relating to Tin and Convocation affairs, as Sir J. Coryton's letter on the Pre-emption of the Crown,.....Trewinnard's Case; his appeal to the Star chamber from the Warden's Courte dismissed," &c., &c. "A discussion of the question 'Who are Tinnars,' by the Bailiff of Blackmore," temp: Elizab. His opinion is that he who hires another to work his right, he who works at tin either for himself or others, he that letteth out money upon black tin and maketh it white, having his blowing house, his Stamping house, his Crasing mill, is a Master Tinner. Once a Tinner and ever a Tinner The Merchant also who buys white tin is in his opinion a Principal Tinner; and (he) produces a dispute in Hen : 8th's time between Hugh Boscawen, Esq<sup>e</sup> and one Farnabye a buyer of white tin at

Kerris, Croker of Trevellis, Trevanion at length, Trencreek, Penhellick, Cosen als. Maderne de Penzance, no arms, but related to Gillard Trevanion, Guavis, Polkenhorn, Davis of Key, Rosewarn of Roswarn, Trefusis at length, Vyvyan of Trelo-warren, Fortescue of Skiberiou, Tregeare of Tregeare, Knevet of Rosmerin, Bosustow of St. Levan, Bosawzak of Bosawzak in Constantine, Levelis of Castlehernock and Trewoof (by marrying the heiress of Trewoof settled at Trewoof,) Gerveis of Menathlek, Chalons of Mylor, Fleming of Landrith, Noy of Pendre, Bogans of Treleage, Polkenhorn of Polkenhorn, York of Phillack, Tresaher of Trevethanus (?), Painter of Antranpe, Tonkin of Trevalleck in St. Kevern, Lanion of Lanion in Madern to whom Lanion of Winear is a 2<sup>nd</sup> branch, Erisey, Bonython, Chinoweth, Trenwith of d<sup>o</sup>, Sparnon of Sparnon in Breag, Nanspian of Gurlyn, Roskreague, Enys of Enys, Dewen of Gwinear, four descents to the Visitation 1620.

5<sup>th</sup>. Additional Observations, but few, on the Hundred of Powder—pa. 1—39.

6<sup>th</sup>. Additional Paroch : Observations on the Hundred of Pider—pa. 40—66.

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Truroe try'd by the then Vice Warden Sir W<sup>m</sup> Godolphin Knt., under Hollings Ld. Loughborough." The following is another extract on this same subject:—"Of late years the ancient custom and privilege of the Tinner (of having disputes in Tin affairs tried only in this Stannary Courts, viz. : by the Steward, the Vice-Warden or the Lord Warden with appeal to the Duke of C<sup>ll</sup>'s Council) has been much broke into, and all causes of consequence brought to the Common Law before Lawyers and Juries entirely ignorant of the Customs and Laws of the Stannaries; by what means this has happened Qu?; but this I know very well that when John E. of Bath was Lord Warden he has more than once demanded the Cause out of the Court and the Judges have acquiesc'd therein. In the Bailiff of Blackmore [by Beare MSS. Harl: No. 6380] there is a famous Case of Martin Trewinnard, Esq., upon his appeal to the Star-chamber from the Lord Warden, which was dismiss'd out of the said court and the ancient method of the Tinner appealing first to the Steward, then to the Vice Warden, then to the Lord Warden, and at last to the Prince's Council, therein justify'd." Among the anecdotes in this volume is the following:—"Mr. John Langherne, younger brother to Degory Langherne of Trigavethan Esq<sup>e</sup> was no less remarkable for the greatness of his stature being better than 7 ft. 6 inches high (from whence he was commonly call'd the Long Langherne) than for his strength, of which I had this instance given by his son of the same name, that being at the siege of Plymouth where he was Lieut. of Horse for Chas. I, he rid up to one of the gates of the town and stuck his sword in so deep that two strong men could not possibly pull it out." (MS.B. p. 133.) A list of soldiers mostly Cornish of the time of the Great Rebellion is given in the same MS at p. 131." W. C. B.

7<sup>th</sup>. Pedigrees of Hill of Wendron, Arundell of Menadarva, Thomas of Lelant, Bray of Treswithen Camborne, Randall and Hallymore of Penryn, Kestle of Menacan, Robinson of Cadgwith (in) Ruan, Roskymer of Merthen, Trenarth of d<sup>o</sup>, Killigrew of Arwinick in full, Hext and Quarne, Penhallow of d<sup>o</sup> (in) Philly in full, Edmunds (of) Feock, Burgess, Michel and Phippen of Truro, Coryn, Launce, Crockhay, Langherne of Trigavethan, Munday, Willoughby of Carvynick (in) Enoder, George of Trenouth, Sayer, Stephens, Verman, Hatch, Hill of Truro, Williams of Probus, Maynard, Coswarth, Cook, Rosagan, Sharrock, Poyle, Tanner, Trethewy, Pye, *Tredenham*, &c. (?), Wallis, Hicks, Herle of Prideaux in full, Birde, Trewbody, Skory in full, Killiowe of Lansallas, Barrett of Glant in full, Colquite, Moyle of Trevithek, Trefry in full, Hooker als. Vowell in full, Tonkin of Trevaunance in full from Ric<sup>d</sup> II, Carter, Jenkin, Pomeroy, Tippet als. Nankevil, Gavrigan, Kete, Trenance de Lanhidrok, Gambon of Padstow.\*

D. A thin folio written throughout containing—

(1) State of the Tin Trade by John Coster, Esq<sup>e</sup>—a loose paper stitched†

(2) Dedicatory Epistle to Sir W<sup>m</sup> Carew, and Sir John St Aubyn dated July 9<sup>th</sup> 1733, from Polgorren.†

(3) Fair copy of Mr. Carew's Survey, 1<sup>st</sup> book, with Notes and Additions (continued) from B pa. 45—167—pa. 1—132—then 4 leaves of blank. Notes numerous.

E. A thin folio containing:—

1<sup>st</sup> Several Pedigrees from pa. I to pa. XXVII. Roscarrock of do in full; Billing of Hengar; Opy; Hill of Helligan; Mathew; Cawel in full; Nichols of Trewane; Nichol de

\* In a preface to this volume the author said "that if by Death or any other accident they (these MSS) should fall into other hands I desire they will by no means publish them in the dress which they now appear in." (1733) But that "if any one should think fit or resolve to print them they would at the least be pleas'd to new model them after the method follow'd in those few which have received my last corrections such as St. Agnes, St. Piran in the Sands, St. Michael Penkivel, &c.

[Signed] Tho. Tonkin, Polgorren, Mar. 27, 1733." W. C. B.

† There is a paper of this name amongst the MSS, &c. of Dr. Walter Borlase, Vice-Warden of the Stannaries, and now in my library at Laregan. W. C. B.

‡ Printed in Lord De Dunstanville's Edition of Carew—(1811) in whose possession at that date these MSS undoubtedly were. W.C.B.

Penvose; Carnsew de Bokelly; Webber and Lynam; Dagge; Bere of Pengelly and of Egloshele; Kestell of Egloshele in full; Stone; Barrett; Rogers de Lank; Tucker and a grant to wear his hat before the King, &c.; Flamock of Bokarne; Parker; Sprey and Michell; Glyn of Glyn in full and Chapman; Lower in full; Trengove als. Nance; Tubb; Jeynens and Marke; Chapman and Hunkyn; Murth of Tallant in full; Code de Morval in full; Dandy and Ouge; Connock; Langdon of Keverell in full; Mayow of Bray.

2<sup>nd</sup>. Parochial heads and some Memorandums of the Hundred of Trig,—Bodman—pa. 1—2; very few, mostly from Leland to pa. 61.

3<sup>rd</sup>. Parochial names &c. of the Hundred of East from pa. 63, (little within) to pa : 128.

4<sup>th</sup>. D<sup>o</sup> of Hundred of Lesnewyth, little but names of the parishes, to pa : 150.

5<sup>th</sup>. Hundred of Stratton, little but parish names to pa : 172.

6<sup>th</sup>. Several Pedigrees of the Hundreds of East, Lesnewith and Stratton. N.B.—These Pedigrees collected from the Visitation books of the Heralds in the year 1620.\* The rest blank leaves.

F. A thin small Quarto. A Villare rectifying the names of places, viz. :—Towns, Villages. Dwellings, with their meaning in ye Cornish language beginning at the Land's End, and under the parish names inserting the places, [*e g.*] at S<sup>t</sup> Sennan; Lands End, Pedn-men-*das* (?) &c; Kerrier Hundred pa. 14 ibidem; compleat and many entertaining explanations of names, besides reformation of spelling,—usefull,—to pa. 114. Then an unfinished attempt to place all ye names .....under the parish names,† ad finem to pa 140.

G.—A thin quarto containing extracts from Norden, &c., with Notes by T. T.

\* A list of these is given in full (78 in number), but, as the Visitation is now published, it need not be here reproduced. W. C. B.

† In Dr. Borlase's scheme for explaining the meaning of Cornish names in his "Mems of the Cornish Language," MS at Laregan, he arranged them alphabetically, placing the names of parishes in a second column. Dr. Bannister unfortunately omits the parish names. Dr. Borlase follows Martin's scheme in his Index Villaris of Cornwall W. C. B.

1st, from Norden's Description of Cornwall, pa. 1, 13.

2nd, Sir Jos. Treddenham's notes on the Hundreds of Kerrier, Powder, Pyder, Trigg, Lesnewyth, and West,—four pages—to pa. 16.

3rd, Extracts relating to Cornwall, from the works of Wal. Moyle, Esq., with a few notes, to pa. 27.

4th, Mr. Moyle's Observations in MS. on Willoughby's Ornithology, noted in the margin of his Book, 11 pages.

5th, Observations on Birds, pa. 30k—30n.

6th, Abstract of Dr. Musgrave's Belgium Brit., pa. 31 a to 35a, with a few notes.

7th, Dampier of Water Spouts, and Tutaney and Fleetwood of Church Tenures, 3 pages.

8th, Leland's and Harrison's Description of Scilly Isles,—pa. 30-42.

9th, Extract of 'Phil. Transactions,' pa. 47-48. Dr. Leigh's Nat. Hist. of Lancashire, p. 50-52.

10th, Danmonia Occidentalis—Mr. Tonkin of the Romans, and (Roman) Ways, &c., in Cornwall, 69-79a.

11th, Extracts from Dr. Brown's Travels, 75-88. Rapin, of Cornwall, 89-97.

12th, Extracts of Memoirs of Literature, 98-110. Cornish Tin Mines, from the 'Transactions,'\* 111-123.

13th, Of the Generation of formed Stones by Harenberg, 124-131.

14th, Mr. Tonkin's 'Proposals for Printing.'†

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\* Upon this Dr. Borlase, in a note, says that it, i.e. Dr. Nerret's account of Tin Mining "contains nothing worth reading." W. C. B.

† "Proposals for the whole Work in 1735." "Proposals for publishing 3 volumes of the History and Antiquities of Cornwall. Imperial Quartos. The first to be a compleat work of itself, and a full Natural History thereof, and its Antiquities also. The 2nd volume will give a particular account of the 4 Western Hundreds after the method of Sir Wm. Dugdale's Warwickshire, Maps of each, Arms round ye Maps, Draughts of the Seats, Prospects of Mounts' Bay, Falmouth Harbour, Truro with its River, Wadebridge and River. 3rd Vol. Of the five remaining Hundreds in the same manner,—with prospects from Mount Edgcombe, of Plymouth, Stonehouse, and ye Dock; a 2nd of Lanchester, Newport, &c. A third of Fowey harbour."

H.—A thick small Quarto containing an "Alphabetical Account of all the Parishes in Cornwall. First Vol., A-I, brought down to the year 1702, by Wm. Halse, of Fenton Gymps, Gent., with large Additions and amendments to the whole, and brought down to 1736, by Tho. Tonkin, of Trevaunance—mostly written.

I.—A small Quarto containing an Alphabetical Account of all the parishes in Cornwall, Vol 2, Pt. I. K-O, by Mr. Tonkin only, but (as the former) allow'd by him by advertisement not to be fitted to appear in Publick; some Parishes treated of fully, some sparingly, some not at all."\*

[The Preface to these volumes differs from the epistle dedicatory mentioned above; it acknowledges great obligations to Halse, and yet detracts from his character as a man of learning and honour. Dr. Borlase animadvertes severely upon it.—W. C. B.]

Such is the complete list of the Tonkin MSS preserved by Dr. Borlase. Notices of other fragments and letters have been gathered together in the *Bibliotheca Cornubiensis*; so that we have now in all probability a tolerably perfect account of all the writings of this author. The question is, what has become of the 7 first volumes in the above list? I have made inquiries as to whether they are at Tehidy, and I understand they are not. Indeed the fact that the two little vellum volumes now in my

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"Subscribers to send their names and Arms, and information to the Author at Polgorran, near Tregony, at or before Ladyday, 1737. The price in hand to Subscribers, one guinea; and 5 shillings on the delivery of the 1st Vol.; 16s. on delivery of ye 2nd Vol.; and one guinea on delivery of ye 3d. Subscribers for 6 to receive 7 copies."

\* These two last volumes, the only two out of the whole collection, the whereabouts of which is known, are in my library at Laregan, and were purchased by me of Messrs. Ellis and White, from the sale of the late Mr. Sandys. It will be noticed that the alphabetical list is only carried up as far as the letter O, to the end, that is, of the 1st Part of Vol. II. The remainder of the work from P to Z is now in the possession of the Royal Institution of Cornwall, having been presented to that Society by the Rev. Mr. Pye, of Blisland, through the medium of the Rev. C. M. E. Collins, of Trewardale. This latter portion is not bound, which probably accounts for its separation from its fellows, which must have taken place probably on the death of the author, in 1742, and certainly previous to the year 1761; since, it is clear that Dr. Borlase did not receive it with the above. My two little MS. volumes are bound in vellum, with gilt lettering on the back. "Parochial Antiquities of Cornwall," and Dr. Borlase's extra lettering H and I, can still be detected on them. W. C. B.

possession were in the hands of Kerslake, the Bristol bookseller, in 1856, seems to point to the fact that a dispersion of them from the Tehidy library had taken place previous to that date. Nevertheless, at the meeting of this Society in the Spring of 1873, I find the late Mr. Reginald Rogers expressing his decided conviction that within 30 years he had seen them there. Their loss to our generation is not great: In his addition of Carew, Lord de Dunstanville caused the most valuable portions of the parochial and family history to be skilfully worked into the notes; while several of the papers relating to the Tin Trade appear in the appendix. The list of Cornish names of places, and the modern Cornish Glossary appended to the Cottonian Vocabulary, Dr. Borlase copied into his MS volume on the Cornish Language, and by far the greater and most valuable portion of the heraldic and genealogical information he similarly transferred to another volume in the same collection, devoted to the family history of the County. It is consoling to know that even though the original MSS may be lost, their contents have been copied and thus preserved.



VII.—*Autobiographical Notice of William Gwavas, extracted from his Common Place Book, 1710.*—BY W. C. BURLASE, M.A.

THE MS\* from which the following is taken consists of a folio of 15 leaves, the covers being rough brown paper. On the outer cover are simply the words "Liver Ve—'my book,' Anno Dni, 1710, Wm. G."

Pages 1 and 2 contain the numerals in Cornish; sentences in that language, and a short essay on the "ye Cornish Tounge." P. 3 has the Lord's Prayer and Apostles' Creed, and pp. 4 and 5 the Ten Commandments, translated into Cornish by Mr. Thomas Boson, Mr. John Boson, and Mr. Oliver Pendar, of Newlyn; with a parallel translation of the two first by Mr. Keigwin, of Mousehole. P. 6 contains the Ten Commandments as given in Cornish by Mr. Keigwin. Pp. 7, 8 and 9 are occupied "with instructions according to the best of my understanding to my kindred that shall succeed me." They were written when the author was only 35 (1711), and are several of them very quaint. At the foot of p. 9 is the following note "4th March, 1711, My Coz. John Millecent, of Barham (Cambridgeshire), and I saw the Great Gen'all Prince Eugene of Savoy at the Duke of Grafton's house in St. James's Street." P. 10 contains the autobiography presently to be given, and p. 11 a pedigree of the Gwavas family "per Mr. Thomas Boson." P. 12 relates to family affairs,—purchase of property, &c. The next three pages are taken up with speculations on the name of Gwavas, and the fourth relates to estates of that name in Meneage. Pp. 17 and 18 contain various mottoes, phrases and verses in Cornish, most if not all of which will be found in Pryce's grammar. On p. 17 an anecdote is told which may be repeated, since it shows how colloquial Cornish was still understood and made use of. "Mr. Oliver Ustick (als. Eastwick) of Burryan, was Rythming on ye Persons Names in his Company, and my father being a Chearfull man, but Loud in his discourse, asked what ryhme he had for his name, who said, 'Mr. Gwavas, Sindzi (or Sindgye) guz

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\* In the library at Laregan. W. C. B.

Tavaz': i.e. 'hold your tongue.'" Pp. 19 to 27 is taken up with a list of names of places with their meanings, from which Tonkin derived much information, and from which Dr. Borlase copied largely. Pp. 28-30 contain some more Cornish sentences and verses, among which is the writer's own epitaph, written March 11th, 1717.

The autobiography runs as follows: "Na [for Nota] my Grandfather Chester was 60 yeares old when he begott my Mother, and my Mother was borne in ye 7th month, and had 11 Children, all now Liveing Men and Women, and I was gray in my head at 20, and white at 30, and my beard changed gray at 32, and I am now, God be thanked, 34 yeares of Age, and in good health, this 9th day of March, Anno Dni 1710.

I and all my Brothers and Sisters were borne at Huntingfield Hall, in ye County of Suffolk, my ffather haveing a Lease thereof Given him for 41 yeares, by John Coke, Esq., Grandson to Sir Edward Coke, of Godwick Hall, in ye County of Norfolk, who was ye Greatest Lawyer yt ever England produced, as his workes left behind him prove. Na. ye sd John Coke's reall Estate was accounted £10,000 per Ann., and he died a Batchellor, to whom my ffather (with his Sister and first Coz. Capt. Coke, of Non-such) was Executor, and his Estate went to a 2d Coz's Son, who had Tho. Coke, now an infant about 14 Yeares of Age, and will have also Sir Edwd Coke's Estate of Derbyshire, so yt he's likely to have a reall estate of £13,000 per Ann.

Na. I was borne on a Tuesday, between ye hours of 12 and 1 in ye Morning, the 6th of Decr., Anno Dni 1676, And was baptized at Huntingfield Church, 1st Jan. then following, and had for my Godfathers my Uncles Dottin and Nance; my Grand-mother Gwavas was my Godmother.

Na. My Grandfather Gwavas lived in Trennick House, in ye parish of Sithney, nigh Helston, in Cornwall, And was Receiver of ye County Stock in Oliver Cromwell's time, and being for the King, was forced to pay £800 to Cromwell's Officers, which he had but a little before paid to ye King's use, and was sequestered, plundered, and Imprizon'd by them. My Grandfather had also a law suite with the sons of Hickes (his Sister in Law, Philipe Hickes, his Brother's widdow, her Children) about the right of the purchase of the Rectory of Paul, for which the Hickes in

Oliver's time Recover'd by Decree in Chancery £800; which suite cost him in all neare £1200;—that These accidents run him so far in Debt that he was forced to Incumber his Estate very much,—And my father paid, of his ffather's Debts, to the value of £3000. That my ffather succeeding in an Incumbered Estate, and also engaged in a Law Suite with the Duke of Leeds, by being Executor to Mr. John Coke, Left ye Estate much further in Debt, and my Mother with Eleven Infant Children living, and 13 Several Law Suites depending at his Death, some of which Suites were transacted in ye Both Houses of Parliament, and in all ye Courts at Westminster Hall, and had nigh 25 years continuance.

That By the Greate and Wonderfull providence of God Almighty, who is all sufficient to bring down ye highest and raise the Lowest, from Less than nothing, as may be truly said in this Case, for that my ffather died indebted beyond the value of his Estate, and Even my Mother's joynture Engaged for near £4000, So that she had nothing yt she could call her owne,—yet by God Almighty giveing Hearts of ffriendship to those yt she might feare as destructive Enemies, by their favourable Treatment and forbearance (which came from ye fountain of all Mercy and Goodness), She was Enabled to pay of my ffather's Debts to the value of £4798 2s. 10d; Besides giveing to all her Children decent Education and Imployments, considering ye circumstances She was in. And all her Children are now alive (God be thanked) [both men and] women, and all the Law Suites Ended, and [She] hath hitherto (By God's speciall favours) had proof of all to be obedient Children; And tho' her afflictions and feares were greate and to her insuperable, yet now she hath (tho' infirme), rest from troubles, and I hope as a [reward of] (?) her greate care and dilligence and prudence (which God endowed her with) she will in heaven receive Eternall Life." [Here the last line of the MS. is destroyed.]

From the pedigree which occupies the opposite page in the MS., and which is dotted over with texts and mottoes and legal notes, we gather the following particulars of the Gwavas family and of the author himself in especial.

"Richard Hicks, als. Gwavas, was a Tinner, and lived in Gwavas, in Sithney parish, near Helston, in Cornwall. He had Issue two Sons of one Christian Name Alive together.

I.—John Gwavas (or John Richard als. Gwavas,) yeoman, so called (it appears) in a deed of settlement 8 March, 1598, of Gwavas, and other lands on his marriage with Mary ye Daur. of Parson Wm. Robinson, of Sithney, near Helston." When he became possessed of the first part of Gwavas is not known, but he purchased another part with other lands on the 21st of June, 1610, "as per deeds, by having got the money by Dealing in Tin, and being concerned in Good Tin-workes."

"In Crokhay's deed of sale of a house in Penryn, John Gwavas wrote 'gen,' and had purchased in Land near £200 per Ann., as mentioned in ye fine and Entaile deed on ye marriage of John Gwavas, Esq., his Son, in 1633."

[N.B.—A lease is mentioned "28 Janry., 1610, between Samuell Pendarves, gen., and John Hicks, yeoman. Mr. Boscawen hath old deeds of ye Blowing house in Sithney, wherein it is sett to John Hicks,\* als. Gwavas, Tinner."]

This John Gwavas had issue:—

1. John Gwavas, Esq. by degree, Barrister-at-Law of the Middle Temple: he purchased the Rectory of Paul as per deed 1638, and per deed 1640. He married in 1633 Mr. Hickes's widow, who was Daur. to Wm. Burlace, gen. He died without issue.

2. William Gwavas, gen., (of whom see above as Receiver under Charles I and Cromwell), married Eliza., ye Daur. of Sir Thomas Arundell of Tolvorne by Truro. He sold and mortgaged sev'rell parts of ye Estate. He had issue:—

1. William Gwavas (of whom presently.)

2. John Gwavas.

3. Chamond Gwavas, Attorney at Law of ye Queen's Bench Court who had issue two sons—(1) John Gwavas of Tavistock, Pewterer, and (2) Chamond Gwavas, "at London," both living 15th Febr. 1710, of whom John the eldest had again two sons William Gwavas (living in 1710), and John "now (1727) at Plymouth, carpenter."

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\*At p. 8 b of the same MS. Mr. Gwavas makes the following note on the arms of Hicks, of which he gives two drawings. "'\* \* Hicks, Cornwall, bore for arms \* \* Chevron between 3 pole axes'; but ye right is (on a) field arg. a Castle standing between 3 pole axes, sable. Hext has the same, only the field Or." The MS. is much mutilated and words are left out where the \* \* occur.

## 4. Thomas Gwavas (living Feb. 15, 1710).

William Gwavas, the eldest son, was a Barrister at Law at the Middle Temple; lived at Huntingfield Hall, in Suffolk, and married Anne ye Daur. of Wm. Chester, Esqr., of East Haddon, in Northamptonshire, who was 2nd son to Sir Anthony Chester, of Chichley in Bucks, Bart. (her portion pd. him was £1200.) He purchased a  $\frac{1}{4}$ -part of Gwavas Oct. 10, 1679. He had issue:—

1. William Gwavas (of whom presently).

2. Anthony Gwavas.

3. Robert Gwavas, "in the Streights of Banca, in the East Indies."

4. John Gwavas.

5. Henry Gwavas. (All of whom were alive in 1710); and six daughters—Anne, Mary, Jane, Francis, Eliza and Dorothy.

William Gwavas ("myselfe") the eldest son, was "bred a Clerke to Mr. James Holt (Attorney of ye Queen's Bench Court) of Lyon's Inn; entered ye Middle Temple; purchased a Ground chamber in Brick Court, No. 4, ("primi gradus super dextram, septentrionali parte Edificiarium in Le Court.") "for my life:" Married Elizabeth, Daughter of Cro (Christopher) Harris, of St. Ives, Cornwall, Merchant, 29th of April, anno 1717; her por. con. pd. him was £1500. He renewed Trennick Lease; Redeemed ye mortgage on ye Rectory of Pawle;\* and purchased a House of Mr. (Richard) Pearce of Penzance, 2 cellars in Moseshole and Newlyn, and a house and field in Newlyn.† He has issue:—

1. William Gwavas, "4 months old, obiit August 1727."

2. Elizabeth Gwavas, married Wm Veale, Esqr., of Trevaylor, and left issue.

3. Anne Gwavas married the Rev. Thos. Carlyon, and left issue.

[These two latter entries of marriage are in a later hand.]

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\* I notice that in one place in this MS. (p. 6 b) Pawle or Paul is spelt "*Pawlyn*."

† It is clear from this that however modestly Mr. Gwavas may attribute the restoration of the property to his excellent mother, it was principally to his own efforts, probably to success in his profession, that it was due.

II.—John Gwavas (second son of Richard Hicks, als. Gwavas), “nick-named ‘Pedn-gwidden’ from his grey or white hair,” had issue:—

1. Thomas Gwavas, fuller, yt lived at ye Tucking Mill, in Sit[hney?]

2. Richard. } The MS. here is very defective, but these would  
3. Gregory. } seem to be brothers of Thomas.

[Next below Thomas Gwavas, and probably his son comes the name of] Robert Gwavas, of Zennan parish (living in 1710), who had issue Charles Gwavas, Tobacconist, in Penzance, apprenticed to Alexander Thomas. He was living in 1710, and had issue:—

1. William Gwavas (born?) in 1727, obiit 1731.

2. Charles Gwavas (died?) in 1737.

[*N.B.*—The writer seems to have added to this pedigree at different periods, and there are also traces of the work of two other hands.]

Amongst the mottoes at the end of the common-place book is the following epitaph written by Mr. Gwavas upon himself, “for the benefit of posterity, in Cornish”:

Che Dean Crév, Leb es war Tîr  
hithow gwrà, gen skians fir.  
ha’n Dew euhella, vedn ri,  
peth ew gwella ull, rag whi.

IN ENGLISH.

Thou Strong man, who on Earth dost dwell  
To day with Prudence act Thou well.  
And God Supreme, for Thee will Do,  
What Hee thinkes best, is Good for you.

Mr. Gwavas’s house in Penzance stood on the spot where the Wesleyan Schools now stand, in Chapel Street. He was buried at Paul, January 9th, 1741. A small oil painting of him is in the possession of Mr. G. B. Millett.

VIII.—*Copy of a MS. in Cornish and English from the MSS. of Dr. Borlase, who observes on the cover: "N.B.—I had this MS. from Mr. Ustick, Vic. of Breage," in whose writing it therefore probably is.*

On the cover is—

'Απόγραφον MSS<sup>m</sup> Anglo Cornubiensis  
 Incerti Authoris, forsan  
 . . . Boson\* Gen. de Newlin  
 Ex Dono H. Rogers J<sup>a</sup>  
 Arm<sup>st</sup>.  
 1750.

[CORNISH.]

Nebbaz Gerriau dro tho  
 Carnoack.

[ENGLISH.]

A few Words about  
 Cornishe.

Gun Tavas Carnoack en mar  
 pu gwadn hez, uz na ellen  
 skant quatiez tho ewellaz crefhe  
 arta, rag car dreeg an Sausen e  
 thanen en pow idden ma an  
 kensa, an delna ema stella teg-  
 go warno tha hep garra tho tha  
 telhar veeth buz dro tho an  
 Aulz ha an more, el eu a va  
 clappiez lebben oggastigh en  
 durt pedn an wollaz tho an  
 karrack Cooez ha tuah Poreeah  
 ha Redruth, ha arta durt an  
 Lizard tuah Helles ha Fal-  
 mouth: ha an powna, an idna

Our Cornish Tongue hath  
 been so long in the Wane that  
 we can hardly hope to see it  
 increase again, for as the Eng-  
 lish confined it into this narrow  
 Countrey first, so it presseth on  
 still leaving it no Place but  
 about ye Cliff and Sea, it being  
 almost only spoken from ye  
 Land's-End to the Mount, and  
 towards St. Ives and Redruth,  
 and again from the Lizard to  
 Helston, and towards Falmouth,  
 and these parts in the narrowest  
 two Necks of Land, containing

\* [Mr. John Boson of Newlyn is quoted by Dr. Borlase in his MS. volume on the Cornish Language as the author of a piece entitled 'The Duchess of Cornwall's Progress to the Land's End,' and as the writer of the following dissertation avows himself to have been the author of that work (a few extracts from which are alone extant in the volume just mentioned), it is clear that Dr. Borlase would have considered him the author of this piece also.]

deu Codna teerez (*teer es*)<sup>1</sup> en fester<sup>2</sup> a dro tha iggans moldeer,<sup>3</sup> ha buz quarter (*skant*), en po hanter an lester na; en telhar idden ma ha gul ma mouz (*mouy*) Sousenack clappiez dre eza Curnoack, rag radden el bose keevez na el skant clappia; na guthvaz Curnooack, buz skaut Denveeth buz ore guthvaz ha clappia Sousenack; rag hedna he volden kallick<sup>4</sup> eue tho gweel dotha gurtaz ha dose a dro arta, rag ugge an Teez goth tho | <sup>4</sup> merwal akar, ny a wele an Teez younk tho e clappia le ha le, ha lacka ha lacka, ha an delna eue a vedden<sup>5</sup> beha durt Termen tho Termen.<sup>6</sup> Rag an Tavaz Sousenack clappies mar da \* \* \* vel an telhar weth en wollaz \* \* \* evez (*tavaz*) an metherwin an \* \* \* na na gu an Pobel Coth tho bose skoothez war noniel, kar dre vedno why gwellaz urt hemma dro tho an Empack Angwin an brossa (*brauza*) ha an cotha Fratier meak ul an clappiers Carnoack a dewethaz rag guffiniez tho dismiggiā, GEVERN ANKO, eue a reeg peverre war Gever, ha meskeeges dro tho Anko, eue levarraz droua Gever ul, eue a wya dro, Gevern buz

about twenty Miles in Length, and [a] quarter (*not*) or half that Breadth, within which little Extent also there is more of English spoken than of Cornish, for here may be some found that can hardly speak or understand Cornish, but scarce any but both understand and speak English, therefore it seems difficult to stay and recover it again, for the old Men dying away, | We find the young Men to speak it less and less, and worse and worse, and so it is like to decay from Time to Time. Because ye English Dialect and Pronunciation \* \* \* where in ye Land (the Towns and Cities only excepted) \* \* \* neither are the old Folks to be depended upon, as you will find by y<sup>a</sup>. Instance about the Sieur Angwin, the greatest and the eldest of the late Professors of ye Cornish Tongue, who being desir'd to interpret GEVERN ANKO, prepossessed with the thoughts of Gever, which signifieth Goates, and perplex'd about Anko, concluded that it was 'Goats all'; Whereas it signifies the Bounds of the Hundred:—Gevern He knew to be the Hundred, but forgot that the

<sup>1</sup> The words in italics are written in the MS. over the word preceding.—W. C. B.

Quere MS. fester.

<sup>2</sup> Mal heer.

<sup>3</sup> f. Kalliak.

<sup>4</sup> [These lines mark the end of pages in the original.]

<sup>5</sup> Consule MS.

<sup>6</sup> The MS. very imperfect.



nekovaz dro an geer ko dewe-  
thaz durt per hen ko. Tra an  
pa \* \* \* Me a glowaz dro tho  
an Karack Mean Omber; rag  
hedna mar peth travith gwrez  
tho gwetha an Curnooack, eue  
a dale bose gen kine eu ginnez  
ubba, ha Deskez da, kevez buz  
mennau, rag na genz buz neb-  
bas | buz deu po try aorama  
anetha, mesk an GYwouen<sup>1</sup>(*gy  
women*) eu gwenhez ha Deskez,  
drez ul an rerol ane derarta  
enge polta, po vedn dose ugge  
va drez lirkland an delna eu  
penaveth \* \* \* ab peth gwrez,  
lebben it an scant vedna bose  
gwrez ugge hemma, voz des-  
hava<sup>2</sup> marveer Guthvaz an l<sup>3</sup> \* \*  
az Tavaz pokarra tha Greckian,  
Hebran; \* \* \* Me a glowaz  
lever \* \* \* \* Markressa, an  
Dean deskez teer na gwellaz  
hemma \* \* \* a venya kavaz  
fraga e ouna en skreefa com-  
poster, &c. Whath hemma el  
mose rag bonogath leig; rag  
na rigga ve beska gwellaz  
skreef Bretten Coth veeth; an  
Letherau war an Mean beath  
ezen Eglez Burian na oren pen-  
dra tho weel anotha, ha Mean  
orrol en Madern en Gunneau  
Bosolo henwez Mean scriffez

Word Ko was Cornish for  
'remembring.' Something  
like this I have heard about  
Mean Omberkarack; therefore  
if any Attempt be made about  
preserving the Cornish, it must  
be by such as are perfect  
natives, and good Scholars,  
scarce to be found, for they  
are but few, | but two or three  
that I know of; whereof one  
is of more special Skill and  
Learning than any that have  
been this long Time before, or  
will come after in all Likeli-  
hood; so that except it be now  
done it is never like to be at all  
hereafter, having so much Skill  
in Languages as the Greek,  
Hebrew, &c.,<sup>4</sup> of which I heard  
him say that the Cornish carries  
a very near Likeness. If that  
learned Wise Man should hap-  
pen to see this, doubtless he  
would find Cause to correct it  
in Orthography, &c. However,  
this may pass for a vulgar  
Essay; for I have never seen  
any of the antient British Writ-  
ings: the Characters on that  
stately Tombstone in Burian  
Church<sup>5</sup> we know not what to  
make of, and another Stone in  
Madden in the Downs of Bosolo<sup>6</sup>

<sup>1</sup> [This, as Dr. Borlase explains in pencil, refers to "Mr Keigwin, Mr. Lloyd's Schoolmaster in Cornish."]

<sup>2</sup> v. MS.

<sup>3</sup> v. MS.

<sup>4</sup> Not in ye MS.

<sup>5</sup> [The writer probably refers to a Norman French Monument.]—W. C. B.

<sup>6</sup> [Two Keltic surnames—that of a father and son—connected as usual by the Latin 'Fil' is the true interpretation of this well-known inscription which reads 'Kialobran Cunoal Fil.'—W. C. B.]

tho an Jorna ma tegge na orren  
 panna Letherau noniel ; an  
 peth eu gwellex gen a vee, tho  
 bose guthnethez ha dismiggyez,  
 en lavar Coth gwnez | war  
 Cota Dean broze (*brauze*) en  
 Arganz hunt tho Canz bloath  
 Coth lebben marrack en pedden  
 west pow Densher, ha kellez  
 (kar dre hevol) gen e Mab leean,  
 mose tuah e Bargenteer en  
 Pedden an wollas ; sue ve kevez  
 a dewethaz gen wonen reeg  
 gweel Ke, ha gwerhez ; an  
 gwaz reeg e perna, a re \* \* \*  
 flanen tho an kensa skon \* \* \* \*  
 an Choy na igge tri \* \* \* \*  
 \* \* \* nez tho an karrack glooz  
 en Cooze. An Gerriau war no  
 \* \* \* Car Dey res pybtra, leb-  
 ben nebbaz kene cowzez mar  
 dewethaz (kar dre hevol) thera  
 Curnooack en powna, ha lebben  
 na gez buz nebbaz-en powna an  
 peth ; ez gweel terem Creege  
 dreved naua dowethe akar : Rag  
 me a hunnen ve gennez en Col-  
 lan an Powna<sup>1</sup> eu an Curnooack  
 mouyha Cowzes, ha whaeth may  
 kothera penaz oma buz dro tho  
 wheath Bloah Coth, na olga  
 ma e clappia, na skant e guth-  
 vaz ; an where thera ma pedeere  
 tho durt Seanz a Dama tesna  
 an Pobel-choy | ha an Contra-  
 vagian tho clappia traveeth  
 tho Ve buz Sousenack. Ma

called the written Stone to y<sup>s</sup>  
 day bearing Letters as un-  
 known. What I have met with  
 legible and intelligible is a mot-  
 to on a Gentleman's Coat of |  
 Arms engraven in silver of  
 above a hundred years old, a  
 knightly ffamily<sup>2</sup> at present in  
 the west of Devon, and lost  
 'tis like by his Steward holding  
 Court at his Manor<sup>3</sup> at the  
 Land's End ; it was lately found  
 making a Hedge and sold ; He  
 that bought it sent it unto the  
 first Branch of that Family now  
 planted by the Mount.<sup>4</sup> The  
 words on it are 'The Great God  
 giver of all Things,<sup>5</sup> which  
 somewhat varies from the pres-  
 ent Speech, so late (it seems)  
 Cornish was in Use in that  
 County, and now it is almost  
 disus'd in this ; which to me  
 confirms the conclusion of its  
 Discontinuance : for myself  
 being a Native in the very heart  
 of this Country where the  
 Cornish is most spoken, yet I  
 do remember that being but  
 about a half-a-dozen years of  
 Age, I could neither speak nor  
 understand it ; the Reason I  
 conceive to be a Nicety of my  
 Mother's forbidding the Ser-  
 vants | and Neighbours to talk  
 to Me otherwisethan in English.  
 A like Case I have sometime

<sup>1</sup> Corrected to 'Powna.'—W. C. B.

<sup>2</sup> [Harris of Hayne.]

<sup>3</sup> [As Kenegy.]

<sup>4</sup> [Mén.]

<sup>5</sup> [The Motto of the Harris family, of Hayne.]

kothem cavaz tra an parma en  
lever Arlyth an Menneth dro  
tho e deskanz Latten. Hag  
ubba ma peth ama kibmiez tho  
gwerl Semblanz gun Aulsen  
Coth Brose :—

Parvum Hærediolum Majorum regna  
meorum

Quod Proavus, quod Avus, quod  
Pater, excoluit.

Nebbaz gun Teer, gun Treveth, ha  
bean Reveth,

Telhar a Seera, Seera \* \* \* \* hinge  
a weth.

\* \* \* enna mose a lez tho se  
\* \* \* ha ugge hedda mose tho  
Frenk, na gez kothem tho  
guthva<sup>1</sup> meer en Tavaz Cur-  
nooack, lebna tose tho gawaz  
tra-gweele<sup>2</sup> en Bez; ha lebben  
thera Ma toulà tho gwellaz mar  
pel itna oggastigh vel leez an  
Controvagian, ha ma them mar  
veer crenga rarta; buz na ellam  
ry tho tha mouy tre guffia  
them; rag then e skant tounack  
tho bosc gwellez en lecaz Ger-  
reau, a dael bosc gwrez aman  
durt an Latten, po an Souse-  
nack: ha na ore den veeth durt  
| peniel reeg an kol ma kensa  
dose durt an Romans meskez  
gen a Brittez, po ugge hedna  
durt an Sausen, metessen, durt  
an dew; buz thera ma wheelaz  
en skreefma (mar mere drel a  
ma) tho gurra an geerna a tre-  
neuhan ra dismiggià gun Tavaz  
ny sengez tho rerol; ma lever

met withall of the Lord Mon-  
taine in his Essays about his  
learning Latin. And here if I  
may be allow'd to allude unto  
ye Great and Ancient Anson-  
ius:

Parvum Hærediolum Majorum Regna  
Meorum

Quod Proavus, quod Avus, quod Pater  
excoluit

A little Heritage of homely Race  
My Father's, Grandfather's and Great-  
grandfather's Place.

When going abroad to School  
and afterwards over to France,  
I do not remember that I at-  
tain'd to any pass in the Cor-  
nish Tongue, untill I came to  
be concern'd in Business; And  
now I do reckon to see into  
it almost as far as most of my  
Neighbours, and do as much  
esteem it, but I cannot ascribe  
to it more than is meet, for it  
appears to be imperfect in many  
Words, which must be supplied  
from the Latin, or the English;  
and it is uncertain whether |  
this Loss did befall it at first  
by the Romans intermixing  
with the Britains, or afterwards  
by the Saxons; probably by  
both; But I do here avoid (as  
much as I can) such Likeness  
of Sound, as discovers our Lan-  
guage to be beholden unto  
others; and having by Me a  
a little Fancy of the Dutchess

<sup>1</sup> v. MS.

<sup>2</sup> v. MS.

bean (*vean*) rebbam dro tho an<sup>1</sup>  
 Arlothas Curnow skreefez rag  
 an Flehaz nab Blethanniau<sup>2</sup> a  
 lebma, dro tho \* \* \* deag  
 war iggans, le \* \* \* ma  
 leverres gen \* \* \* aorama dro  
 tho an Tavaz Curnooack, Fat  
 la eue a reeg dose t \* \* \* mose  
 a leez an Bretten, ha an Kem-  
 breeanz, ha an Curnowean,  
 meskan gy na eue likland dre  
 vidna (?) gaz pel, hep merwal  
 akar, ha dose tho travith; ther-  
 ama suppoga an delna tho an  
 lita, rag an Bretten ha an Cur-  
 nowean: Voz an Frenkock feen  
 parrez tho cummeraz telhar  
 wara niel, ha an Sonsenack  
 nobla war e gilla; na orava |  
 drel an Kembrean gweel rag  
 tho gwetha ge Tavaz; buz Me  
 a aore hemma, urt e hoer an  
 Curnoack, druava talvez buz  
 nebbaz tho bose gurrez, war  
 barrha gen an Sousenack, an  
 peth eue parrez tho ry polta  
 gwel tho tha, dre gava Cum-  
 merez durta; ha whaeth an  
 Sousen metessen olga gawaz  
 maga nebbaz Skeeanz vel an  
 Brettez it ge clappia ge for,  
 nereegan d . . e drez ubba  
 an kensa dalleth lebma gun  
 gwel neaue ny ha an Gwayne  
 gun Enys da reeg ge dro tho  
 an u whelder ma<sup>3</sup> \* \* \* \*

of Cornwall, written for my  
 Children some years past, about  
 the thirtieth Page, I have given  
 my Observations of the Cornish  
 Tongue, how it came to be di-  
 vided amongst the Britains,  
 Welsh, and Cornish, amongst  
 whom it is not like to abide  
 long, by [something omitted?] it  
 dye away and come to Noth-  
 ing; I do presume so at least,  
 for the Britains and ye Cornish:  
 because of the finer French  
 taking place upon the one, and  
 the nobler English upon the  
 other; I know not what | the  
 Welsh may attempt for the  
 Preservation of their Tongue;  
 but I know this by her Sister  
 the Cornish, that it is but coarse  
 and insignificant in comparison  
 of the English, which is ready  
 to give it Advantage by Ex-  
 change; and yet the Angles  
 might be as blunt as they found  
 the old Britains in Speech and  
 Language, when they first came  
 over, untill our better Clime  
 and the Traffick of our Island  
 improv'd it to this Pass. But  
 if any will contend that the  
 British Tongue may attain the  
 like improvement, as their For-  
 tune succeeded, I am so far  
 from opposing the Reputation  
 of my Mother-tongue, and

<sup>1</sup> "This MS. is at present [I am copying the transcriber's words, W.C.B.] in the hands of Mr. Rob. Davy, of Ludgvan." [Dr. Borlase had two

copies of it. See 'Memo of the Cornish Language,' MS., p. 158.]

<sup>2</sup> v. MS. "Blethannian."

<sup>3</sup> MS. quite destroyed.

martra wonen ve \* \* \* lever ol  
 drolga tavaz an Brettez cooth  
 tose th \* \* \* e whelderma,  
 a we \* \* \* marpee an gy  
 maou (?) fortidniez, ther a ve  
 ma pel durt na ha an dadn an  
 Tavaz a Dama ha a Pow, uz  
 rag e Crenga dro ma parrez tho  
 leverol an delna a weah, ha des-  
 kunta leh dressa lever an Have  
 (?) an Arlothas Kernow bose  
 kevez en dula a Flehaz ugge  
 hemma, radden olga bose par-  
 rez tho leverol drerama gweel  
 nebbaz aga a | Curnoack, voz  
 dre vengama gweel a hunnen  
 tho bose devethez drez Maur,  
 buz ma bose gun ollez gen pan-  
 na Collan da therama leverol ul  
 an Sompel rag an Curnoack;  
 eue a dael bose Ankou e hun-  
 nen a vedden pedeere drerama  
 creege hedna tho bose gweer eu  
 skreefez enna, rag travith orrol  
 buz tho gweel weez, ha lebben  
 dru a devethez ita Brez, me a  
 vedn gweel Duath an Skreefma  
 durt an dewetha reem vez an  
 Kensa Caon Horace.

Quod si Me lyricis Vatibus  
 inseres  
 Sublimi feriam Sydera  
 Vertice.

Mar pethum Francon-belgan  
 me ra bose  
 Po car dru Sousen-Curnow  
 vith anar vrause.

[N.B.—I have copied the above word for word from the MS.  
 of Mr. Ustick, not attempting in any respect to alter his

Country, that for their Sake I  
 will willingly consent, and the  
 rather least it, the Dutchess of  
 Cornwall's Progress, should  
 hereafter be seen in the Hands  
 of my Children, some might  
 take occasion to object that I  
 slighted the Cornish | \* \* \*  
 \* \* \* \* \*  
 \* \* \* because I would make  
 myself a Transmarine, but it  
 therein appears with what Res-  
 pect I carry the whole Matter  
 of the Cornish, and it must be  
 Envy itself that will think I  
 do believe what I therein have  
 fained about that particular.  
 'Vis animo, nec tauta Superbia  
 victic. However, seeing it is  
 now come into my mind, I will  
 conclude this Scribble with the  
 last Line of Horace's first  
 Ode :—

Quod si Me lyricis Vatibus  
 inseres  
 Sublimi feriam Sydera (*sic*)  
 Vertice.

transcription, or to correct the grammar or orthography. A few passages which Dr. Borlase quotes from the 'Progress' by the same author I hope to print on a future occasion. Meanwhile it would be extremely interesting to discover the originals of either of these pieces. I have here to add my thanks to the author of the *Lexicon Cornu-Britannicum* for kindly reading the proof sheets of the above. W. C. B.]

IX.—*Archæological Discoveries in the Parishes of St. Just-in-Penwith and Sennen, made during the past year by the President, W. C. BORLASE, M.A.*

A GLANCE at the map of Cornwall will suffice to show that the western seaboard of the county, properly so-called, consists of a small piece of jagged coast-line, 5 miles in length from point to point as the crow flies, extending from Kenidjack Castle to the Land's End. Beyond these headlands in each instance, the cliffs trend away to the eastward, so that the part which lies between them is that which faces most directly west. The shore between these points is deeply indented by several bays or bays, the largest of them being Whitesand Bay, within which again lie several small coves. The cliffs themselves are cleft into numerous divisions by valleys rendered all the deeper by stream-works and open excavations—the evidences of mining operations carried on from a remote period to the present day. Of these valleys the principal are Nancherrow, Nanpean, Porthnanvan, Nanquidno, and Vellan-dreath. From these circumstances, as well as from the nature of the rocks themselves, it results that 'Karns' as they are called,—that is to say masses or congeries of rock, whose sides have proved impervious to the denudation which has removed the softer portions,—stand out in bold relief and often to a considerable height, on such portions of the cliff as intervene between the valleys or the coves. Of these 'karns' there is scarcely a single one which does not bear, either on its summit or on the downs close by, an artificial 'cairn' or tumulus of stone, or the traces of one having existed there in days gone by. On this one narrow strip of cliff there are more of these little sepulchres grouped together than on any other portion of the Cornish coast, unless it be on the shores of the Lizard near Mullion. I shall presently give a possible explanation of this custom of clustering the tumuli along those shores which have a western aspect, while those portions which face the east are almost, if not entirely, without them. In addition to the cairns, it will be found that this same stretch of cliff contains no less than four cliff-castles,—those of Maen, Ballowal, Cape

Cornwall, and Kenidjack, the latter of which I shall proceed to notice in connection with a recent discovery of bronze articles on the summit of the promontory on which it stands, and at a distance of only 150 yards from the ramparts.

KENIDJACK CLIFF.<sup>1</sup>

The so-called 'castle' itself owes the main portion of its strength to a natural 'karn' of rocks, forming (as it were) the central bastion of the outer wall. On the eastern side of it is a triple vallum and ditches. A single wall, mostly formed of stone, crosses the promontory to the western side where a double wall and ditch complete the fortification. All the ramparts are formed at their bases by large stones set on edge, and it is probable that externally they were faced with masonry, though the inside was merely filled up with earth. In common with all our Cornish cliff-castles, Kenidjack was intended for defence from within against a land attack. Immediately above the castle on the land side is a 'cairn,' inclosed by a double ring of stones, and having the remains of an open grave exposed to view in the centre. This cairn was partly destroyed when the St. Just Rifle Corps erected their 'butts' close by. Following the direction of the shooting range, at a distance of about 150 yards from the target, a low dilapidated fence of stones may be observed, set on edge, running across the back of the promontory, and touching here and there in its course large banks of earth and stone. It appears to be the ruin of an inclosure formed for agricultural purposes,—similar banks and terraces, with the remains of what seem to have been hut-dwellings, being visible all along the southern slope of the hill. Under one of the piles of loose stones midway across this low fence a labourer while raising stones for the highway, discovered—together with a quantity of smelted copper—the four objects figured on next page.

When found they were resting on the natural unbroken soil on the south east side of an enclosure, about 15 feet square, formed of stones set on edge. The workman, who completely

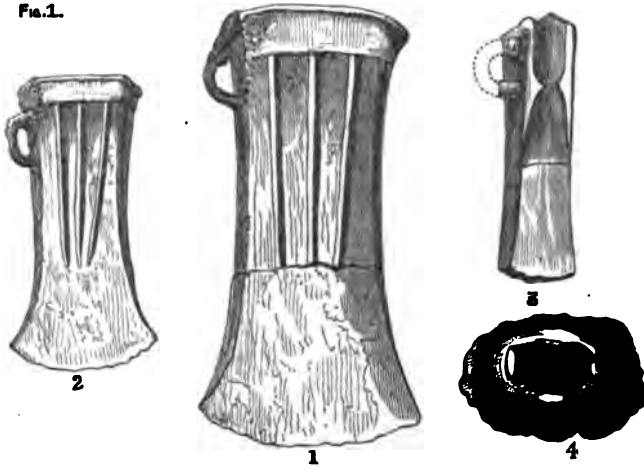
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<sup>1</sup> In spite of all the singular derivations which have been propounded for this name, I am inclined to think that it is merely the Cornish word "karn" in conjunction with the name of the Welsh Saint Teilo or Elidius—found in Port-isceck (or Isaac), Canal-idgie, St. Issey, &c., &c. The termination is certainly nothing more than a vulgar corruption of "issack." A chapel to this Saint may have stood on the estate.



cleared out this area in search of other objects, gave it as his decided opinion—(and in this, from what I saw of the place, I think he was probably correct),—that the stones on edge had been once the base of a building which had fallen in,—the pile of small stones in the middle representing the débris of the ancient walls.

FIG. 1.



CELTS AND BRONZE ARTICLE FROM KENIDJACK.

Two of the celts are of the socketed type, the third is a paalstab, much broken, but showing signs of having been provided with a single handle, and the fourth object (2 inches long by  $1\frac{1}{4}$  inch broad), perhaps served as the knob of a sword hilt, if it be not the cast-off from the mould. The edges are indented; and there is a cavity in the upper face, on the rim of which appear to have been four knobs. Of the socketed celts the larger is  $5\frac{1}{2}$ , and the smaller  $4\frac{3}{8}$  inches in length. Each is ornamented with triple lines drawn down the sides, and each is provided with a handle. They bear an almost exact resemblance to the pair found at Karn Bré, near Redruth, and figured by Dr. Borlase in the 'Antiquities of Cornwall.' The type is a common one in the county generally. Mr. Collins, who kindly analysed the bronze, tells me that they contain 17 per cent. of tin, the rest being copper, except that there are traces of iron, silica and zinc. The broken paalstab contains

16½ per cent of tin.<sup>1</sup> From 20 to 30 pieces of pure copper lay around these articles, some few of which show the form of the stone bowl into which the metal had been made to run.

On analysis these pieces were proved to contain 98 per cent. of copper, the rest being made up of small quantities of iron, tin and silica. Near them was a single fragment of pottery, thinner and better baked than the sepulchral pottery, and probably a portion of some domestic vessel for cooking. There were no traces of the mound which contained these articles having been used for sepulchral purposes, nor did its construction resemble that of the cairns. That it was connected, however, with the fortifications and other enclosures on the headland seems very probable, and, on the supposition that it was the actual spot on which the celts were manufactured, careful search was made for the stone moulds, but without success.

#### CAPE CORNWALL.

The valley of Nancherrow, ending in Porthleden cove, separates the Kenidjack cliffs from the promontory of Cape Cornwall, where, as in the former case, there are traces of a Cliff-Castle. Until lately the lines of defence were very clearly to be made out spanning the neck of the headland, though owing to agricultural improvements they have now been partially effaced. Hearing that in the course of these operations a cairn had been disturbed, and a large urn discovered and buried in the ditch of the castle, I caused a portion of it to be cleared out in hope of finding the vessel again. At a depth of 8 feet the bottom of the trench was reached. It was found to be strewn with charcoal. Some pottery of the hard and well-baked domestic type was taken up, together with broken flints and round granite pebbles, large enough to have been used as weapons of offence, though none appeared to have served as mullars, nor would their size have fitted them for the purpose. The most singular find, however, in the bottom of the trench was a little stone cist, 2 feet long, and covered by a flat stone. When opened it was perfectly empty, but, being precisely of the same type as those used for

<sup>1</sup> This very large proportion of tin would probably tend to render the articles more brittle. Klaproth arrived at the fact that the average alloy used in Europe was from nine to fifteen per cent. of tin. The facilities for obtaining tin in St. Just may account for the quantity used.

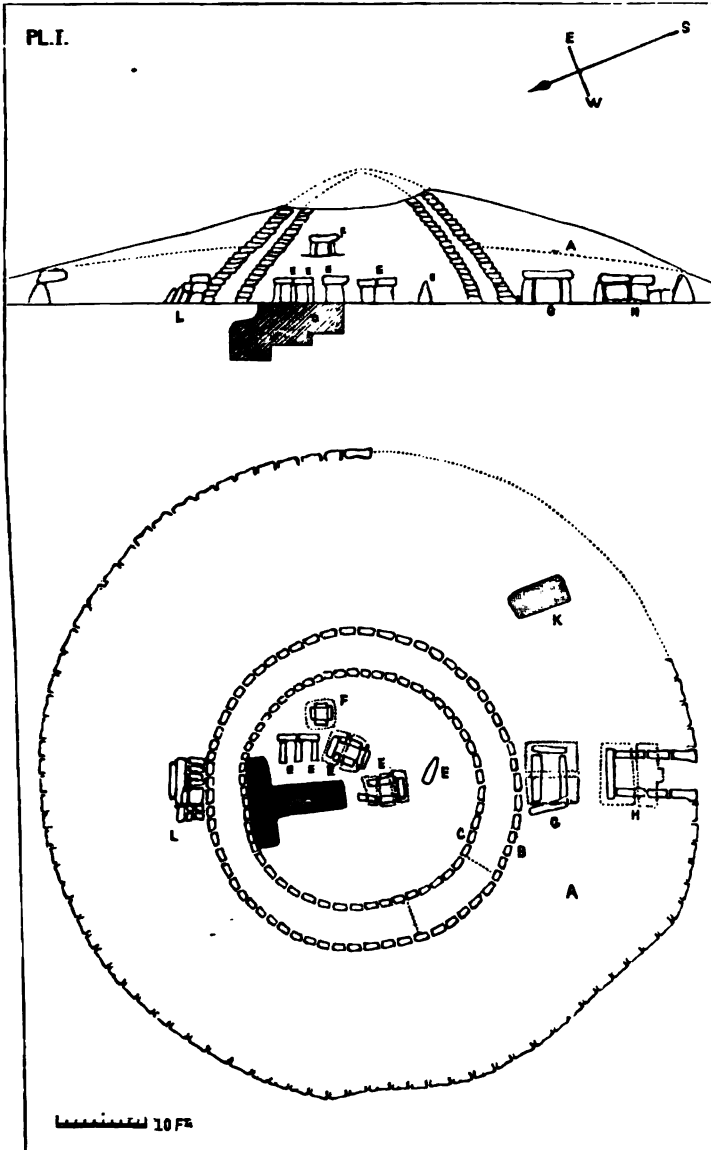
sepulchral purposes, its presence would seem to point to the fact that the ditch was used for interments after it had ceased to be a fortification. No trace of the buried urn could be found.

#### BALLOWAL.<sup>1</sup>

Rising to a much greater height than Cape Cornwall, the Ballowal cliffs come next in order as we pass to the southward. Karn Gluze (in Cornish 'the grey rock'), as the bastion of granite which rises from their western side is called, is a favorite resort of the St. Just people on summer evenings, and there are few more extensive or romantic views to be found in the neighbourhood than that which is gained from the summit of this cliff. The killas of the northern part of the parish is here exchanged for the more fantastic forms of the granite which extend from this point to the Land's End and far beyond it. In an archæological point of view the estate of Ballowal had been known to be one of considerable interest previous to the discoveries which I am about to notice. Many years ago Mr. Leathan, then tenant of part of the estate, (to whom I cannot sufficiently express my obligations for the assistance he has rendered me throughout my researches) discovered in one of his fields which adjoined the cliff, a trench about 20 yards in length, but in some places not more than one foot in width, entirely filled with decayed limpet shells. It was four feet deep, and out of it he removed as dressing for his land no fewer than 20 cartloads of shells. The soil around was of an unusual depth, and on the bottom being reached, stone hand-mills with their attendant mullars, together with portions of a stone bowl were found. Near them was a stone cist which, like that at Cape Cornwall, proved to be empty.

On the 29th of August, 1878, I set some men to work to open a small depressed cairn in the 'croft,' immediately adjoining the field where these relics were discovered. The place proved to have been previously rifled, but contained traces which showed that the centre had been occupied by several small stone vaults or cists, arranged in a circle, and surrounded by an inclosing wall. A few small pieces of pottery, the fragments probably of

<sup>1</sup> In Cornish Bal-huel—"the mine work." Wheal Owles or Owlaz, a mine not far off, is derived from "huel" and "owlaz," or "auls"—"the work on the cliff."



BALLOWALL CAIRN.



sepulchral vessels, together with numerous flints, mullars, and whetstones, were all the reward of one day's work. Undaunted, however, by this ill success, I set the miners next morning to work in a spot which was of even less promise, to all appearance, than the last. On the very summit of the promontory, some two hundred yards from the edge of the cliff, and within the lines of a cliff castle, (not mentioned in any history of Cornwall, but which, as at Cape Cornwall and Kenidjack once inclosed this headland also) the 'St. Just Amalgamated Mines' have thrown to the surface an enormous pile of refuse—to the height in some places of more than 20 feet. In one spot in the summit of this accumulation of rubbish, my attention was called to the fact that the pile appeared to be composed not of material broken underground, but of the granite stones common to the surface of the land. They had therefore been purposely thrown there by the hand of man. Fancying that it might be, as indeed it afterwards proved, the upper portion of a large cairn which owed its preservation to the covering of mine stuff which centuries had accumulated round it, I caused the workmen to drive a trench from the outside of the whole mound towards the point where the surface stones appeared on the top. By this method the structure of the tumulus was, after many days' labour, laid bare on the western side with the following most interesting results. At a distance of ten feet from the extreme edge of the mound, a wall was uncovered, formed of massive blocks of granite (some of them 7 and 8 feet long), set on edge contiguously, and supporting a second layer placed horizontally on their top. The height of this outer wall averaged four feet, and it formed at once the inclosing ring and the basement of the immense pile of stones which lay within. As the men followed this circle round towards the northern side, it was found to be making an outward bulge or sweep in that direction to an extent of ten feet beyond the arc of the original circle. Cutting through the outer ring the men now broke into a pile of loose stones (A, Plate I), 18 to 20 feet in breadth, and after removing a sufficient number to gain a passage through them, reached a second wall (B), resting, like the former one on the unmoved ground, and surrounded at its base by a stratum of ashes and charred wood. This inner circle proved to be 11 feet in height, and was neatly constructed, in a beehive form, with layers of

square or flat stones. In general appearance the rough dry masonry much resembles that of the beehive huts of the district, but it differs from them in the fact that while they are self-supporting, this one appeared to depend for its stability on the pile of stones which it inclosed. At a height of 4 feet 6 inches from the base, a layer of well chosen square stones ran all round the structure, forming a kind of rude plinth from which the upper portion of the truncated cone or dome rose more perpendicularly than was the case with the lower portion.

From this fact I should imagine that, according to the original design, this plinth marked the level to which the cairn was carried between the first and second walls. From this point the central cone, which would have been exposed to view, would take its rise—to the height (to judge by measurements and by the accumulation of *débris*;—of not less than 16 feet. On breaking through this second wall, at a distance of 4 feet within it, a third wall (C) was uncovered, also built in the beehive manner, but more perpendicularly than the other, and of smaller stones. The space between these two domes had been filled in with large flattish stones dropt in a-slant. The central circle which this last wall inclosed proved to be 26 feet in diameter, which gives to the whole tumulus a diameter of from 70 to 80 feet, or, including the bulge on the northern side, and the debris without, of scarcely less than 100 feet from out to out, and a consequent circumference of from 240 to 300 feet.

Before I go on to describe the contents of the inner circle, I wish to point out the close similarity in point of construction, which exists between this cairn and certain other structures in other lands. In the Balearic Isles, for example, are certain buildings known as '*Talayos*,' (accompanied by rude stone monuments of the biliton or T type,) which, from drawings I have seen of them, seem to be very similar. It is, however, in the tumuli of Afghanistan and of India, that the mostly striking likenesses to this cairn present themselves. It certainly bears a most curious resemblance to the *topes* which in those countries it was customary to erect over the relics, or sometimes over the burnt bodies of early Buddhist teachers of noted sanctity. Such an one is that of Bhojpur in central India, described by General Cunningham. The external construction in that case is of stone, the interior being filled up with loose stones, bricks and rubbish.

An outer circle of walling supports a terrace 4 feet higher than the level of the soil. This terrace is approached by an inclined plane or by steps, which on the ground plans appears to have been a bulge from the side of the original outer circle. A plinth, too, encircles the conical structure which rises from the terrace, and this plinth is at no great height above the level of the terrace itself. Were a restoration to be made of the cairn at Ballowal it would be found to agree with these eastern topes in all these several points.

The same features are also noticeable in the great Sanki Tope, as also in Persian monuments, and finally in Asia Minor also, where, as in the case of the tomb of Tantalus, the plinth, so rudely indicated, as I believe, in the unhewn stones of our Cornish mound, has developed itself into a characteristic feature of architecture.

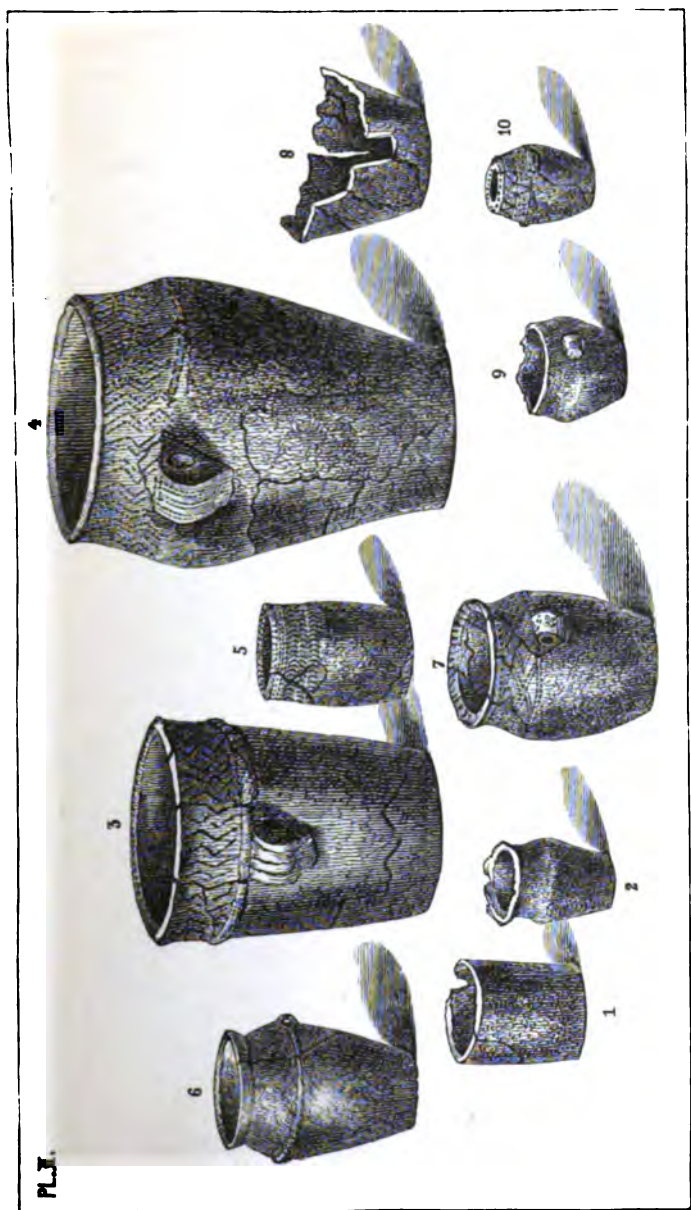
As the workmen penetrated the third wall, ashes became more plentiful, and, on their arriving at the centre, and clearing up the surface of the natural soil, a pit or grave (D) was discovered sunk in the unmoved ground. It was in the form of a T, the shaft of the letter being represented by a pit 8 feet long and 3 feet wide, lying in a direction S.W. and N.E. The depth at the S.W. end was only 3 feet, but it was found to be descending by 2 steps, each 18 inches deep, until the floor at the other end was 6 feet under the surface. Here it joined the transverse part, which proved to be 8 feet long and 2 feet wide, had been hollowed out like a little cave under the natural surface, and was rudely rounded off at each end. It was probably in this part that the interment had taken place, and from the length and narrowness of the excavation, the body would seem to have been placed in an extended position. From the fact that here, as in other graves in the district, no bones were found, I conclude that inhumation was the mode of burial. On first opening the pit, I was inclined to think that miners had been before me, and that it might have been sunk for tin. Practical authorities, however, on the spot gave me good and valid reasons why this could not have been so, and the grave must therefore be classed with others similarly sunk in the neighbourhood in connection with stone monuments, as at Lanyon Cromlech, Trigganeeris and Trewren,—all within the distance of a few miles.

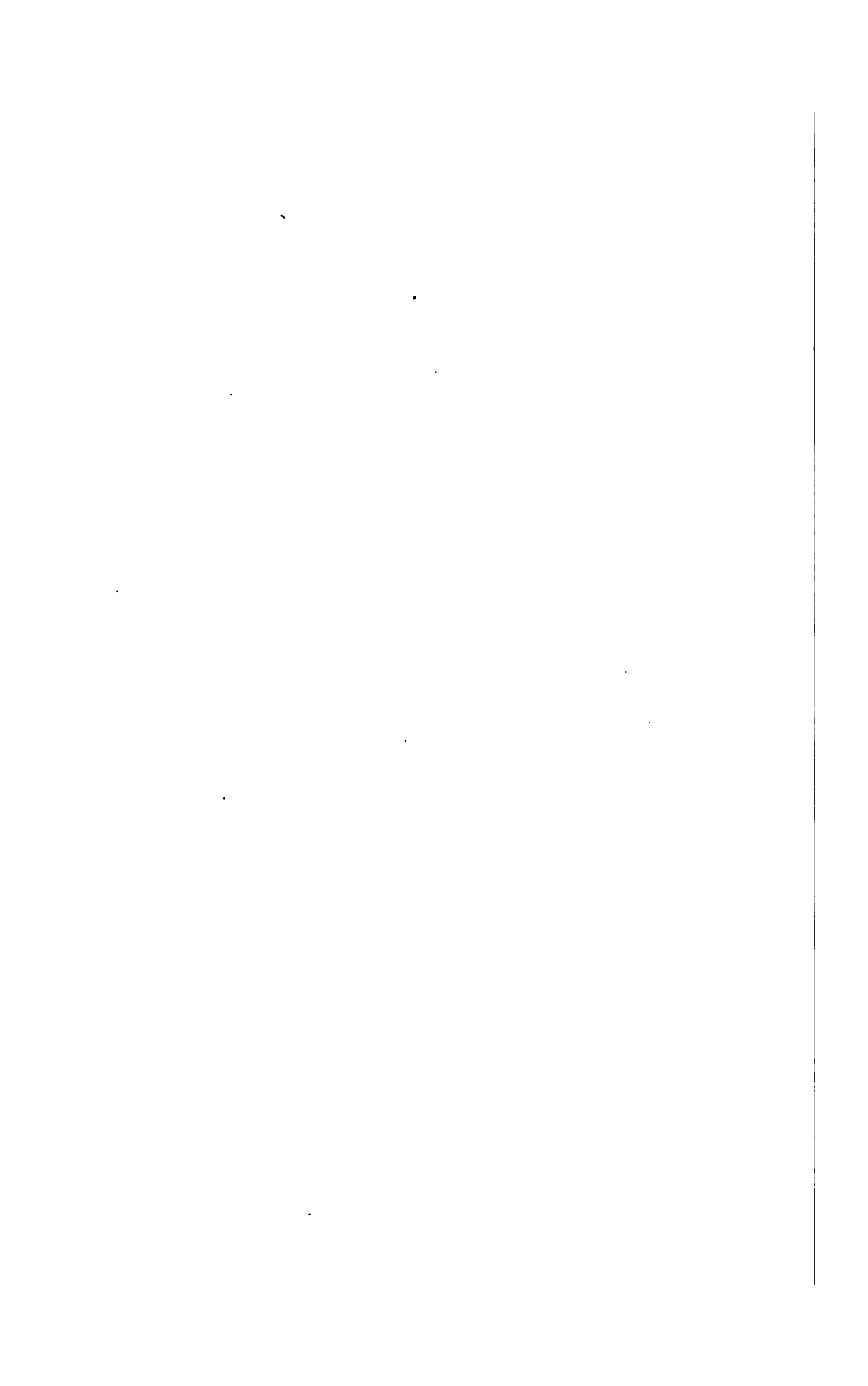


From the floor of the grave was taken up a quantity of black greasy earth, mingled with ashes, but no bone, and amongst this was a bead of a dark micaceous stone, 1 inch in diameter, (Plate III, A) which only differs from a spindle-whorl in being more globular in form. I next proceeded to clean up the floor of the tumulus around the edge of the grave as far as the base of the inner circle, and in so doing, discovered no less than 5 little stone cists (E, E), of extremely neat construction, all arranged on the south and south-west side. The first from which the cover was lifted measured 2 feet 3 in. long, 1 foot wide, and 2 feet deep. At the western corner of this little vault, close against the wall, stood a small and perfectly plain cylindrical urn, mouth upwards (Plate II, fig. 1). It was filled with dark-coloured earth and charred wood, on the top of which lay two minute portions of burnt bone. The height of the vessel is  $5\frac{3}{4}$  inches, and its diameter  $4\frac{1}{2}$ . In the same cist were 3 other fragments of another small vessel, which had been provided with two knobs or cleats, one on each side.

About 2 feet from this cist to the southward was a second, similarly formed and likewise provided with 2 covering stones. It was 2 feet long, 1 foot wide, and 1 foot deep. Within it lay another miniature urn on its side closely hugging the S.E. wall, and evidently placed purposely in that position (Plate II, fig. 2). It is  $4\frac{1}{2}$  inches high, and 4 inches wide at the mouth, and is a perfect representation in miniature<sup>1</sup> of a typical form of Cornish sepulchral urn, having a bulge immediately below the rim and gradually tapering away towards the base. The pottery is very coarse, black, and earthy, and not made on the wheel. A third cist was discovered close to this one, and two others (contiguous to each other, and only separated by a single stone, which formed a wall to both) lay a little to the S.E. On a piece of the superstructure of the cairn falling away, a sixth and last cist (F) was discovered at a height of 5 feet above the ground. It measured about 1 foot square, and contained several fragments of a thin well-baked vessel of the domestic type, such as is found in hut villages in the vicinity, and which in some cases may certainly be placed as

<sup>1</sup> The little cylindrical urn was an equally good representation of the other typical form of Cornish sepulchral pottery. I call them 'miniature urns' because they essentially differ in type from the 'food vessels' of other districts.



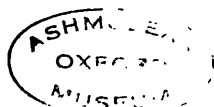


late as the Romano-British period. With these shards was the jaw-bone of a graminivorous animal. The entire absence of any deposit of human bones, either burnt or unburnt, throughout the central portion of this cairn, seems very remarkable, and I can only account for it on the supposition previously advanced, that an unburnt interment took place in the grave, but that owing to the nature of the soil, which will hold water for long periods, no trace of it is left.

Having explored the central space inclosed by the domes, I directed the workmen to turn over the entire area between the outer ring and the outer dome. In doing this they discovered a grave at G, 5 feet 6 inches long by 2 feet 3 inches broad. It was formed of granite slabs, roofed in by two covering stones, and was 3 feet deep, and paved along the bottom by a single stone, on which an inhumated interment was probably placed. Three feet from this grave and between it and the S.W. side of the ring was a finely constructed chamber (H), 5 feet long, 3 feet 9 inches broad, and about 3 feet 6 inches high, covered in by two slabs, and connected with the external ring by an uncovered passage 6 feet long. It was paved throughout, and under the pavement quantities of burnt human bones of adults, and fragments of broken pottery—some curiously ornamented with dots—were discovered. They had been dispersed all over the natural floor of the chamber and the passage. On the opposite side of the mound a curious little empty cist (L), 8 inches deep to the top of a paving stone 18 inches square, and well protected by stones, was found, as also a plain earth-cut grave (5 feet long by 3 feet 6 inches broad) to the south-east, at K.

Before proceeding to my next discoveries I may here introduce a passing remark on the position which this immense tumulus (whose magnitude alone is enough to excite our wonder at the amount of labour brought to bear on the work) occupies on the cliff. It is placed, as I pointed out before, on the summit of a ridge immediately overhanging the lower rocks of Cape Cornwall,—on the highest point of cliff for some miles around. Now, in the eyes of Cornishmen, Cape Cornwall always used to be, and still, in spite of accurate measurements, is held to be the most westerly point in Cornwall. It has also been noticed already that the groups of barrows (more thickly clustered here than on any other portion of the coast) are situated on the

O



very portion of the cliff which looks most directly west. It has been shown too that the cists in the tumulus occupy the south or south-west sides of the grave—only one empty one being found on the northern side. Therefore the question which seems to suggest itself is, ‘Was there any meaning attached to this persistent preference for the western and south-western sides, and for a western aspect?’ ‘Was there any reason in the minds of the original builders why those portions of our Cornish coast which face in this direction should be crowned with tumuli, while far fewer, if any, are found on those which have an eastern or north-eastern aspect. If there is a reason, then the superstition about not burying on the northern side of a church may arise from the same or a kindred cause. I do not myself think that it is the result of mere accident. I think we may fairly regard this grouping of cairns along our western cliffs, and in especial the rearing of this immense tumulus on the highest point of what was held to be the westernmost Cape, as relics of,—if not a solar worship,—still of a superstition connected with, or inherited from, such a worship,—a tenet, that is, of that ‘sepulchral religion’ which obtained among the nations of antiquity, and which connected the setting sun with death. The west has been the “death quarter” of very many ages, and of nearly all our mythology and folk lore.’<sup>1</sup> From the Maoris of New Zealand, and from the Red Indians of America, we have fables brought home to us respecting it, which differ little from those of the classic myths, or the old Teutonic legends. May we then be very wrong in thinking that it was with the object of bringing their dead as nearly as possible to the gulf which parted them from the spirit land that the primitive inhabitants of our county crowded our western rocks with those tumuli the remains of which are still extant, though fast passing away? Mr. Greenwell, after his great experience among the tumuli of northern and central England, has noticed that the dead are generally placed in the grave facing the sun. Though differently applied,—may not the phenomenon presented on our cliffs in Cornwall afford us a like evidence of a solar superstition here?

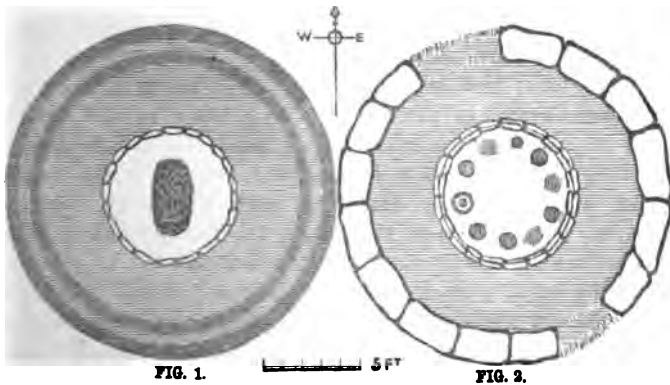
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<sup>1</sup> By the two terms ‘mythology’ and ‘folk-lore,’ I mean to distinguish those hero myths which are of Aryan origin, from the local superstitions of our people, which (since many of them are held in common with the inhabitants of northern Asia) I believe to be of an earlier (may I say of a Turanian?) origin.

It is remarkable that in this single tumulus are contained all the several forms of interment found in the west of England. The graves cut in the natural soil remind us of those at Trewren and Trigganeeris; the cists with miniature urns are common to the whole district; the rectangular graves formed of granite slabs are frequent in the western cairns; and lastly, the stone chamber has its counterparts at Brane, Pennance, Wendron, and Scilly.<sup>1</sup> The fact that interments were found in a disordered state under the pavement of the chamber, recalls to mind similar discoveries in Brittany.

BOSCREGAN.<sup>2</sup>

The farm of Boscregan lies about a mile and a half due south of Ballowal. From the waste land on the cliff adjoining it rise two natural granite tors or summits, known respectively as Karn Creis and Karn Leskys. Just beneath them is the Cove of Pol Pry, well known to the wreckers in times not long gone by. It is only too probable indeed that the fires lighted to allure ships on shore may often have blazed forth from the tops of the dilapidated tumuli which crown these two eminences. The Cornish word 'leskys,' which means 'burning,' may point to the fact that on one at least there was a beacon, if we cannot trace it far enough back to see in it a reference to the funeral pile. On the top of Karn Leskys are two contiguous circles, placed in a direction east and west, with the faint traces of a third at a few paces distant to the south. The two contiguous circles (figs. 1 and



CAIRNS AT BOSCREGAN.

<sup>1</sup> Since this was written two others have been discovered in the district, namely, at Chapel Karn Brea, and Tregaseel.

<sup>2</sup> In Cornish "The house (by the) 'crigs' or cairns."

2) differ from each other in construction ; that on the west side consists of a ring of earth and stone 18 feet in diameter, and only 12 inches high, inclosing a depressed area, in the centre of which is a little hillock 18 inches high. On cutting through this circle nothing was found in the outer ring, but the remains of a low wall were brought to light surrounding the central heap, which proved to be a pile of small well-rounded pebbles from the beach below. The circle, however, which joined this on the east side, had been hedged round, as is usual in Cornish cairns, with a ring of contiguous granite blocks, most of which were still in their place. These inclosed a bank of earth and stone scarcely two feet high, for the upper part of the tumulus had been carried away by stone-carriers, or used for hedging purposes, if it had not been wantonly thrown over cliff. The diameter, as in the other one, was 18 feet. In driving a trench through the middle, a rough wall was discovered surrounding a central circular area 6 feet in diameter. Ranged all round this space (though there was nothing actually in the centre) were no less than ten separate deposits of pottery, comprising portions of certainly not less than seven sepulchral urns. Their bases, most of which were perfect (the vessels having been broken down by pressure from above), rested on the natural soil, though it is possible that in a few cases (where the bottoms were not found) the urns themselves had been inverted. The largest vessel stood at the western side of the circle. When perfect it cannot have been less than from 20 to 22 inches high, with a diameter of 15 inches at the mouth,—being thus the largest sepulchral vessel yet found in Cornwall (Plate II, fig. 4.) The pottery is  $\frac{3}{4}$ ths of an inch thick, and is hard-baked: the clay is full of the decomposed granite of the district: it is black in the centre, but has a yellowish colour on the outside. On either side, 3 inches below the rim, is a perforated handle 3 inches broad and the same in length. On a line with the handle a bulge runs round the vessel and the vessel itself tapers away to a base 9 inches in diameter. The portion above the handle, as well as the handle itself, is ornamented with a laureated chevron pattern arranged perpendicularly. Adhering to the interior of the urn was a quantity of burnt human bone intermingled with charcoal and ashes. On separating the fragments of this vessel with a view to restoring it, I made the

singular discovery that a second urn had, at some period subsequent to its interment, been thrust down into its mouth, apparently splitting it to pieces. The height of the inclosed urn, whose upper rim was on a level with that of the outer one, was 16 inches, and the diameter at the mouth 12 inches (Plate II, fig. 3.) The pottery is  $\frac{1}{2}$  inch thick; dark-coloured throughout; not so well baked as that of the larger vessel, but like that, filled with small angular pieces of quartz. It had two handles, each  $2\frac{1}{2}$  inches wide by 3 inches long. They were perforated, and over them, as well as round the upper band of the vessel, was a double chevron ornament made, as it appears, with a rough stick, and not displaying the care used in the laureated or twisted-cord pattern. The base was 7 inches in diameter; and the interior was filled with the burnt human bones of a fully developed subject, while ashes adhered to the outer surface. The shape was much more cylindrical than that of the larger urn, and a rim had taken the place of the bulge. Both these forms of urns are common in Cornwall, and if indeed this was a secondary interment, it may tend to show, what I have already suspected to be the case, that the cylindrical form is more recent than that with the bulge and tapering base. Urns, such as those found in Dorsetshire and further east, with a very heavy overhanging rim, are at present unknown in Cornwall. A flint, (Plate III, C) with a natural perforation, and a flint possibly used as a 'strike-a-light,' were found amongst the ashes in this last-mentioned urn. A parallel instance of one urn being pressed down inside another occurred not long ago in an adjoining parish. Of the other fragments of urns found in this most prolific cairn, I may mention (1st) the base ( $6\frac{1}{2}$  inches diameter) and some of the portions of a coarse dark earthy vessel,  $\frac{1}{2}$ -inch thick, and full of burnt human bones; (2nd) the handle (2 inches broad) and other parts of a vessel ornamented with the twisted chevron pattern; (3rd) five fragments of a very prettily ornamented cylindrical urn, 5 inches in diameter, and probably 6 inches high, the pottery fairly well baked, of a reddish tinge, and  $\frac{1}{4}$ -inch thick, the sides covered with a series of laureated chevrons, which, from a fragment of the base, seem to have reached to the bottom of the vessel (Plate II, fig. 5); (4th) portions of a rough hard-baked urn (size uncertain), the interior of the rim ornamented with chevrons; (5th) five pieces of rough



dark earthy pottery, having an attempt at sand glaze on the inside. Besides these fragments of seven urns, there were found amongst the earth thrown out of this cairn, numerous beach pebbles, one of which, a flat one, (Plate III, B.)  $1\frac{1}{2}$  inches long by  $1\frac{1}{4}$  inches broad, had been artificially perforated, and probably used as a pendant or charm. We picked up also several splinters of flint, common to the downs of the vicinity, but most frequently met with near tumuli and cliff castles.

Karn Creis (in Cornish 'the Middle Karn'), lies 150 paces south of Karn Leskys. It consists of two peaks, 26 paces apart. On the northernmost of these stands the next cairn I explored, which, like the others, was 18 feet in diameter (fig. 3.) A ring of stones, most of which were still in their places, surrounded it, and

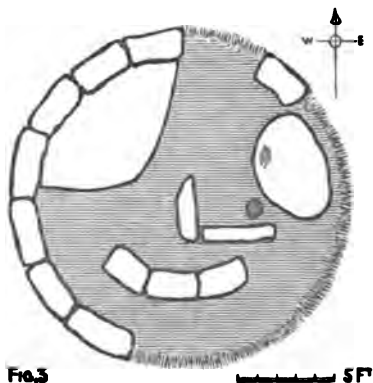


FIG. 3

CAIRNS AT BOSCREGAN.

within this a second concentric circle of stones had been formed. Close to the southern edge of this inner ring were two stones set on edge in such a manner as to lead to the supposition that they were respectively the side and end of a cist 4 feet long by 3 feet wide. A large flat stone lying on the eastern edge of the cairn might have served as the covering stone. The length of the cist lay east and west, and at the eastern end lay a single fragment of pottery ( $\frac{5}{8}$ ths of an inch thick), marking perhaps the position of an urn. Two feet from this, under the corner of the covering stone, lay some other pieces of a reddish colour, which had belonged to another vessel. In its general construction,—i.e.

with a large grave or cist at or near the centre, this cairn resembles many others on this coast, nearly all of which, like it, have been previously rifled.

On the southern peak of Karn Creis lay the fourth and last cairn I explored on the Boscregan estate. The construction of the little burying place in this case was peculiar, and deserves attention. A large natural granite rock, of a square tabular shape, (see figure 4 where it is represented by the shaded portion)

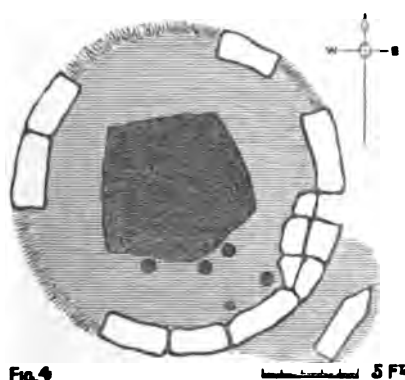


FIG. 4

CAIRNS AT BOSCREGAN.

measuring 8 feet across, and 4 feet in height, had been made the centre of a ring of stones 18 feet in diameter. Similar arrangements of Cornish cairns have previously been noticed by Dr. Borlase and others. One such occurs at Karnmenelez, and another at Tresco, in Scilly; and to judge by the results of my own exploration of a barrow on Morval hill, in which such a rock occurred, I should venture to assert my conviction that in cases where they are found they were purposely selected to form the bases of the funeral piles on which the bodies were burnt. From the north, east, and west sides of the rock at Karn Creis, the filling between it and the outer ring of stones, if it ever existed, had been removed, but on the south side two feet of filling still remained. On removing this the workmen found, resting against the side of the central rock, the greater part of a plain barrel-shaped urn. The pottery was thin and earthy,

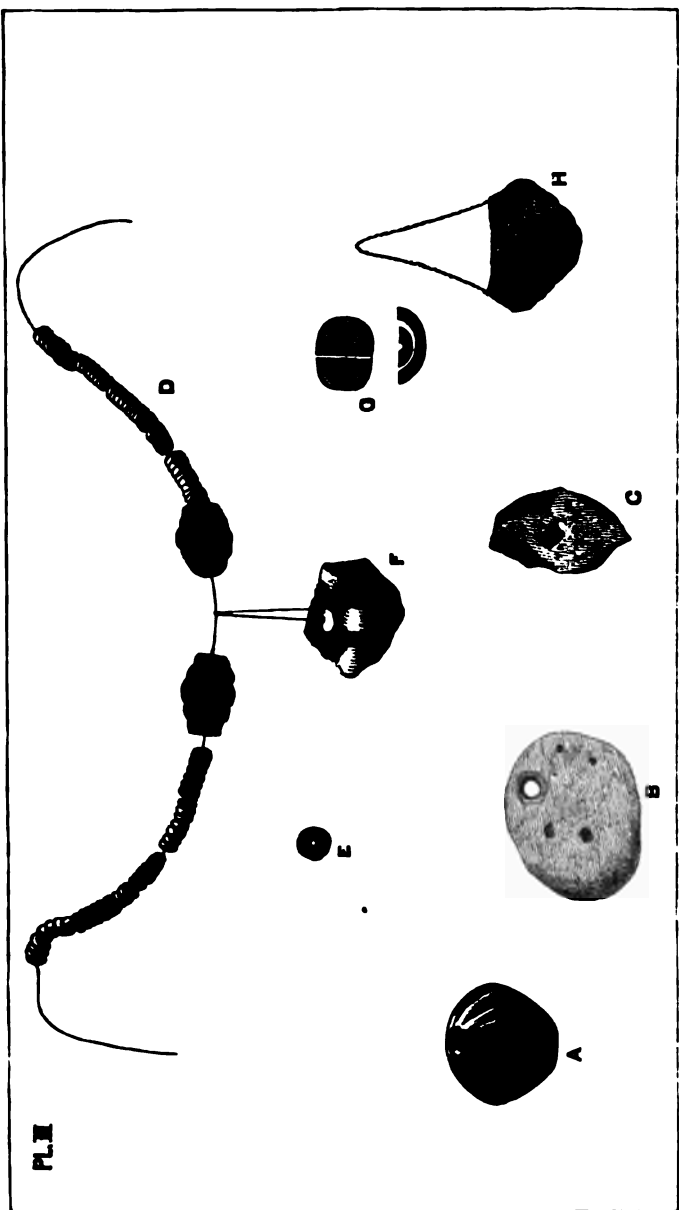
copiously mixed with gravel, and averaging from  $\frac{1}{4}$  to  $\frac{3}{8}$ ths of an inch in thickness. It was ornamented with two cleats, or small handles, each 1 inch wide, perforated with holes only  $\frac{3}{8}$ ths of an inch in diameter. When perfect, the diameter of this vessel at the mouth was 8 inches, and its height a little over a foot. (Plate II, fig. 6.) On examining carefully the agglomerated mass of bones and ashes with which it was filled, a few rough chippings of flint and a portion of a globular glass vessel was found,  $\frac{1}{4}$  of an inch thick, of an olive-greenish hue when held up to the light, but the surface covered with a blueish black coating of iridescent appearance. From the fragment it would seem that the part of the globular vessel from which it was broken was about three inches in diameter. Whether articles of glass were of native manufacture in Britain, or were imported (as seems to be implied by a passage in Strabo lib. iv. c. 5), has still to be determined.

In common with some beads described by Professor Buckman, and found in Wiltshire, this fragment of glass has been found on analysis to contain no lead, but much iron.<sup>1</sup> It differs also materially, both in colour and thickness from that of the vessel found by Mr. Spence Bate, F.R.S., in connection with some graves at Plymouth, and to which he applies the name of "amber-glass."

About 18 inches to the east of where the urn containing this interesting relic was found, and still under the brow of the rock, were discovered the fragments of a second urn of rather rounder form than the others. The pottery averages from  $\frac{1}{2}$  to  $\frac{3}{4}$ th of an inch in thickness; the base measures  $7\frac{1}{2}$  inches, and the mouth 8 inches in diameter. The inside of the rim is ornamented with a series of parallel lines of the twisted-rope pattern placed diagonally, and the outer band of the vessel below the rim is decorated with the usual chevron laureated device ranged in series of acute angles placed horizontally. The handles are 2 inches broad, and are pierced with holes  $\frac{1}{2}$  inch in diameter. (Plate II, fig. 7.) The texture of the pottery is finer than that of the others, though

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<sup>1</sup> Roman beads of a bluish-green colour do contain lead. See Nesbitt's Catalogue of Glass Vessels in the South Kensington Museum, pp. cxxvii, cxxix, &c. &c.





it is extremely black and earthy. Close to the side of this last, lay the bottom and several other fragments of the rudest urn I have yet met with in Cornwall (Plate II, fig. 8.) It was filled with burnt human bones, some of which had become so firmly imbedded in the clay that, when removed, they either broke off or left their stamp in it,—a fact which seems to prove that they were placed in the vessel while the clay was still wet, and that the only baking the urn received was from the flames of the funeral pile. So broken was it that the various portions can scarcely be made to show any sort of symmetry, though it belonged to the class which taper towards the bottom, that part being 5 inches in diameter. The pottery varies from  $\frac{1}{4}$  to  $\frac{1}{2}$  inch thick, and at a height of 6 inches expands to a diameter of 9 inches.

Opposite this urn, and placed close against the inner face of one of the stones of the ring stood a little urn,  $3\frac{1}{2}$  inches in diameter at the bottom and  $4\frac{1}{2}$  at the top (Plate II, fig. 9.) The rim is gone, but otherwise it is perfect, and it is 4 inches high. It has a slight bulge, and is provided with two unperforated knobs or cleats. The pottery is of a very reddish colour within, but yellow externally, and is  $\frac{1}{2}$  an inch thick. A few bones lay near the mouth, but the bottom was filled with snuff-coloured powder.

One foot further to the east of this little urn, in an angle formed by a turn in the encircling ring, were found three pieces of black hard-baked sand-glazed pottery,  $\frac{3}{4}$ ths of an inch thick. One of these is part of a plain bevelled rim, and on another can be traced a rude pattern made by the incision of a pointed instrument. Together with these last fragments my trowel brought out 12 very peculiar beads, which I at first took to be opaque glass, but which have proved on analysis to be glazed earthenware<sup>1</sup> (Plate III, D.) The colour of the glaze is a bright blue, such as that of the best lapis-lazuli. Ten of them are cylindrical and fluted, but the two others are larger and barrel-shaped, though fluted like the rest. The length of the cylindrical ones, when perfect, is  $\frac{3}{4}$ ths of an inch, and their diameter nearly  $\frac{1}{4}$  of an inch. The barrel-

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<sup>1</sup> My friend, Mr. Woodruff, F.S.A., has found some very similar beads in a barrow in Kent. He describes them as composed of vitreous paste. See '*Archæologia Cantiana*,' vol. ix, *Celtic Tumuli in East Kent*, p. 11. The urns there figured bear also some likeness to those of Cornwall.

shaped ones are of the same length, but their diameter is double that of the others. Owing to this, when worn on a chain, it is clear that the smaller ones would have run into the larger ones, to obviate which the latter were provided with little circular pieces of what I take to be Kimmeridge shale, only  $\frac{3}{16}$ ths of an inch in diameter, (Plate III, E) each perforated with a tiny hole, hardly large enough for a pin to pass through, but through which the thread of the necklace was clearly meant to run. To such minuteness of detail had the necklace-maker's art been brought!<sup>1</sup> The discovery of personal ornaments in connection with Cornish cairns is a very rare occurrence. My impression is that these beads are of native origin. Canon Greenwell<sup>2</sup> has indeed strangely enough spoken of Cornwall as a remote part of the country where "the characteristic features of early burial may have been found in connection with interments of comparatively late times," but it must be remembered that Cornwall in all probability received her civilisation long before the rest of England; for civilisation travels in the lines of commerce, and it was on account of her tin (which must have come from Cornwall,) that Britain was first known to the ancient world. At the time then when these beads were deposited in this cairn, Cornwall was in sufficiently intimate communication with the continent to have imported them, if they are of foreign make, and sufficiently civilised to have made them herself, if, as I think myself, they are native. With them were found three other objects:—

(1) A singular little object seemingly made of decomposed stone or concrete, and possibly used as a fastening or button. In shape it is half a sphere, the flat surface being oval and measuring  $\frac{3}{16}$ ths of an inch long by  $\frac{1}{16}$ ths broad (Plate III, G). It is traversed from side to side by a cut or trench, which passes across and bisects it. In each of the divisions of the surface, so formed, is a hole large enough to admit a pin's head, and these two holes join together under the indented line. It seems too small for a counter, and too weak for a fastening for the necklace.

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<sup>1</sup> Glass beads somewhat similar to the cylindrical ones are figured in Faussett's 'Inventorium Sepulchrale,' Pl. v; and one very like the barrel-shaped ones in Warne's Celtic Tumuli of Dorset, Pl. 3.

<sup>2</sup> Note at end of his Introduction to British Barrows.

(2) A heart-shaped stone with flinty excrescences perforated, and probably intended as a charm for the necklace (Plate III, F.)

(3) The base of a leaf-shaped arrow-head of dark-brown flint, finely worked (Plate III, H.) From the delicate texture of the few burnt bone and splinters which occurred with these objects, I should take them to be those of a young woman, or of a child.

#### ESCALLS.<sup>1</sup>

On the Tregiffan estate to the south and south-east of the cliffs on which these cairns are situated, there is evidence of early habitation in the plots of ground and terraces artificially levelled in the side of the cliff, and hedged in with banks and upright stones. Continuing my researches in this direction, I found at Escalls, in the parish of Sennen, a cairn surrounded by a double ring of stones. One side of the area of it was almost entirely taken up by a natural rock protruding through the surface. On the southern side a large rock covered a cist 3 feet long by 1 foot 6 inches wide, in which nothing was discovered but a few flint chips and 2 limpet shells. Outside this grave, however, at its southern end, a little urn was found, full of black earth and ashes, and ornamented with a double chevron pattern arranged round the rim. In form it is barrel-shaped, and it has two unperforated cleats, one on either side. It had been placed mouth downwards, is 5 inches high, 4 inches in diameter at the base, and  $3\frac{1}{4}$  at the mouth. The pottery is dark and thin. In the very centre of this cairn, but not in the grave, were taken up several fragments of British pottery of the more specially domestic or culinary type, such as are found in the hut villages. The repeated occurrence of these in the tumuli is worthy of note in connection with the date of the interments.<sup>2</sup>

#### MAEN.

A few days afterwards I opened three cairns at Maen in Sennen, thus completing the exploration of the cliffs of west Cornwall from St. Just to the Land's End. On this estate occurs one of the most perfect of the cliff-castles of the district, and also a monolith, and

<sup>1</sup> In Cornish—'Ezekiel's'—the name probably of a former owner or tenant of the land.

<sup>2</sup> For an approximate date for the hut-villages, see my paper on the subject in the *Archæological Journal*, read at the Exeter Meeting in August, 1873.



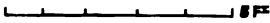
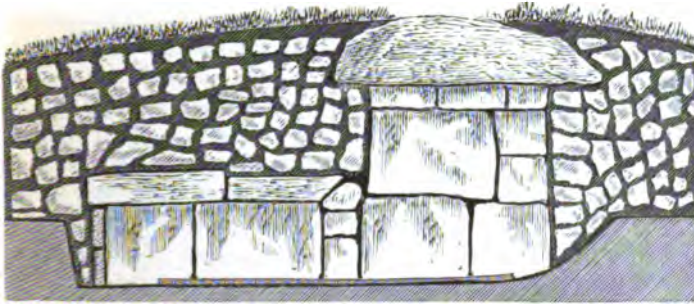
on the adjoining one, in which the Land's End is actually situated, are several cairns which, being denuded of their envelope, are seen to contain stone cists or graves. In the first cairn I found fragments of a large urn, together with flints, pebbles, burnt bones and charcoal. The place, however, had been previously disturbed by the erection of a flag-staff in the centre. In the second was a stone grave, 7 feet long by 4 feet wide, which had also been opened before. The third was a low cairn only 9 inches above the surface, which, though not before opened, seemed to be one of those cenotaphs, or empty memorial mounds, which are occasionally met with in Cornwall and elsewhere.

#### TREGIFFIAN.

Coming back to the parish of St. Just, the last cairn I explored, situated not on the cliffs, but on the downs above them, proved to be unrifled and (although it contained no objects of interest) was remarkable and suggestive in its structure. The ring of stones surrounding it had been carried away for hedging, but the centre (about 20 feet in diameter, and 4 feet high) remained intact. Cutting a trench—as is my usual practice—from the south-western side, the workmen soon arrived at a wall encircling the centre. Passing this, the surface of the natural soil was found to be strewn with ashes; and two flat stones, brought from a hill two miles off, and neatly fitted together, were laid bare. These were the covering stones of a grave  $4\frac{1}{2}$  feet long by 2 feet wide, and  $2\frac{1}{2}$  feet deep. It was very well and tightly constructed, and had clearly never been opened before, yet it was filled up to the top with earth and stones. It lay N.E. and S.W., and, although closed at the N.E. end was found to be open at the other, and curving slightly to the south. Exploring in this direction, we quickly opened out a rudely planned chamber, averaging 4 feet 6 inches from side to side, and about the same in height. The construction of its walls was much like that of the so-called 'Giant's Graves' or 'chambered barrows' found in Scilly and elsewhere, and it was roofed in with a rugged block of granite 6 feet long by 5 feet wide and about 18 inches thick. Like the grave, the end of which opened into it, this chamber was filled with stones and earth. Near the floor, which (as in the grave) was sunk 2 feet below the natural surface (see section), the fragments of a large urn were found bearing the usual laureated chevron pattern.

SECTION

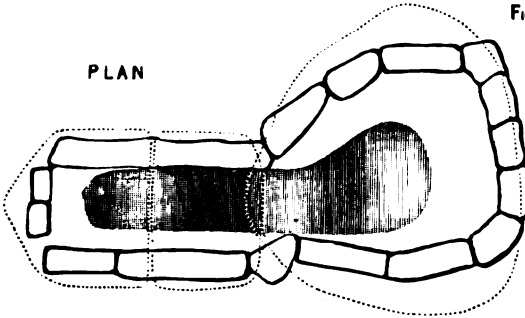
FIG. 5.



GRAVE AND CHAMBER IN CAIRN AT TREGIFFIAN

FIG. 5.

PLAN



GRAVE AND CHAMBER IN CAIRN AT TREGIFFIAN.

They were thick and well baked. On the floor itself, burnt into the clay of the surface, was a stratum of human bone (that of a full grown subject) mixed with the ashes of a peat fire. This conglomerate of burnt bone and clay reached for some three feet into the grave or cist adjoining, as is shown in the accompanying plan by the shaded portion. The burnt stones found in the chamber, as well as other indications of great heat, seemed to point to the fact that here had been the actual furnace in which the body was consumed. Considering the strength of the fire of peat in such a place as this, it is not a matter of wonder that, with the exception of a few fragments of pottery, and some flint pebbles within and without the chambers, nothing of interest was found in the *débris*.

In conclusion, I may observe that the results of these few days' researches in a very limited tract of country in Cornwall, are sufficient to justify the belief that much yet remains to be done to illustrate the unwritten history of the county, and that not alone in such tumuli as seem to be intact, but in those also which may have been previously denuded for purposes other than those of archæology. For according me their kind permission to make researches on their lands, I have to express my thanks to Mr. Richard Boyns, the owner of Cape Cornwall; to the several part-owners of Ballowal; to the Rev. F. Tonkin, the owner of Boscregan; to the Rev. R. J. Roe, the owner of Maen; and to Mr. Hickee, the owner of Tregiffan,—all of whom took a personal interest in my work while in progress.

*X.—The Glasney Cartulary.*

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  - Oath of the Vicars.
  - Oath of the Chaplains.
  - Rules as to the letting of Farms.
  - On vacancy, the Canon to appoint a new Vicar within a month.
- 1268-1275 Statutes of Exeter Cathedral.

- 1270-1 Regulations for the Dean and Chapter of Exeter.  
 1292 Regulations for the same as to residence, order, &c.  
 1267 Charter of the Foundation of the Church of Saint Thomas the Martyr, of Glasney,  
 1287-8 Of the Ordination of the Provostship and appropriation of the Church of St. Melor.  
 1270 Of the appropriation of the Churches of Saint Sithney, Saint Goran, Saint Enoder, and of the Church of Landege, with its Chapels.  
 1270 Confirmation of the Dean and Chapter of Exeter upon the appropriation of the Churches aforesaid.  
 1275 Charter of Menestere & Confirmation of Do.  
 1276 Appropriation of the Church of Saint Colan.  
 [1267] Charter of the Church of Saint Feoc.  
 1267 Confirmation of the Charter of S. Feoc.  
 n.d. Charter of the Church of Saint Colan, by Ysolda de Cardinan to Henry de Champernoun.  
 n.d. Charter of the Church of S. Colan, made to the Bishop by Henry de Champernoun.  
 n.d. Charter of Saint Enoder made to the Bishop by John de Trejagu.  
 1269 Charter of the Church of Saint Goran, made by Philip de Bodrigan to the Bishop.  
 [1269] Charter of the Church of Saint Sithney, made to the Bishop by Roger de Skyburiow  
 [1269] Charter of Landege, made by Stephen Haym to the Church of Saint Thomas, Glasney.  
 [1270] Appropriation of the Church of Saint Sithney.  
 1315 New Ordinance of Lord Walter, Bishop of Exeter, concerning the Sacristy of Glasney, and the fruits of Saint Colan.  
 1315 Acceptance of the offices of Warden and Sacrist.  
 1316-17 Ordinance concerning the farm of Saint Goron by the Provost and Chapter.  
     Provision upon Farms of :—  
     Saint Budock.  
     Saint Sithney.  
     Saint Senar.  
     Saint Enoder.  
     Landege.  
     Saint Feoc.  
     Saint Gluvias.  
     Sum of all the Farms.  
 1271 Taxation of the Vicarage of S. Goron.  
 1271 Taxation of the Vicarage of S. Enoder.  
 1271 Of the taxation of Farms, which on any vacancy may be dealt with according to the judgment of the Provost and Chapter.  
 n.d. Of the Obit of Walter de Bodmin, and when it ought to be observed.

- 1315 New taxation of the Vicarages of Saint Budock and of Behedlan, made by Walter, Bishop of Exeter.
- 1315 Taxation of the Vicarage of Saint Feoc.
- 1318 Declaration of the taxation of the Vicarage of Saint Gluivias.
- 1318 Taxation of the Church of Saint Sithney.
- 1315 Taxation of the Vicarage of Saint Senar.
- 1270 Taxation of the Vicarage of the Church of Landege.
- 1353 Taxation of the Vicarage of Saint Melor.
- 1318 Confirmation of the Bishop upon the appropriation of all the Churches to Glasney.  
When every residence of Canons begins and when it terminates.  
Tenths of the several churches, with a Table of their respective values.
- 1273 Ordinance and Provision of the Provost and Chapter concerning Farms, setting out the terms of payment, &c., and a statement of the names of the Canons called (defective).
- 1304 Relating to the office of Sacrist; what payments are to be made by him, and what he is bound to find; also minute Regulations as to the lighting and burning of candles. The Sacrist to find incense, coals, mats, straw, &c., and to have the keeping of books, vessels, vestments, &c.
- 1355 Appropriation of the Church of S. Just-in-Penwith, which had been given by Sir John de Beauprè; institution of two Priests, called Beauprè's Priest's; two Clerks, called Beauprè's Clerks; and two Choristers, called Beauprè's Choristers.
- [1355] Taxation of the Church of S. Just in Penwith.
- 1329 Ordination of Bodrigan's Chaplain and appropriation of the Church of Lamorek, given to the Church of Glasney by Sir Otho de Bodrigan; concerning services at the Altar, called "Bodrigan's Altar."
- 1400 Letter of Edmund, Bishop of Exeter, on the Reform of Abuses that had gradually crept into the Church of Glasney. No absence allowed without leave being first obtained, and then for short and allotted periods. The Clergy to wear their proper habits, and not to wander about during Divine Service. The Common Seal to be kept in a chest secured with 3 keys. As to closing the gates; bread and wine, &c. Then, as to the renovation and completion of the church. Decree as to foregoing profits for one year, which are to be taken for the works, &c.
- 1485 Regulations as to Accounts, the keeping of money, entering arrears in writing; as to a yearly Account; the election of Stewards; the keepers of two keys of the common chest.
- 1265 Charter of Jocinus de Autrenon.
- n.d. Quitclaim by Thomas Perere to the Church of Saint Feock.

*Abstract of the Glasney Cartulary, a Quarto MS. containing 96 leaves of Parchment, and bound in old oak boards; bought at Sotheby's auction rooms, 18th June, 1878, By JONATHAN RASHLEIGH, Esq., of Menabilly, in the County of Cornwall; translated by JOHN A. C. VINCENT, Esq.*

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IN the name of God, Amen. [The writer premising that, as we are taught by the revelation of the Holy Spirit that events which have actually happened in our own times are worthy of committal to writing in order to arouse the devotion of the living, and to preserve the memory of the departed; so lest perchance the silence of eyewitnesses be the means in after ages of consigning to oblivion (which God avert) the name of the founder of so magnificent a work, he places on record the outset occasion or origin of the foundation of Glasney College.]

There was in the time of Henry, King of England, (son of King John) and of the same King Henry's brother, Richard, King of Almain, Earl of Cornwall and Lord of the City of Exeter, a Bishop of Exeter of happy memory, Walter Goode,\* a man in counsel provident, in action circumspect. He had been sent into Almain for expediting arduous business on behalf of the said king; and, on his return to England, while lodged at Canterbury, was suddenly seized with a sickness so grievous that he was thought by all to be very near death, even at death's door. To him thrice in vision appeared Saint Thomas, formerly Archbishop of Canterbury, in the robes of a Martyr, telling him that out of that sickness he should recover; but that it was God's will that, when he returned to his diocese, he should speed into Cornwall and there on the soil of his Bishopric, namely, in his Manor of Penryn, in the wood called Glasney, found and establish to the praise of God in the name of Saint Thomas the Martyr, a Collegiate Church with secular Canons, their Vicars and other suitable Ministers. Saying to him :—

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\* The bishop's name is also given as "Walter Goode" (not *Branscombe*) in the Certificate of Commissioners for Colleges, Chantries, &c., in Cornwall, 2 Edward VI. See also "Valor Ecclesiasticus."

This shall be to thee a sign. When thou comest to the place, Glasney, thou shalt search for a certain spot in it near the River of Autre, called by the inhabitants *Polsethow*, which Cornish name being interpreted is "mire,\* or a pit"—which said place hath of old time borne such name from the fact, that wild animals in the neighbourhood when wounded by an arrow, were wont to run thither after the nature and custom of such animals, and to plunge into its depth, and arrows could never be discovered there. And thou shalt find in it a large willow-tree, and therein a swarm of bees; and there thou shalt appoint the High Altar and ordain the fabric. Of which said place it hath been anciently prophesied:—*In Polsethow ywhylyr Anethow*, that is to say, "In Polsethow shall habitations, or marvellous things be seen."†

And when, yet laying to heart all that he had heard, the Bishop hastened to Penryn, and inquired for the said place, Polsethow, he found how deep as well as miry and thick with thorns, brambles, and other rough and tangled growth under his feet it was, and on searching for the willow tree, he at length found it, and in it the swarm, as in his vision had been signified. So, being thoroughly convinced of the truth of his vision, he gave thanks to God and, spreading abroad the knowledge of it to every one, by the aid of workmen collected together, who rooted up the willow tree (the trunk of which is yet preserved for a memorial in the church), and the mud being sent down by river to the sea, he caused the site to be cleansed and dried and levelled by means of earth brought from the higher places. In which said place oft-times in the blackness of night a most brilliantly shining light

\* The Latin is written:—"lutu-sive puteus," and extended by the present writer—*lutum sive puteus*.

† The Latin (extended) reads:—*In Polsethow habitacionis seu mirabilia videbuntur*. The present writer assumes an error here for *habitaciones*. [With the slight literal alteration of l into t in the word *ywhylyr*, I should venture to translate this as follows:—In Polsethow "in the arrow pool," (from *pol*=a pool, and *seth*, plural sethow, an arrow) "are" or "will be" (understood) *ywhytyr*= "cities," or "congregations of men." Latin '*civitates*,'—*yw* being, according to *Bullet Dict: sur la langue Celtique* the same as *cyw*; for the plural compare '*Cyttiau'r Gwyddelod*,' the name of the early habitations on Holyhead Island: anethow "marvellous,"—(plural of *anat* which in Breton signifies according to *Bullet "evident, remarkable, illustre."*) W. C. B., Ed.]



was seen from Heaven, and girt round with burning candles a multitude of clerks clad in white, praising God there: as is most positively testified by the neighbours, who told how they themselves saw these things.

He laid the foundation of the church on the morrow of the Annunciation of Our Lady, in the year of Our Lord 1265, and in two years he perfected the fabric, and on Sunday the morrow of the Annunciation of Our Lady, the two years being complete, he solemnly consecrated the church and churchyard. And so concerning the constitution therein of secular Canons and other competent Ministers he laid down skillfully drawn rules, 13 discreet persons of the more substantial sort in the same County being provided and chosen, whose names are contained below; and out of his own wood he gave and assigned to every Canon—each one an acre—for constructing for himself and his successors suitable buildings founded around the church, as the areas are constituted; so that, the several courts and buildings being completed by the aforesaid Canons severally at their own cost, the same Father, deservedly regarding the labours of the said builders and recompensing temporal expenses with a spiritual reward, by the consent of the lawful lords the Dean and Chapter of Exeter, in the fifteenth year of his Episcopal office (lit: "Pontificate") piously appointed and ordained that their several successors, being Canons, should pay yearly for ever out of their prebends, 8 shillings on the day of the decease of each for celebrating for ever the Obits of his builders, according to the form of the Charter of the same Father, ordained concerning the Obits of Canons.

The names of the first founders are as follows:—Henry de Bollegh, the first Provost, special Clerk of the said Father, and truly provident and discreet; Sir Stephen Heym, then Steward of Cornwall, rector of the churches of Lanteglos and Lannevet; Roger de Saint Constantine, then Clerk of the said King of Almain, and rector of the churches of St. Paulinus, S. Hermes, and Lanreythow; Master Nicholas de Tregorrek, then rector of the church of S. Constantine; Master Roland de Pedyforth, then rector of the church of Saint Creed (*sancta Crida*); Master Richard Vivian, then Official of Cornwall, rector of the church of Lanmoren; Master William de Saint Just, then rector of the

church of Saint Just in Roslande; Robert Fitz-Robert, then rector of the church of Saint Wymer; Walter Peverell, then rector [of the church] of Saint Ladoek; Walter de Fernesham, then rector of the church of Saint Melor; Durandus Haym, then rector of the church of Morriwynstone; Payan de Lyskeryt, then Treasurer of the said King of Almain, and rector of the church of Saint Stephen in Branell; and Walter de Tremur, rector of the church of Saint Probus.

On the death of Stephen Haym, who chose his area and built a court in the wood distant from the Church, and divided by the public road from the church and the dwellings of the other Canons, the said Bishop the founder, considering it not suitable for future Canons, took the said Court to himself and his successors, and out of his own money by his bailiff caused payment to be made for celebrating the yearly obit of the said Stephen; and he made Canon and Prebendary Master Adam Haym, then Clerk of the said King of Almain and rector of the churches of [name omitted] and South Hylle, to whom—that the 13th Canon should not want an area or buildings near the church as the other Canons had—in exchange for the said Court he gave and assigned and united to the Prebend a piece of ground on the North side of the church beyond the river, near to the area of the said Durandus Haym, and then wanting competent buildings: which said area, because the said Adam did not build upon it in his time, being absent travelling in the order of Preachers, Thomas, Bishop of Exeter, conferred with the Canonry and Prebend on Master Walter de Bodmin in 1297. After treaty with the Dean and Chapter and also with the Provost and Canons, the Bishop ordained in 1300, that the same area, so united and annexed to the sanctuary of the church, should be for ever free from all secular service, and have the same immunity and liberty as the grounds of other Canons within the close; and after the said Walter had perfected the area and buildings for habitation as other Canons within the said, in order to give him all the benefits which the others enjoyed, and in accordance with the order of the Founder, that every successor to his Prebend should be bound to pay yearly to the Exchequer 8 shillings at the time of celebrating the yearly obit of the said Walter to be faithfully distributed for his soul. Afterwards in chapter in

1305 the Provost pronounced and declared in writing that the same Walter had sufficiently built his said area for himself and his successors, and was entitled to receive the said 8 shillings at his death. After the buildings, etc. were completed, the Founder constructed in the church a Perpetual Chantry for the souls of himself and his two diligent coadjutors, Masters Henry de Bollegh and Walter de Fermesham, with two chaplains, to whose support he assigned the fruits of the church of Menstre. He appointed moreover the Feast of S. Gabriel the Archangel to be celebrated for ever on the first Monday in September, and the same day, yearly, 60s. in bread to be distributed to the poor out of the fruits of Saint Colon, according to his charter made in this behalf. The said Father ruled the said church and See diligently, and manfully defended the rights of the church in many adverse suits. On St. James's Eve, in 1287 [*sic.*], he departed this life in the 23rd year of his Pontificate.

[An erased sentence—then that Thomas (à Becket), Archbp. of Canterbury, died in 1171,\* in about the 53rd year of his age, on the 5th before the Kalends of January, on the third feria (*i.e.* 28 December on a Tuesday), about the eleventh hour.]

*Charter concerning Obits of the first founders, Canons of Glasney confirmed by the Dean and Chapter of Exeter.—(Printed in Oliver's Mon. Dioc. Exon., page 49.)*

Inspeximus by Roger de Tory, Dean of Exeter, of the Letters of Walter, Bishop of Exeter, decreeing that—as a reward for the labours and expenses incurred by the first Founders, who constructed dwellings and buildings on the rude area assigned to them, and who were the first Canons of the Church of S. Thomas the Martyr, of Glasney, viz., Henry de Bollegh, Provost, Stephen Haym, Roger de [Saint] Constantine, Nicholas de Tregorreth, Roland de Pediforde, Richard Vyvyan, William de Saint Just, Robert Fitz-Robert, Walter Peverell, Walter de Fermesham, Durandus Heym, Payan de Leskeret, and Walter de Tremur—every of the successors of the said Canons in time to come, dwelling in the said houses, should pay 8 shillings yearly on the day of decease of every of the Canons above-named Willing

\* The date assigned to the "Martyrdom" is Tuesday, 29 December, 1170; not Tuesday 28 Dec., 1171.

that, of those present at the solemnity, every Canon should receive yearly twopence, every Vicar being a Priest, one penny, other Vicars of a lower order and Clerks, each a half-penny. And that whatever remained of the said sum of 8 shillings should be distributed in bread to the poor for the soul of the deceased Canon whose Obit was on that day being celebrated, such distribution being made by the view of the Provost or Steward. Dated at Horslege on Saturday before the Feast of S. Luke, 1272 (*i.e.* 15 Oct., 1272), and in the 15th year of (the Bp's) Consecration. Confirmed by the Dean and Chapter at Exeter on Sunday after the Epiphany (8 January 127- $\frac{1}{2}$ ) 1272.

Stephen de Hal, of Penryn, and Margery his wife grant 3 shillings in silver of yearly rent to be paid to the Perpetual Vicars and Chaplains in the name of a pension on the first of March every year, secured on a messuage in Penryn burgh; procuring the Seal of the Peculiar of Penryn, and sealing with his consent. Dated at Penryn on the morrow of S. Katherine, 1336 (10 Edw. III.)

William, son of Roger de Bodwey grants a pension of 8 shillings yearly rent to be paid 7 Kal. Novemb. (*i.e.* 26 October) and secured on a messuage in Penryn burgh.

Witnesses: Walter de Carnsvyowe,  
John de Kyllgrew, & others.

Dated Sunday the Assumption of B.V.M., 1349, (23 Edw. III.)

John Rous of Penryn and Constance his wife grant 8 shillings yearly rent. Dated at Penryn Thursday before the Feast of All Saints (*i.e.* 27 Oct.) 30 Edw. III (1356).

Odo Brasygonha of Penryn grants 8 shillings yearly rent out of a messuage in Penryn. Dated at Penryn Thursday after the Feast of S. Barnabas, 43 Edw. III (14 June, 1369).

Benedict Arundell, Canon of Glasney, quitclaims to the Church of Glasney a messuage and land in Polfenten. In return the Provost and Canons grant 6s. 8d. to be paid at the celebration of the anniversary of the Donor, 5 Id. Julij (*i.e.* 11 July), day not to be changed. After payment of the Canons, Vicars, and other Ministers present at Mass, the residue to be given to the poor in bread. Dated at Glasney, Wednesday the Feast of S. Agnes (*i.e.* 21 January) 1320-1.

Walter de Bodmin }  
 William de Mylbron, } Canons.  
 Ralph de Arundell, }  
 Thomas de Treneythyneck, Chaplain.

The Provost and Chapter of Glasney grant to Stephen de Reswalstes, Perpetual Vicar of Behedlan, a messuage and land in Polfenton for the term of his life; he paying yearly 10 shillings at four terms, but he is not to alien the said land.

Dated in the Chapter of Glasney Thursday after the Feast of St. David, Bishop and Confessor (2 March), 1339 (13<sup>39</sup>).

Witnesses: Ralph de Rosmeryn,  
 John de Kyllgrew,  
 Walter de Carndynow,  
 Nicholas de Pennans,  
 Nicholas de Penfor and others.

Constance, widow of John Rous, grants 4 shillings yearly rent out of a tenement in Penryn, between the church of S. Mary, Penryn, on one side and the tenement of Reginald Beauchamp on the other side, for a yearly obit to be celebrated for her soul at the Feast of All Saints (1 November).

Witnesses: Odo Brasigonha,  
 Richard Symond,  
 James Kenel,  
 John Amydew,  
 John Polgeren, and others.

Dated at Penryn, Monday after the Feast of S. Michael, in September (5 October) 1 Ric. II (1377).

Walter Myn (?) and John Treneyda grant to the Chapter of Glasney 8 shillings yearly rent out of three messuages [here minutely described] in Penryn.

Witness: John Tremayne,  
 James Gerveys,  
 Odo Brasigonha,  
 John Robyn of Penryn,  
 John Joce,

Dated at Penryn Monday after the Feast of the Translation of S. Thos. Martyr (8 July) 1381 (4 Ric. II).

Edmund, Bishop of Exeter, to the Dean of Keryer and Sir John Rawlyn, Vicar Choral of Glasney, Greeting. A dispute

having arisen between the Chapter of Glasney and Master Nicholas Harry, Sacristan, the matter has been referred to Commissioners, who gave as their decision, that every Sacristan for the time being was bound to the repair and amendment of the books, vessels, vestments, and other ornaments of the church. They are now to order the said Master Nicholas to obey the judgment given; and if he do not obey, he is to appear before the Bishop in his chapel within the Manor of Chuddelegh.

Dated at the Manor of Chuddelegh 3 August 1424, and 4th year of his (the Bp's) Translation.

William Fylham, Canon of Exeter and Archdeacon of Cornwall, and Richard Olyver, Canon of Glasney and Rector of the church of Alyngton, on a dispute between the Provost and Chapter of Glasney, and Master Nicholas Harry, now Sacristan of Glasney, upon certain articles. The said Sacrist prays:—

In the absence of the Provost, that no minister go away from the college without leave from himself; In the absence of the Provost, in Major Doubles in divine service that he may be accounted most worthy; In the absence of the Provost, that he be President over the Canons in Chapter;

When the Provost is present, that he (Sacrist) may have second voice and second place in sessions and customary processions in presence of the Bishop; other questions on the repairs and mending of books, vestments and other ornaments of the said church; the keeping and letting; and to whom such charges should appertain, in what manner and how.

After long disputes all and singular the premises were left to the abovenamed as Arbitrators, both parties binding themselves to be governed by their decision. They give judgment. As to the first Article—no one to withdraw from the College without leave of the Sacrist;—let it be done, because just and according to the custom of the Collegiate Church. As to the other questions of place, etc., the Senior Canon to have (in the absence of the Provost) vote, voice and place and not the Sacrist unless he be the Senior Canon. They confirm the judgment of Master John Waryn, Canon of Exeter, and Master John Carslegh, as to the repair and mending of books, vestments and ornaments being the duty of the Sacrist. So peace is made between the

parties. Dated at Exeter as to the signing of these Presents 18 November, 1427.

*The Provost to celebrate on certain Feast-days.*

The Provost to celebrate on the feasts of Christmas-day, S. Thomas the Martyr, Epiphany, Purification B.V.M., Annunciation B.V.M., Dedication of the Church to Saint Thomas, Easter, Ascension of our Lord, Pentecost, Trinity, Corpus Christi, Apostles SS. Peter and Paul, Translation of the reliques of S. Thomas, Assumption and Nativity B.V.M., and All Saints. The Provost to celebrate on Sundays, the first Sunday in Advent, Palm-Sunday, the fourth feria at the beginning of Lent (*i.e.* Ash Wednesday); the fifth, Holy Thursday; the sixth, Good Friday; Easter Eve (or the Holy Saturday of Easter), and Saturday the Eve of Pentecost. Also the Provost is to celebrate at the Obit of the Founder on Saint James's Eve.

KALENDAR.\*

*January.*—Id. 13. Obit of Joan, who was wife of Otho Kylligrew.

18 Kal. 15 „ Otho Trevarthyan, knt.

16 Kal. 17 „ Walter de Bodmin, Canon & Founder.

*February.*—1 Obit of Geoffrey Carew, Canon and Sacrist.

4 „ William Cullyng, Canon & Provost.

12 „ Roland Pediforde, Canon & Founder.

14 „ Walter de Tremur, Canon & Founder.

*March.*—4 Obits of Sirs Thomas de Treneythenek and Roger de Blacolnesle.

5 Obit of William Somerford, Canon & Priest.

*April.*—15 „ Roger de S<sup>t</sup> Constantine, Can. & Founder.

25 „ Henry de Bollegh, Canon & Founder.

30 „ Master William N[e]ce, Canon & Priest.

*May.*—7 „ Robert Dracus, Canon & Priest.

27 „ Henry Brasygonha and Juliana his wife;  
and of John Dawbrun and Meroda Scorre (?)

*June.*—4 Id. 10 „ Walter de Fermesham, first Provost.

23 „ William de S<sup>t</sup> Just, Canon & Founder.

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\* The days only, on which commemorations are recorded, are noticed by the present writer.

- July 5.*—Id. 11 ,, Benedict de Arundel, Can. & Sacrist and of John Arundel & his heirs.  
 Id. 15 ,, John de Grandisson, Bp. of Exeter.  
 9 Kal. 24 ,, Walter, Bishop of Exeter, Founder of the Collegiate Church of Glasney.  
 25 ,, Saint James the Apostle.  
 27 ,, Seven Sleepers.  
*August.*—5 Id. 9 ,, William de Bodrigan, Can. & Priest & also of Ralph Arundel, Can. & Sacrist.  
 11 Kal. 22 ,, Payan de Leskerryt, Canon & Founder.  
 9 Kal. 24 ,, John de Beaupré and Margaret his wife.  
*Sept.*—8 Id. 6 Obit of Otho de Bodrigan  
 2 Kl. 30 Obit of Durandus Heym, Canon & Founder.  
*Oct.*—5 Non. 3 Obit of Peter, Bishop of Exeter.  
 Id. 15 Obit of Walter de Stapleton, Bp. of Exeter and William Milborne.  
 16 ,, sancti Michaelis in monte Tumba.  
 Obit of Nicholas de Tregorrek, Can. & Founder.  
 7 kl. 26 ,, Robert de Trethelw, first sacrist of Glasney.  
 6 kl. 27 ,, Richard Vivian, Canon & Founder.  
*November.*—3 Non. 3 Obit of John Rous of Penryn and Constance his wife.  
*December.*—Non 5 Obit of Thomas Gwynow who gaveto the Provost & chapter to celebrate the obits of himself and Ralph De Ponte sacrist for 20 years following, and to distribute yearly on the day of the said Obit ten shillings between the Canons and other Ministers of the church present at Exequies and Mass according to their degree.

## GLASNEY.

*Statutes of Glasney.*

These are the Statutes of the Venerable Father Walter, Bishop of Exeter, to be firmly observed in the Church of Glasney, which are also reduced to writing and sealed with the Seal of the said See in the said Church in these words :—

Walter, by the grace of God Bishop of Exeter, to our beloved sons Master Henry de Bollegh, our vicegerent in those things



which appertain to the Provostship of our Church of Glasney (the same Provostship being vacant) and to all other the Canons of the same Church, greeting, grace and benediction We command you, that you do fully and reverently in virtue of obedience observe in our Church aforesaid our Statutes, which by the tenor of these presents We destine to be henceforth observed by you, the tenor of which is thus :—

1. We appoint that the divine office for the day and night without murmur, devoutly and reverently be celebrated for ever in our church of Glasney ; and that the Canons present in the church and the Vicars of the church do every day enter the chapter and humbly execute those things which to the Chapter belong.

2. Also We appoint that the Canons and inferior clerks show due reverence to their elders, on pain of standing before the crucifix without the choir at all the hours of one day and night following and more at the will of the Provost and chapter if their fault deserve it.

3. Also We appoint and strictly order that all obits and all perpetual anniversaries be henceforth celebrated as they are instituted and that they be reduced to writing containing the manner of institution and the names of the persons for whom they are, and out of what and out of how much they are wont to be supported. And that two be set in authority and sworn, namely, one Canon and one Vicar, who shall be called stewards of the Obits, to execute that office and that the one present shall as to the obits unceasingly supply the place of the one absent.

4. Also we appoint that the priests, nominated and to be nominated for perpetual anniversaries and other offices do follow the choir and the canonical hours as the Vicars on pain of removal or suspension for the time and loss of their stipend for one fortnight to be converted to the use of the Vicars, So, that is to say, that the Provost by the advice of the Stewards of Obits provide that if any Clerk of those nominated shall be removed or suspended the office in the meantime shall not be lost.

5. Also We appoint that in disposing of the weightier business of the church, as in the letting of farms, presentation to benefices, the conducting of pleas and other the like matters, all the Canons be convoked in Chapter who within ten days wish to be and can

be present, otherwise the ordinance contrariwise made shall be accounted null, and the ordainers shall be punished as We may judge.

6. Also We appoint that the Canons shall not by any household service impede the Vicars in the execution of their offices on canonical pain to be inflicted at our judgment on the Canon so offending.

7. Also We order, concerning the ruling of Proctors, that two sufficient principal clerks be ordained Proctors having under them two inferiors, diligently executing their office and procuring peace and silence in the church as is contained in the Council of Lyons.

8. Also We order that negotiations be not henceforth made in our Church as in the same Council is decreed.

9. Also detractors and sowers of hatred amongst brethren, who lead schism, provoke hatred and banish charity,—We prohibit such to henceforth remain in our church on pain of excommunication, distinctly ordering the Provost or his Deputy that, if he find any such, he do utterly eject them without in any wise receiving any constraint from Us.

10. Also We order and decree that no Canon shall receive of the farms of the aforesaid Chapter of Glasney more farms (than one) but shall remain content with one; other farms to be granted to Canons having no farm, who offer the most and who have made due residence.

11. Also We appoint that all farmers shall pay the whole money due for their farms at the appointed terms without any holding back or compression of money due or to be due whatsoever, fully paying to the Exchequer what they owe by the hands of the the steward there who shall receive the same in his time, Otherwise in that right they may be deprived of their farms, such punishment nevertheless being left to our judgment.

12. Also being zealous for the honour of our church (as we are bounden), We order that no Canon, Vicar or other nominated priest in a secular habit enter the ambit of the choir or pass through it or tarry therein from the sounding to the Mass of the Blessed Virgin and thenceforward on pain of losing the upper

garment which he happens to be wearing to be converted to the use of the Proctors and boys of the choir.

13. Lastly We order that Our statutes be observed by all whom they concern, expressly reserving to ourself the penalty of trespasses, together with the interpretation, supplement, diminution and change, as shall seem to Us expedient.

*\* Oath of the Provost.*

I, B. of A., Provost of the Church of S. Thomas the Martyr of Glasney from this time forward, in whatever state I shall be, with the utmost of my power will recall and reform to the ancient state long used and approved, the rights, liberties and customs of the said church, by whomsoever under whatsoever colour or veil assailed, and so recalled and reformed as far as the laws permit I will guard and defend them with all my strength: and I will be faithful to the church and Canons, all and every, past, present and to be. The secrets of the Chapter to the damage of it or of any one of the Chapter I will not reveal. So help me God and these holy [Gospels].

*Oath of the Vicars.*

I, R. from this time forward will show canonical obedience and reverence to the Provost of the Church of S. Thomas the Martyr of Glasney, and I will be faithful to the church. The secrets of the Chapter to the damage of any of the Chapter I will not reveal. I will faithfully acquit my Master [*i.e.* his Canon] by the observance of the Canonical hours and I will be faithful to him in all things. Nor will I withdraw from this service without honourable warning to the Provost for half a year before my withdrawal, unless it shall chance that I be promoted to a perpetual benefice. So help me God and these holy [Gospels.]

*Oath of the Chaplains.*

I, N. from this time forward [as in the Oath of the Vicars down to "benefice;" after which] The statutes concerning my office I will faithfully fulfil. The rights, liberties and customs of the said church with all my strength I will guard and defend. So help me God and these holy [Gospels].

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\* The Oath of the *Canons* is very similar, with the addition of being obedient to the Provost at the commencement.

*As to letting of Farms.*

On account of abuses in letting lands to farm, it is decreed that a farm shall not be intrusted to any Canon, unless he make yearly residence. One farm only to one Canon, unless any voluntarily renounce his farm, in which case the fruits of that farm shall be divided between the Brethren severally.

*On vacancy of Vicar, Canon to appoint.*

Every Canon, on a vacancy by his Vicar, shall fill his place within a month; otherwise the Provost shall appoint.

*Statutes of Exeter Cathedral.*

[Here follow the statutes of Exeter Cathedral dated 4 Kal. May 1268 and confirmed at Canterbury 6 July in the fourth year of Pope Clement IV. (A.D. 1268). They are the model on which the statutes of Glasney are founded]

Walter, Bishop of Exeter, 17 Kal. Sept. (i.e. 16 August) 1275, desires to place on record the customs to be observed in the Cathedral Church of Exeter, and decrees the statutes [many of these are similar to those laid down for Glasney].

Walter, Bishop of Exeter, to Dean and Chapter of Exeter. Referring to several Visitations by himself, he makes regulations as to residence, and differences or disputes between the Canons and Vicars, &c. Dated in February, 1270.

Peter, Bishop of Exeter, to the Dean and Chapter of Exeter. Regulations concerning several matters; as, residence, order in sessions and processions, &c. Dated at Exeter 15 Kal. May, first year of Consecration (17 April, 1292).

*Charter of the Foundation of the Church of Saint Thomas the Martyr of Glasney.*

To all to whom, etc., Walter, Bishop of Exeter, Greeting in the Lord Everlasting. The churches of S. Budoc, in Cornwall, S. Thomas the Martyr, Penryn, and Saint Feoc to be annexed to the Collegiate Church of Glasney. The Statutes of Exeter to be observed. Every of the Canons to have Vicars, who are to receive 20 shillings yearly. One of them to be Proctor in the College, and to be called by the name of Proctor. Every of the 13 Canons to have six marks yearly in the name of portion. Of

the 3 said churches there shall be in each a Perpetual Vicar, who shall continually reside and is to be instituted by the Bishop and his successors. The collation of the said Vicarages to belong to the Bishops of Exeter, who may increase the number of Ministers and their portions as may seem expedient.

Dated at Glasney 7 Kal. April (*i.e.* 26 March) 1267.

*Of the Ordination of the Provostship and appropriation of the Church of Saint Melor.*

Peter, Bishop of Exeter, to all sons of Holy Mother Church, &c. On account of the remoteness of Glasney from the Church of Exeter, he orders that there shall be a Perpetual Ruler, who shall bear the name of Provost, who must at the time of institution be at least a subdeacon, after a due interval to be ordained Priest. He must personally reside in the Church of Glasney at least two parts of the year continuously, or with an interval. He is to exercise over the Canons and Clerks the same authority as the Dean over the Canons and Clerks of Exeter, so that Glasney be as much as possible a daughter following her mother. The Bishop confirms Walter de Fermesham as Provost, and, considering the tenuity of the revenues of Glasney (with the express consent of the Dean and Chapter) confers on the said office the church of Saint Mylor (*sancti Melori*) which shall be annexed thereto for ever. He ordains a Perpetual Vicar to the same church. Dated in Chapter at Exeter 7 Kal. March (*i.e.* 23 February) 1287 in the tenth year of his Consecration. Approved and confirmed by the Dean and Chapter, who affix their Common Seal at the same date.

*Of the appropriation of the Churches of Saint Sithney, Saint Senar, Saint Goran, Saint Enoder, and of the Church of Landege with its Chapels.*

Walter, Bishop of Exeter, to all the faithful in Christ, etc. Considering the tenuity of the revenues of the church of Glasney, and the charge incumbent for the support of Clerks ministering there, the churches of S. Sithney, S. Senar, S. Goron, S. Enoder, and Landege with its chapels of Kenwen and Tregenfedon, with 13 English acres to be held by Church of Glasney in almoigne for ever quit of all secular service. In each of the said churches

there shall be a Perpetual Vicar, to be instituted by the Bishop and his successors, who shall on entry personally reside constantly. One of the portioners of the said church of Glasney shall be Provost of the College, and shall have the care of it. Dated at Clyst, Tuesday after the Beheading of S. John the Baptist (*i.e.* 1 September) 1270.

*Confirmation of the Dean and Chapter of Exeter, upon the appropriation of the Churches aforesaid.*

Roger Tory, Dean of Exeter, and the Chapter of Exeter confirm the letters of the said Walter, Bishop. Dated in the Chapter of Exeter on Tuesday after the Beheading of S. John Bapt. (*i.e.* 1 Sept.) 1270.

*Charter of Menestere.*

Walter, Bishop of Exeter, for the perpetual support of two chaplains, who shall celebrate a daily Mass of St. Mary, and another for the soul of himself (Bishop), Master Henry de Bollegh and Sir Walter de Fermesham, and all the faithful departed, gives the church of Menestere (of which he is Patron) to the use of the said Chaplains, saving a competent Perpetual Vicar. On any vacancy of said Chaplains, the Provost and Sacrist to present. The said Chaplains, by consent of the said Henry and Walter, to have for residence the houses and buildings which the said Henry and Walter have built near the bridge of Glasney, so that they and their successors, being Chaplains, may hold them for ever free from all secular service.

Witnesses:—John de la Noble, Dean of Exeter,  
John de Pontilera, Archdeacon of Exeter,  
John de Esse, Archdeacon of Cornwall,  
Richard de Brendesworthe, Canon of Exeter,  
Hugh de Plenton (Plemton), Canon of S.  
Beryan.

Sir Alexander de Orton, }  
Sir Ralph de Arundell, } *Knights.*  
Sir John de Trejagu, }  
and others.

Dated at the Park of Gargowl, Saturday after the Feast of the Assumption, B.V.M. (17 August), 1275.

Confirmation\* of the aforesaid by Dean and Chapter of Exeter.

Dated at Exeter, Tuesday after the Feast of the Beheading of S. John Baptist (3 Sept.), 1275.

*Appropriation of the Church of Saint Colan.*

To all, etc. Walter, Bishop of Exeter, etc. To celebrate in the Collegiate Church of Glasney for ever in memory of S. Gabriel, Archangel, and nine orders of Angels, on Monday in the beginning of September, the Bishop grants the Church of S. Colan. The Sacrist and his successors to have ten shillings every year if personally present at the solemnity, and every Vicar present five shillings from the fruits of the Church of S. Colan. Every year sixty shillings in bread to be distributed to the poor by the Sacrist and his successors. All these things to be done on pain of incurring excommunication. Dated at Glasney the Vigil of the Nativity of the Blessed Virgin Mary (*i.e.* 7 Sept.), 1276.

*Charter of the Church of S. Feock.*

Walter Peverell gives an acre of land near the land of Penhaldewy, with the advowson of the church of Saint Feoc in frank almoigne to Glasney in augmentation of the daily distribution to the Canons there.

Witnesses:—Sir Ralph (or Randle) de Arundell,  
Sir William de Halap,  
Roger de Trenewyth,  
Oliver de Tregoreen,  
Nicholas de Trenewyth,  
and others.

[No date, but see the next.]

*Confirmation of the Charter of the Church of S. Feoc.*

Walter, Bishop of Exeter, confirms the gift which Walter Peverell made to the church of Glasney and the Canons. "So that it shall not be lawful for us or our Successors in time to come to invalidate so pious a gift."

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\* This Confirmation occurs a second time in the same words, and with the same date.

Witnesses :—[See the last.]

Sir Ralph (or Randle) de Arundell,  
Sir William de Halap,  
Roger de Trenewyth,  
and others.

Dated at Polton on the day of Saints Prothus and Jacinthus  
(i.e. 11 Sept.), 1267.

*Charter of the Church of Saint Colan.*

I, Ysolda de Cardinan, have given &c. to Henry de Champernoun for his homage and service certain land at Saint Colan, called Crofaylward, with a house thereto appertaining and with the Advowson of the church of S. Colan and all appurtenances, To have and to hold to him, his heirs and assigns for ever yielding yearly to me or to my heirs or assigns a pair of white gloves at the Feast of S. Michael for all service, demand and exaction. And that this gift may remain firm and stable, etc. [Sealed.]

Witnesses :—Stephen Haym,  
Sir Philip Bodrigan,  
Sir Thomas Lercedekne,  
Sir Roger de Pridias,  
Peter Haym, clerk,  
and many others. [No date]

*Charter of the Church of S. Colan made to the Bishop.*

Henry de Champernoun gives a messuage with garden (which one George formerly held), in town of Saint Colan and a croft, called Croft aylvod, together with the advowson of the church, To have and to hold to the Bishop and his assigns for ever to give and alien to whomsoever he will, doing to the chief lords the services due and accustomed.

[Sealed.] Witnesses :—

Sir Oliver de Dinan,	} <i>Knights.</i>
Sir Richard de Poltimor,	
Sir Alexander de Okestone,	
Sir John Wyger,	
Richard de Hydon,	
Roger de Archevesc	
Ralph Beaubell,	
and others.	



*Charter of Saint Enoder made to the Bishop by John de Trejagu.*

I, John de Trejagu, Lord of Fentengollen, have given to the Venerable Father, Walter, Bp. of Exeter, an English half-acre of land in Trevowan, near the fountain (or spring) at the Sanctuary of Enoder, To have and to hold to the said Walter and his assigns for ever. [Warranty for himself, his heirs & assigns and whomsoever holding the Manor of Fentengollen as to the said half-acre and the Advowson of the church against all men and women for ever. Sealed.]

Witnesses :—Sirs Philip de Bodrigan,  
Ralph de Arundell,  
Thomas Lercedekne,  
Ralph de Tynten,  
Roger de Bodrigan,  
Renfrey de Arundell,  
Hugh Peverell,  
and others. [No date.]

*Charter of the Church of Saint Goron.*

I, Philip de Bodrigan, have given to Lord Walter, Bishop of Exeter, one English acre of land with the appurtenances in Saint Goron, nearest the church, with the advowson of the church—one of those 3 acres which I formerly held of Philip de Secheville (or Sackville—sicca villa).—To have and to hold the said acre with the advowson and all other appurts and to give, alien, &c., to any persons or colleges, or transfer to another in any estate whatsoever at his will, free from all secular service for ever. [Warranty for himself, his heirs and any who shall hereafter hold his Manor of Bodrigan.]

Witnesses :—Sir Ralph de Arundell,  
Sir Alexander de Orton,  
Roger de Bertford, Canon of Exeter,  
Master Ralph Barat,  
Reginald de Valletort,  
Richard de Hydon,  
Roger le Archeuske,  
Thomas de Wamford,  
and others.

Dated at Ohedesham on the Feast of Pentecost (i.e. 12 May), 1269.

*Charter of the Church of Saint Sithney, made to the Bishop  
by Roger de Skyburiow.*

I, Roger de Skyburiow, have given to the Venerable Father Walter, Bishop of Exeter, one English acre of land in my land of Merthersyam, in the field called Croftengrons, together with the advowson of the church of S. Sithney. To have and to hold to the said Walter and his assigns for ever. [Sealed.]

Witnesses :—Sir Philip de Bodrigan,  
Ralph de Arundell,  
Stephen Haym,  
Walter Peverell,  
John de Keleryon,  
David de Leniem,  
and others. [No date]

*Charter of Landege.*

I, Stephen Haym, have given to God and the church of S. Thomas the Martyr, of Glasney, a perch of land in width and 20 perches in length, measured near the Sanctuary of the Church of Landege, To hold in frank almoigne. [Warranty for the said land with the advowson of the church and all appurtenances. Sealed.]

Witnesses :—Master Roger de Tori, Dean of Exeter,  
Master John de Bradalech, Archdeacon of Barnstaple,  
Sir Roger de Bertheford, } *Canons.*  
Master de Esse,  
Sir Ralph de Arundell, } *Knights.*  
Sir John Wyger,  
Oliver de Arundell,  
Henry Padebroke,  
Ralph Beaupell and others.

*Appropriation of the church of Saint Sithny.*

Walter, Bishop of Exeter, gives to Glasney two acres of land with the advowson of the church of Saint Sithny in frank almoigne for ever for the purpose of augmenting the daily distributions of the Canons there for the time being. [Sealed]

Witnesses :—Sir Ralph de Arundell,  
Sir William de Halap,  
Roger de Trenewyd,  
Oliver de Tregereon,  
Nicholas de Trenewyth,  
and others. [No date]

*New Ordinance of Lord Walter, Bp. of Exeter, concerning the Sacristy of Glasney and the fruits of Saint Colan.*

Walter, Bishop of Exeter, to his beloved son Robert de Tredowall, Priest-Vicar in the church of Glasney. Having seen and examined the appropriation of the church of Saint Colan by Walter, late Bishop of Exeter, our predecessor, who willed that the Sacrist in the said church being Canon and Priest, and his successors, Priests and Canons, should dispose of the fruits of the church of S. Colan; having now assembled the Provost and other Canons,—no one among them would undertake the office,—the said office as well as the office of Warden is committed to him (Robert). Dated at Glasney 23 August A.D. 1315.

*Acceptance of the offices of Warden and Sacrist.*

Afterwards the same Robert, accepting the said Ordinance before the Provost and Chapter undertook the charge of the said Wardenship with the stipends incumbent upon him; and so he was admitted in due form.

*Ordinance upon the farm of Saint Goron by the Provost and Chapter.*

On Friday, the morrow of S. Hilary (i.e. 14 Jany) A.D. 1316, in solemn Convocation it was unanimously decreed that for the more necessary expenses of the Church of Glasney, viz.: covering with lead, &c., the revenues of the farm of S. Goron should be assigned; which farm in the time of Sir William de Bodrigan, late farmer, yielded 20 marks but now forty pounds to the relief and subsidy of the residents, hospitality of tenants and other works of charity. Increase beyond the said 20 marks to accrue henceforth to the Canons duly residing. Other expenses, viz.: wax, oil, chantry keeper, gatekeeper, treasury of Choristers, bread, wine, keeping up books and vestments and other things shall be done out of the residue. Also it is provided that the farmers shall not destroy or suffer to be destroyed the woods, parks, gardens buildings and other things whatsoever belonging to their farms. If any destruction be done, the same shall be repaired and remade at their own costs before Michaelmas following on the pain below noted. They shall not let the land of sanctuaries to laymen, lest they be subject to distress and lay power. If any laymen be placed within the sanctuary by the

farmers, they shall be removed before Michaelmas next ensuing on canonical pain and also loss and deprivation of their farm.

*Provision upon Farms.*

It is provided by the Provost and Chapter of Glasney, that every farmer of the churches of the said Chapter satisfy for the rent of assise within the parish of his farm equally at four terms, viz. Christmas, Easter, Nativity of S. John Baptist and Michaelmas; although the tenants shall not be likewise bound to pay their rents at the said terms.

*S. Budock.*

The farmer of the church of S. Budock ought to pay for garb of his church and for tithe of lambs, wool and fish of the said parish and the parish of S. Gluvias 19<sup>l</sup>. 6<sup>s</sup>. 8<sup>d</sup>.; and for rent of S. Budock 20<sup>s</sup>. and for rent of Tregenegy 9 pence; and so at every term 5<sup>l</sup>. 22<sup>d</sup>. Sum—20<sup>l</sup>. 7<sup>s</sup>. 5<sup>d</sup>. And so the farmer is bound to pay at every term 105<sup>s</sup>. 2½<sup>d</sup>.

*S. Sithny.*

The farmer of S. Sithny ought to pay yearly for Garb to the Sanctuary and the Vicar's pension there 17<sup>l</sup>. for farm, whereof at every term he ought to pay 4<sup>l</sup>. 5<sup>s</sup>.

*Of the farm of S. Senar.*

The farmer of S. Senar ought to pay yearly 12 Pounds; whereof at every term, 60 shillings.

*Of the farm of S. Enoder.*

The farmer of the church of S. Enoder ought to pay yearly 27 Pounds for Garb and Sanctuary; whereof at every term 6<sup>l</sup>. 18<sup>s</sup>.

*Of the farm of Landege.*

The farmer of the church of Landege ought to pay yearly for Garb of the said church and of the Chapels of Keynwyn and Tregenedon and tithe of wool of Landege 26 Pounds and for the rent of the Vicarage 2<sup>s</sup>.; whereof at every term 6<sup>l</sup>. 5<sup>s</sup>. 6<sup>d</sup>.

*Of Saint Feoc.*

The farmer of Saint Feoc ought to pay yearly for Garb 9<sup>l</sup>. 2<sup>s</sup>. 8<sup>d</sup>. and for rent 5<sup>s</sup>. 6<sup>d</sup>. Sum—9<sup>l</sup>. 8<sup>s</sup>. 2<sup>d</sup>.; whereof at every term 48<sup>s</sup>. 0½<sup>d</sup>.\*

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\* Here the amount is 47s. 0½d. In this and two or three instances the figures are not accurate.

*Of Saint Gluvias.*

The farmer of the church of S. Gluvias ought to pay yearly for Garb 10 Pounds, and for rent to Richard de Behedlan 2<sup>s</sup>. 4<sup>d</sup>., and for rent to the heir of Carndu, 12-pence; and for land which John de Bains held, 3<sup>s</sup>.; and for rent which the same John bequeathed to the Chapter, 12 pence, sum—10<sup>l</sup>. 7<sup>s</sup>. 4<sup>d</sup>.—whereof at every term 5<sup>l</sup>. 10<sup>d</sup>.

	l.	s.	d.
Sum of all the farms—	122	18	3
Sum of the payments to be made at every term }	30	14	6½

*Taxation of the Vicarage of S. Goron.*

The Vicarage consists in one English acre for making a Manse and in the whole Altarage except birch-trees, twelve in number, growing thereon. And the Vicar shall bear all due and customary charges. It was so taxed on the morrow of Saint Matthew the Apostle at Clyst (i.e. 22 Sept.) 1271.

*Taxation of the Vicarage of S. Enoder.*

At the same day and place was taxed the Vicarage of S. Enoder, which consists in a house wherein formerly dwelt Walter the Provost, and thirteen English acres of Sanctuary and in all the Altarage except peas and beans growing in fields. The Vicar shall bear all charges as above—and so it is contained in the Register of the Lord.

*Of the taxation of farms.*

Also the same day and place it was provided and decreed by the same concerning farms which seem to the Chapter to be less fruitful to the farmers as to yearly pensions paid in the Exchequer for the same, and because the pensions cannot be augmented without discord or offence to the existing farmers of the same. That they or any of them being vacant, they may be increased or taxed at a yearly pension therefrom to be paid as shall seem reasonable to the Provost and Chapter, And then they shall be granted to him or them able to offer more or offering more in this behalf.

*Of the Obit of Walter de Bodmin and when it ought to be done.*

Also be it remembered, that in full Chapter of Exeter and of the Provost and Chapter of Glasney it is provided that the Obit

of Master Walter de Bodmin be solemnly celebrated in the church of Glasney on the first Friday in Lent and distribution be made to persons of the Choir and the poor according to the Statutes concerning Obits of Canons deceased.

*New taxation of the Vicarage of S. Budock and of Behedlan made by Walter, Bishop.*

To all etc. Walter, Bp. of Exeter Greeting etc. Dispute having arisen upon the portions of the Vicarage between the Provost and Chapter of Glasney and Robert, then Perpetual Vicar of the churches of S. Budock and Behedlan, Walter, Bishop of Exeter, after treating with the Provost and Chapter and the said Vicar, ordains that the said Vicar shall have and receive the Mansion (Manse) in which he dwells, all altarage of the said churches, under which term among other things are comprehended tithe of hay in meadows, flax, hemp and fish, also tithe of things being or to be in curtilages, &c.—tithes of garbs together with tithes of beans, peas, vetches in fields, also wool and lambs remaining to the Provost and Chapter, who are to pay 40 shillings for the repair of books and other defects; but thereafter the said Robert and his successors to keep up books and ornaments, covering, and glass in windows of the Chancel. Dated at Glasney 23 August 1315.

*Taxation of the Vicarage of Saint Feoc.*

[Details as to Tithes] Dated at Glasney 23 Aug. 1315.

*Declaration of the taxation of the Vicarage of Saint Gluvias.*

Walter, Bishop of Exeter, on a dispute as to tithes of small vegetables (pulse). Dated at Glasney 4 August A.D. 1318.

*Taxation of the Church of Saint Sithny.*

Inspeximus by Walter, Bishop of Exeter, of letters of Walter his predecessor, appointing to the church of S. Sithny one Alan, a priest, and granting to him all altarage with tithe of hay and tithes of beans and peas, a house to dwell in with the yards and two fields near the highroad from Hellestone to Heyll. The Vicar to carry to the Canons of Glasney 40 shillings at two terms, Easter and Michaelmas equally, and to bear all other charges, including the covering of the Chancel. Dated Wednesday after the Feast of the Assumption B. V. M. (i.e. 19 August) A.D. 1270. The Bishop, considering the charges incumbent on the

Vicar, now remits the 40 shillings with the express consent of the Provost and Chapter. Dated at Glasney 26 July A.D. 1318.

*Taxation of the Vicarage of S. Senar.*

The Vicar to have a manse, tithe of hay in meadows, of flax, hemp and fish, and tithes of things whatsoever in curtilages &c. [in considerable detail]. Dated at Glasney 23 August, 1315.

*Taxation of the Vicarage of the Church of Landege.*

Walter, Bishop of Exeter, the Vicarage being vacant, confers it on William de St. Just and gives him all the altarage of the mother church and chapels of Keynwyn and Tregenfedon (except tithes of beans and peas growing in fields) with also all the houses and sanctuary appertaining to the said church and chapels. Whosoever shall be Vicar is to carry to the Canons of Glasney three Pounds yearly at Easter and Michaelmas; and he shall bear all due and customary charges, also the covering of the Chancel. Dated at Saint Alun on the Octave of the Feast of Assumption B.V.M. (i.e. 22 Aug<sup>r</sup>) 1270.

*Taxation of the Vicarage of Saint Melor.*

John, Bishop of Exeter, etc. [This portion is faint and difficult to read—details at considerable length.] Dated at Chuddeleghe 9 May A.D. 1353.

*Confirmation of the Bishop upon the appropriations of all the churches to Glasney.*

To all the faithful in Christ to whom the present Letters shall come Walter, by divine permission Bishop of Exeter Greeting in the Saviour of all men. Know Ye that, lately visiting the Colleges and Convents, clergy and people as well religious as secular of our diocese in the due discharge of our office, We have found that the Provost and Chapter of the church of S. Thomas the Martyr of Glasney in Cornwall of our diocese have held the parish churches and curacies of S. Budock, S. [Thomas] the Martyr of Penryn otherwise called Behedlan, Saint Sithny, Saint Enoder, Saint Goron, Saint Feoc and of Landege with its Chapels and other rights and appurtenances of the same in our diocese and hold to their own uses the fruits and obventions of the same except the Vicarages, And moreover that we have

caused the said Provost and Chapter to be lawfully called at certain days and places before us to propose and show in form of law by what right they have held to their own uses as is premised the said parish churches and curacies with the chapels and all their fruits, rights and appurtenances. At length the said Provost and Chapter appearing by their sufficient Proctor before us in judgment have proposed and by witnesses and instruments have sufficiently proved that the aforesaid churches all and singular with their chapels fruits rights and appurtenances are and have been canonically obtained to their own uses as is premised and that touching such retention of the said churches with their chapels fruits rights and all their appurtenances they are empowered in perpetuity as well by sufficient titles as by canonical prescription, except the vicarages in the aforesaid parish churches and every of them, the collations of which to our predecessors, Bishops of Exeter, after their appropriation in all such time have appertained and to us and our successors, Bishops of Exeter, are known likewise to appertain, Wherefore We the aforesaid Bishop, the premises being diligently examined and inspected, have dismissed the said Provost and Chapter from our examination as absolved, approving the aforesaid obtaining and retention except the vicarages aforesaid and so far as appertains unto us by our pontifical authority confirming the same, Saving always (as shall be just) the jurisdiction, dignity and authority of us, of the church of Exeter and also of the Archdeacon of Cornwall in the same churches; And because the instruments relating to these things produced before us on behalf of the said Provost & Chapter in the wax appended to several of them as well as in the charters and letters of the same by some amount of age and by the carelessness of the custodians are beginning to be partially destroyed, We have caused these our Letters Patent to be made for themselves, In witness whereof etc. Given at Peynctor the twelfth day of the month of May in the year of Our Lord one thousand three hundred and eighteen.

*When every residence begins and when it terminates.*

Be it remembered that the first term of residence of the Canons of Glasney always begins on the morrow of S. Michael and terminates on the eve of Saint Silvester (30 Sept. to 30 Dec.); the second begins on the day of S. Silvester and terminates on the



last day of March (31 Dec. to 31 March); the third begins on the first day of April and ends on the Octave of S. John Baptist (1 April to 1 July); the 4th begins on the morrow of the Octave of S. John Baptist and terminates on Saint Michael's day (2 July to 29 Sept.) And no day shall be counted to a Canon for residence unless he be present at the morning or major mass or make the major refecton of the day at table, except the first day of his coming, which shall be allowed whatever hour he comes And be it remembered that there are required in every quarter of the year for due residence six weeks and four days, or forty six days, which make the same thing.

					l.	s.	d.	
Church of S. Goron	..	..	..	..	6	13	4	}
Tenth of the same church	..					13	4½	
Church of S. Feock	..	..	..	..		66	8	}
Tenth	..	..	..	..		6	8	
Church of Landege	..	..	..	..	8	6	8	}
Tenth	..	..	..	..		16	8	
Church of S. Alun	..	..	..	..		106	8	}
Tenth	..	..	..	..		10	8	
Church of S. Sithny	..	..	..	..	6	6	8	}
Tenth	..	..	..	..		12	8	
Church of S. Budock	..	..	..	..	6	—	—	}
Tenth	..	..	..	..		12	—	
Church of S. Gluvias	..	..	..	..		40	—	}
Tenth	..	..	..	..		4	—	
Church of S. Melor with Sanctuary	..				6	13	4	}
Tenth	..					13	4	
Church of S. Senar	..	..	..	..	4	—	—	}
Tenth	..	..	..	..		8	—	
Church of S. Enoder	..	..	..	..	7	6	8	}
Tenth	..	..	..	..		14	7	
Church of S. Colan	..	..	..	..	4	—	—	}
Tenth	..	..	..	..		8	—	

*Ordinance and Provision of the Provost and Chapter of Glasney.*

Be it remembered that it is provided by the Provost and Chapter that whosoever receives any farm from that Chapter shall retain it (if he will) for his life, so long as the Chapter shall be satisfied for the time past. And the time of the farm

shall begin on the morrow of S. Michael in the month of September, and for the fruits of that farm coming up to that morrow of S. Michael a year having revolved he ought to satisfy the said Chapter at four terms of the year by equal portions, viz.: at the Feast of Saint Silvester next after the term shall begin; at the first day of April next following; at the Octave of S. John Baptist next following; and at the morrow of S. Michael next to be (*i.e.* 31 Dec., 1 April, 1 July, 30 Sept.) And further if the farmer do not satisfy the Chapter at every of the terms aforesaid, he shall immediately lose his farm with all its appurtenances and all improvements which he has made in the same and whatever he has before paid; and then the Provost and Chapter shall dispose of that farm as shall seem expedient, the gainsaying of the said farmer notwithstanding. If the farmer, whosoever he be, shall satisfy the said Chapter for his farm before the term of payment shall arrive, he shall be freed. And it is to be known, that all payments and satisfactions for farms of the said Chapter ought to be made to the Steward of the Chapter, or his deputy in the same Chapter who shall be deputed by them *ad hoc*. And all the Canons aforesaid were called to provide the aforesaid at a certain day, viz. the Morrow of the Close of Easter (*i.e.* 17 April), A.D. 1273. And there came on that day Master Henry de Bollegh, Canon of the same church; and Sir Roger de St. Constantine, 2<sup>nd</sup> of the first [founders]; and Walter Peverell, third of the first [founders], who gave the church of S. Feoc to the church of S. Thomas the Martyr of Glasney; Robert fitz-Robert, Walter de Fermesham, Nicholas de Tregoreck, Walter de Tremur and Master William de Saint Just . . . . . [Here has been a considerable erasure; and on the back (71 b.) are tracings of writing, rendered illegible by means of a dark-brown fluid, smeared over the surface for the purpose of obliteration.]

*Relating to the Office of Sacrist.*

John, Bishop of Exeter [on this page has been also smeared the dark fluid, but the purport can be made out, as follows:—] referring to an intention unfulfilled of a former Bishop (probably, the Founder), respecting the appropriation of the church of S. Colan to the office of Sacrist, declares that he has conferred a Canonry and Prebend on Sir Robert de Tredowell Priest & Sacrist, after treaty with the Chapter of Exeter and with the ex-

press consent of the Provost and Chapter of Glasney, appropriates the Church of S. Colan to the Sacrist to receive and convert the fruits to his own use. To guard against uncertainty it is noted that the said Sacrist for the time being shall collect the fruits and obventions (saving a fit portion for the Vicarage) and distribute in the manner underwritten and as in the ancient ordinance laid down. He shall pay the Vicar 10<sup>s</sup>. yearly. Also he shall be bound to pay every year for ever on the first Tuesday in September at the solemnity of S. Gabriel, Archangel, to every Canon nine-pence, to every Vicar five-pence who shall be present at Vespers and Matins, at the Mass and Canonical hours during the solemnity aforesaid every year as on Christmas-day they have been wont to minister. Sixty shillings yearly in bread on the day of the said solemnity to be given to the poor. He shall also find a Clerk of the second farm, beside those heretofore serving in the said church, to ring the bells of the church and to shut and open the gates of the Close after Curfew (post ignitegm) [and the keys\*] at night shall remain in the custody of the Sacrist or of the Provost for the time being. Also he shall find bread and wine for the Eucharist, wax and torches in form, as follows:— On all Major double feasts through the year seven burning candles in the choir, four of which shall be placed round the Altar as shall be ordained, and two before the Altar and one hanging in the pelvis or Corona between the Choir and Altar. And behind the pelvis or Corona a lamp burning night and day, when the light in the pelvis or Corona is extinguished, on account of the reverence due to the Body of Christ and two candles placed near the Great Cross. On Christmas-day, Epiphany, Easter, and Pentecost, also the Assumption of the Blessed Virgin Mary, the feast of Gabriel the Archangel and the Feast of the Translation of S. Thomas the Martyr six candles placed round in small candlesticks fixed at the extremities of the pelvis or Corona are to be lighted as appears below:—At both Vespers and at Mass seven candles shall be lighted; being put out at Compline three shall burn up to Matins; after the second bell shall be immediately burnt that candle in the pelvis or Corona, And while the bell is last sounding shall be burnt four near the Altar and other two near the Cross, and while Gloria Patri is being sung at the

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\* These words seem required by the context.

last response shall be lighted two candles which shall then burn up to the end of Matins. On Christmas-day and Epiphany at both Vespers on account of the late hour and darkness two near the cross shall be burnt while the first mass on Christmas-night is said and in the lauds following and in the lauds of Epiphany, Easter and Pentecost; on the [translation of S. Thomas the Martyr] and the Assumption of B.V.M. all the candles shall be burnt in the pelvis or Corona. At prime, tierce, sext and none shall be burnt one in the middle of the pelvis or Corona. In other Major doubles at vespers and matins five only shall be burnt up to the end of the last versicle of the hymn at Vespers; at Matins up to Gloria Patri, [and so on in minute detail]; Moreover the Sacrist and his successors shall be bound to find at his (and their) cost incense, coals, mats and straw throughout the whole church as well as cords for bells. He shall have the custody of books, vessels, vestments and all other ornaments of the church aforesaid and the mending of the same. The Sacrist and his successors together with the Provost and his successors shall take diligent heed that silence be firmly kept in the Choir there. Also the Sacrist for the time being every year at Michaelmas and Easter equally shall receive from the aforesaid Provost and Canons, for all the abovewritten, six marks by the hands of the Stewards. The same Sacrist and his successors for ever, when instituted by the Bishop or his successors into the said Sacristship & Canonry with their rights and appurtenances, shall take a corporal oath on the Holy Gospels respecting corporal, continual and true residence within the Close of Glasney and to observe all other the things above expressed; otherwise the collation and institution shall be null. In Witness of all which things [the Bp. concludes] We have caused our Seal to be set to these Presents. Given at Exeter in the Chapter of our Church Friday next after the Feast of the Apostles Peter and Paul (2 July), A.D. 1304.

The Chapter of Exeter give their assent and seal with their Common Seal in Chapter the day and year abovesaid.

The Provost and Chapter of the Collegiate Church of S. Thomas the Martyr of Glasney abovesaid accept and consent; and they add their Common Seal in Chapter at Glasney on the Friday after the Feast of Saint James the Apostle in the year abovesaid, (30 July 1304).

*Appropriation of Saint Just in Penwyth.*

John, Bishop of Exeter, appropriates and annexes for ever the church of S. Just in Penwyth to the Collegiate Church of Glasney, reserving a fit portion of the fruits and revenues for the support of a Perpetual Vicar to be instituted there by the Bishop and his successors. At the decease of Reginald de St. Austell now Rector of the said church of S. Just the said Provost and College, may take by themselves, other or others, possession of the said church of Saint Just and enjoy the fruits thereof, saving the portion of the Vicar. In the first place two priests at the nomination of Sir John de Beauprè\* shall be received into the Collegiate Church beyond the accustomed number, who are to be called "Beauprè's Priests" and to celebrate for the healthy estate of Sir John Beauprè and Margaret his wife so long as they live; and, after they have departed this life, for their souls and the souls of the parents, ancestors and heirs of the said Sir John for ever, receiving yearly of the fruits of S. Just 8*l.* 13*s.* 4*d.* divided equally between them. The said priests after admission shall take the oath of obedience according to custom. The 13 Vicars of the said Collegiate Church—one of whom is to be named by the Provost weekly, to celebrate masses with offices for the healthy estate of Sir John Beauprè and Margaret &c. [as before]—shall receive yearly 4*l.* 6*s.* 8*d.* between them equally of the fruits abovesaid. Also the said Vicars every day through the year shall celebrate for the healthy estate of us (*i.e.* the Bishop) Sir Richard de Gomersale, now Provost, Masters Stephen Penpol, William de Heghe, William de Carslake, and Sirs John de Aldestowe and William Tregoni while we live, and for our souls after we depart this life, and for the soul of Master John de Stoke, formerly Canon of our Collegiate Church, our parents, friends, benefactors, and all the faithful departed one mass of the day or of requiem; and they shall receive of the said fruits, in augmentation of their portion abovenamed, yearly 4*l.* 6*s.* 8*d.* among them to be equally divided. Also there shall be two clerks of the second form from the time of possession being obtained of the church of S. Just in increase of the

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\* Sir John Beauprè, knt., had given to the Bishop the Advowson of the church of S. Just. Allusion is made to a late pestilence, by reason of which the Vicars of Glasney had been unable to obtain their Stipends.

number of Ministers in the said Collegiate Church to be called "Beauprè's Clerks," and to serve God and the Church in their degree in daily and nightly offices; and they shall receive yearly 69<sup>s</sup>. 4<sup>d</sup>. of the said fruits, viz. every week 8 pence. Also two choristers, from the time aforesaid, to be called "Beauprè's Choristers," who shall receive yearly of the said fruits 34<sup>s</sup>. 8<sup>d</sup>. viz. every week 4 pence; one of whom shall minister to the said Priests in the celebration of the masses. Also the Provost and College from the said time of possession, shall pay yearly for the obit of Stephen Haym formerly Canon 8 shillings which shall be payable out of our Episcopal Manor of Penryn. Also the aforesaid Provost and College for the healthy estate of the said John de Beauprè and Margaret his wife while they live, and for their souls after their death every year from the time of possession of the said church shall cause to be celebrated a mass with note, and shall pay 8 shillings as on the obit of every of the Canons of the said church up to now they have been wont to do. The Priests to be called Beauprè's, and the Vicar to be deputed by the Provost every week (as premised) shall be bound to observe in all time to come for ever in this form:—First, every day immediately at sunrise one of them shall celebrate a mass of the Blessed Virgin Mary; another, after the hour of Prime a mass of requiem; and the third, viz. the vicar by the Provost (as aforesaid) to be named, a mass of the day after the Sacrament of High Mass, except on Major double feasts, on which days the mass of the day shall be said at Tierce, in the chapel of B.V.M. in the aisle to be named Beauprè's. Also that Chaplain who one week celebrates a mass of B.V.M. shall the following week celebrate a mass of Requiem; and the reverse. Also the aforesaid two Priests as other Vicars shall follow the said offices and daily hours as well as nocturns, except him who shall celebrate the morning mass and is to be present at matins for that week. Moreover the said priests and clerks shall receive of the distribution of Obits as the vicars and clerks of our said Collegiate Church. Moreover, at the cession or decease of the abovesaid priests, or either of them, the said Provost and College shall be bound to give notice within 8 days thereof, to the said John de Beauprè or his heirs, in their Manor of Dyngombrie; and the same Sir John and his heirs within 40 days from the time of such notice shall nominate to the said Provost and College a fit

chaplain or chaplains in place of him or them ceding or decreasing; otherwise the Provost and College abovesaid within other 40 days immediately following shall provide such fit chaplain or chaplains. And if it happens that they do not so provide within 40 days, such provision shall devolve on us and our successors. Also the said Sir John Beauprè shall first find for the said two priests, books, a chalice, vestments, napkins and other the several ornaments, and such things as are necessary for matins and masses; and he shall erect at his own cost suitable houses for the same Priests on the soil of the said Church of Glasney. And the said Provost and College shall then out of the fruits of the said church of St. Just, bear for ever the charges of finding books, a chalice, vestments, napkins, and other necessities for matins and masses, and also of constructing and repairing such houses. Also at the cession or decease of any of the Priests beforenamed, the said Provost and College shall immediately find a Vicar to celebrate in place of him ceding or deceasing, so as for ever to provide one or more who shall receive of the said fruits as the late Chaplain did. Also the Sacrist of our said Collegiate Church for the time being shall be bound to find bread, wine, and lights, for the same Priests so celebrating; and for such charges he shall receive out of the abovesaid profits 4 shillings yearly. The residue (if any), which there shall be beyond the charges abovementioned, shall be divided among the resident Canons according to the custom heretofore had in our said Collegiate Church. Also the said Provost and College shall have the said Sir John de Beauprè in all benefits and orisons specially commended, as any one ever of the College abovesaid. In witness and faith of which premisses all and singular by the appending of our seal we have caused the present letters to be strengthened. Given in our Chapter House of Exeter, 15 April, A.D. 1355. The Dean and Chapter confirm the said appropriation and add their Common Seal the same day and place. Sir John de Beauprè adds his Seal at his Manor of Lannestly, 1 May in the year abovesaid. (1355).

*Taxation of the Church of St. Just in Penwyth.*

John, Bishop of Exeter, to all sons of Holy Mother Church, greeting. Whereas the vicarage in the church of S. Just, which

the Provost and Chapter of our Collegiate Church of St. Thomas the Martyr of Glasney hold, is not taxed, and willing to provide a fit stipend for the present Vicar and his successors, after treaty with the said Provost and Chapter and with Sir John Carbous, now vicar, hereupon and with their express consent, We ordain it to be taxed thus:—assigning to the said Vicar and his successors, all the Altarage of the said church, under which term we will to be comprehended, among other things, tithes of hay of the whole parish now being and to be made in meadows, of flax, hemp, fish and all other small tithes. The said Sir John and his successors shall have and inhabit all the houses appertaining or belonging to the said church with yards and dovehouse situate near them saving and reserving lodging and easement of the Provost and Chapter aforesaid in the houses there for necessary stay when it shall chance that they or any of them pass by for business of the said church. The said Sir John and his successors shall have 7 English acres of land in 3 crofts situate near the Rectory-house, together with three acres for the sufficient support of his own house. The same Sir John and his successors, vicars for the time being at their own costs shall keep up, repair, amend and remake books and other ornaments, the covering of the chancel and glass in the windows as often as necessary. Other extraordinary charges shall appertain to the Provost and Chapter abovesaid saving to us and our successors, bishops, the right of declaring etc. if, as and when it shall seem expedient. [No date].

*Ordination of the Chapter of Bodrigan.*

John, Bishop of Exeter, to all sons of Holy Mother Church, greeting. Sir Otho de Bodrigan, knight, hath shown unto us, that, although the church of S. Thomas the Martyr of Glasney is founded for a certain number of Canons and Ministers, nevertheless the number does not suffice for performing divine service as is fit, and specially for celebrating masses at matins for the devotion of travellers or of those wanting to hear masses at other hours, wherefore he prayed us to appropriate the church of Lamorek, of which he (Sir Otho) is patron, to the church of Glasney, and to assign to the Provost and Chapter, the fruits, rents and profits of the church of Lamorek. After treaty with the Dean and Chapter of Exeter, with the Provost and Chapter



of Glasney, and with Sir Thomas, rector of Lamorek, we pronounce in favour of the appropriation of the said church to Glasney; and at the cession or decease of the now Rector the Provost and Chapter may enter into and possess the same church and retain it to their own use in manner and form following, viz:—That whereas the fruits, &c., of the said church reach in common years the sum of 25 marks and eight shillings, the Provost and Chapter may have and hold to their own use the glebe of the said church, and receive all the great tithes of Treflunen, all the great tithes of Tregaseks, Pentewyn and Tregasky-vooles and Porthpentewyn, also the great tithes of Tregesky-wartha and of Treweny, which said great tithes with all other emoluments should amount to thirteen marks yearly at least, and are to be thus applied:—The Provost and Chapter and their successors shall be bound to admit a Priest, to be presented to them now and for ever on any vacancy by Sir Otho aforesaid and his heirs without difficulty (if he shall be found fit) beyond the customary number in the said church, who shall every day at dawn at the altar called “Bodrigan’s altar,” where the body of the said knight’s mother is buried, celebrate a mass for the souls of the father, mother and relations of the said knight, and for his healthy estate while living, and for his soul and for the souls of his heirs after death, as in the mass of the Blessed Virgin Mary, except on major double feasts or in the Chapter Mass to be celebrated in the church of Glasney for the healthy estate of the said knight in life and for his soul after decease; to which said Priest the said Provost and Chapter and their successors every year for ever shall pay five marks at four usual terms by equal portions. And the said Priest after admission shall take the oath of obedience, as laid down by Walter, Bishop of Exeter, the Founder. The said Sir Otho shall first find at his own expense, for the said Priest, books, a chalice, vestments and other such necessities for mass, and also houses on the soil of the Church of Glasney; and thenceforth the said Provost and Chapter shall bear such charges for ever out of their portion aforesaid. If the priest so presented be deemed unfit in the opinion of the said Provost and Chapter, it shall be lawful for the said Otho and his heirs to present another or others, until the one so presented be deemed fit and be admitted. And if on one side or the other difference arise on the admission of the

said priest presented by Sir Otho or his heirs, and they cannot agree, then the Lord Bishop of Exeter or his principal official for the time being shall appease and terminate the strife without prejudice of any party. Also the said Provost and Chapter and their successors shall keep and celebrate the obit of the said knight after his death, as used for Canons of the said Church and shall pay in like manner 8 shillings. At the cession or decease of the said priest the Provost and Chapter shall be bound to find another priest to celebrate such mass at dawn, in the interval, until one be presented by the said knight and his heirs and be admitted. In the church of Lamorek there shall be instituted a perpetual vicar who shall have the cure of souls and the houses of the Rectory, with the manse and sanctuary. He shall have the great tithes of garbs of Penwen, Trenelghan and the town of Lamorek, together with the whole Altarage and all small tithes whatsoever, throughout the whole parish of Lamorek, saving to the said Provost and Chapter the great tithes and other emoluments above enumerated and assigned to them. Which said vicar for the time being shall be charged with procuration, also the keeping up and renewing of the chancel, books and ornaments,—the finding, repair and construction of which heretofore appertained to the Rectory of Lamorek—and he shall bear all other ordinary and extraordinary charges in time to come for ever. To which said Vicarage, so often as vacant, Sir Otho and his heirs shall nominate within a month after such vacancy, and the said Provost and Chapter shall institute such parson to the Vicarage. All which things shall be observed. In witness whereof we as well as our Dean and Chapter of Exeter have caused our seals to be set. Given at Exeter, 20 April, A.D. 1329. Confirmed by the Dean and Chapter of Exeter, at Exeter, 28 May, 1329.

Ratified by the Provost and Chapter of Glasney, at Glasney 2 June, A.D. 1329.

*The Bishop on the Reform of Abuses.*

Edmund, Bishop of Exeter, to the Provost, and in his absence the Sacrist his Deputy, and to the Chapter of Glasney. First, we order that the Provost, and in his absence, the Sacrist, so often as they shall find the Vicars, Chaplains and other inferior Ministers, negligent, irreverent or indevout in the divine offices,

shall in the chapter-house as heretofore customary—not in chamber or privately—correct and punish them according to the statutes of our predecessor hereupon published. Also we order that no Canon shall by any house-service impede any Vicar in the exercise of his office in the church on canonical pain, and the Vicar obeying his master in such service, to be punished in the chapter-house after the manner of his offence. Whereas in our Visitation we have found that the Vicars, who at every hour of the day and night are bound to be present and consequently to reside, and other inferior Ministers absent themselves in remote places and for a long time, many together and many times, running about at their will in decrease of God's service, and to the scandal of the Church, We order and decree, that from this time forth none of the Vicars or other of the inferior Clergy shall be allowed to absent himself henceforth without cause great and urgent or at least, useful to the Church or to his Parson, first being shown before the Provost or his deputy, and (laying aside all fraud and simulation whatsoever), being approved as just and true; and then not beyond 8 or 15 days in one turn, or in divers turns for such time of the year as shall not amount to a month, Provided that then of the Ministers aforesaid many together, or on the same side of the choir have not such leave of absence. Also We order, enjoin and command that the Canons, Vicars, Chaplains and other Ministers of the said Church be present in their habit at the Canonical hours and Masses to be said and celebrated therein, as the statutes of the said Church published by our predecessor require, And that the vicars strive to celebrate their own private masses out of the time of the hours for saying them in the choir, so that they may be present and officiate (as they are bounden) in the divine offices, to be said in the choir at their proper time, And that no Canon, Vicar, Chaplain or any other Clerk or Minister of the said Church outside the choir, in the Ambit of the same Choir, or in the Church itself while the divine offices are being performed, in his habit or without, make any disturbance or in any wise wander, or presume to run about in his habit outside the Close of the Church, under Canonical pain for the degree of fault to be inflicted on any of the said Vicars or other inferior Clerks, who shall be guilty in this behalf, by the Provost or his Deputy together with the Chapter in the Chapter-house; the pain (penalty) of the Canons in this behalf

being specially reserved to Us and to our Successors, Also, whereas all ecclesiastical benefices are given and have been instituted on account of offices, and he who serves the Altar ought to live of the altar, We ordain that in all time to come for ever, every Saturday one of the resident Canons of the same Church for the celebration of High Mass at the High Altar there, on Sunday following, and every double feast and festival falling in the said week (Christmas, Easter and Pentecost weeks excepted), shall be entitled successively to keep the ancient custom; and he, who is so entitled, shall be bound to celebrate such masses himself, or by another of the Canons if it happen that himself be hindered or otherwise indisposed, Otherwise for the Resident in the said Church for that week it shall in nowise be accounted without reasonable cause or lawful impediment. Also we decree that the common seal of the said church be safely kept under 3 different and secure keys, always and severally remaining,—one key with the Provost or his deputy, and the other two keys with other two different Canons of the said Church by the Provost (or his deputy) and the Chapter to be deputed; nor shall anything be sealed with the said seal without the special consent of the Provost (or his deputy), and a majority of the senior members of the Chapter. Also We order that the Sacrist of the said Church by his Clerk at due and customary times at the Canonical hours and at Mass, shall strive diligently to shut and keep shut screens, gates and doors of the Church, also the gate and partition of the Close, so that by late closing no loss to the church or scandal to its minister be generated. And that bread and wine—pure and not sour—be by the same Clerk daily prepared and had for the celebration of masses, And that phials and other vessels appertaining to the ministry of the Altar be cleansed and washed by him, And if it chance that such clerk be negligent or blameable in the premises or in any of them, after three times notable default proved before the Provost or Chapter, the Sacrist for the time being at the warning of the Provost or Chapter shall be bound to remove such Clerk from his office within a month to be reckoned from the time of such warning, and, to diligently substitute another in his place, And if the Sacrist so warned neglect to do this within such month, then after the lapse of a month the appointment and substitution of such Clerk shall pass to the

Provost and Chapter. Whereas in the same Visitation made by Us between the Provost and Canons of the said Church present and the proctors lawfully constituted in Chapter assembled on restoring and sustaining the fabric of the said church, specially of completing the Choir of the same and arching and vaulting its Aisles. [At this point the manuscript presents great difficulty on account of the thinness of the parchment, which allows the words written on the other side to show through. However, the purport seems to be] that the Canons beneficed are to receive nothing by reason of residence from the feast of S. Jerome (*i.e.* 30 Sept.) to the same Feast following for an entire year—but all the fruits, rents and emoluments whatsoever accustomed to be paid (save the portions of Sirs Geoffrey the Sacrist, and John Raaffe, Canon), should cede and be wholly converted to the use of the said work and making the vaulting. And the Sacrist, who should not be beneficed elsewhere (because bound to continual and personal residence by the Statutes of the said Church), for himself and his household, and the government of the ministers of the Church and hospitality to be kept in the absence of the Provost, also for the body of his Prebend, may receive 20 pounds per annum, at 4 usual terms; and the said John Raaffe, because he has no benefice elsewhere or would not reside there during such time, for his living and other necessities and the body of his Prebend may receive ten marks per annum at the same terms, and because the Vicars of the resident Canons for the time of residence were wont to be present at table with their Masters, in recompense of such absence of the Canons, such Vicars of the said Church dwelling in their houses and leading there an honourable and common life and dining and supping in their common hall, may receive of the body of every Prebend of a Canon beneficed elsewhere (as aforesaid), six shillings at the said terms to the use of their commons there only, so that no Vicar, refusing to be present in such common hall with his fellows at dinner and supper, without infirmity or other reasonable cause, receive aught of such six shillings on pain of Major excommunication not undeservedly to be fulminated against him so contravening. Nevertheless the Sacrist's vicar may be present with his Master at table as formerly. The premises, moreover, all and singular to firmly observe and in nothing to contravene the abovesaid

Canons all and singular present, and the proctors of those absent on the Holy Gospels in our presence have promised and sworn, then and there requesting that those things in form before written by our authority, and by decree be corroborated. We therefore commending the pious proposal of those Canons, and decreeing all the things above written for the necessity and utility of the church to be done and observed inviolate, have ratified and do ratify the same, forbidding that any Vicar do presume in anywise contrary to the premises to receive or usurp anything out of the fruits of the said church, as they wish to escape divine and canonical vengeance. Moreover, We order that the fruits, rents revenues and emoluments above written and sums of money due therefrom for residence, or belonging and wont to belong to Residentiaries by the discreet men Alan Trelees, Rector *de Ponte*, and Thomas Trefuthen vicar in the choir there be levied and received entirely for the time of a year abovesaid towards the work of the church and together with the council and aid of the venerable men, Master Edward Daundesey, Archdeacon of Cornwall, and Matthew Bodrigy, Canon of the same Church, Overseers of such work, always and continually to be expended and paid, To do which things to the said Alan and Thomas to levy, require and receive the fruits and emoluments and to convert and expend the same to the uses aforesaid, and at the end of the year faithfully to account, having been sworn on the Holy Gospels, We have committed as We do commit full power. We ordain that all resident Canons of the said church, whether they have completed yearly residence or not, be admitted in the same state, as to performance of residence and the receipt of the emoluments thereof, on the Feast of S. Jerome the year abovesaid ended, as that in which they were and chanced to be on the Feast of S. Michael next to come, and the year abovesaid beginning, their absence for such year and the Statutes or customs of the said church to the contrary notwithstanding, so that, such year being finished, they may return to residence in the said church and from that time entirely receive the emoluments on that account due and wont to be paid, Saving the sum of 26 shillings from the body of the Prebend of every Canon to be subtracted for keeping up the fabric, and of old accustomed to be granted and paid. Also, although some Canons in time past there deputed as Stewards

have withdrawn, received and had the sum of 26s. aforesaid to convert to the use of the fabric, they have nevertheless deferred and yet defer to render an account before the Provost and Chapter, Wherefore We will and command, that every of the Stewards now surviving before the discreet men Masters Edward, Archdeacon, abovesaid, and Benedict Caunterbery, Canons of the said church, named and chosen *ad hoc* in our presence by the Provost and Chapter, strive to render an account for the time of his administration of such sum of 26s. and the receipts and payments in this behalf this side of Easter next, And to compel (if need be) the said Stewards so to do, We demise our office to the same Edward and Benedict with power of canonical coercion, And because it is of little use to make laws or statutes, unless they are kept and duly observed, We order you the Provost and your deputy for the time being, whomsoever of the Canons, Vicars and other Ministers, our said ordinances, monitions and decrees concern, on pain of everlasting malediction to observe them in all things, and the same in nowise to contravene. You, as our Vicar in spiritual things, are to certify this side of the Purification of the Blessed Virgin Mary next, by your Letters Patent sealed. Given at our Manor of Crediton, 24 Sept., A.D. 1400, with the appending of our seal in witness of all the premises.

*Regulations as to Accounts.*

A.D. 1435, on the morrow of the Nativity of the Blessed Virgin Mary (*i.e.* 9 Sept.), it is ordained by the Provost and Chapter:—

1. That 4 times in the year our Exchequer be made and accounted in the house ordained *ad hoc* before the Provost and every of the Canons willing to be present within 8 days after the terms.

2. Also, that at the end of every year, all monies belonging to the Community be placed in a chest with 3 keys, in which the College Seal is kept.

3. Also, that in the last term of every year all arrears of our churches be reduced to writing and notified by the Stewards to the Provost and Chapter.

4. Also, that every year in Michaelmas term before the Feast of All Saints (*i.e.* 1 November), the Stewards render a final account of the whole year then past before the Provost and Chapter on pain of retaining [Something omitted.]

5. Also that no Canon of Glasney, so long as he is notably in debt to the College, be elected or admitted to the office of Steward.

6. Also, that every year on the morrow of the Feast of All Saints (*i.e.* 2 November), there be an election of Stewards, and on the same day there be elected the keepers of two keys of the common chest aforesaid of three keys.

Charter of Jocinus de Autrenon, granting to the venerable Father, Walter, Bishop of Exeter, one English acre of land in his Lordship of Autrenon, situate near Kellyengof, extending in width from the ditch of Roger de Scyberio up to the highway which runs between Heyl and Helleston, next to the sanctuary of Saint Sithny, together with the advowson of the church of S. Sithny, To hold the same to the said Lord Walter and his assigns for ever. [Sealed].

Witnesses: Sir Philip de Bodriga[n].

Stephen Haym.

Ralph de Arundel.

Bernard de Bodbran.

Walter Peverel.

Matthew de Eglosheyl.

Richard de Brendes, [erasure] then Steward,  
and others.

Given at German in Cornwall, 4 April, 1065. [*sic.*, but evidently a mistake for 1265.]

Charter of Thomas Perere, quitclaiming to Martin, Rector of the church of S. Feock, all right in a wood in the Manor of Trevelle, assigning to him the homage and service of Oliver de Lo and his heirs for half an acre in Lo, in the same parish, which he (Thomas) had of the gift of Sir John de Rouen "(de Rotomago)," To have and To hold to the said Martin and his assigns for his life, and after his death to the church of S. Feock for ever. For which gift and quitclaim the said Martin gave five marks. [Sealed].



Witnesses : Sir Richard son of John de Reskemmer.  
 Sir Henry de Kemyel.  
 Philip de Penhalewy.  
 Reginald Waleys.  
 William de Trevelle.  
 Silvester clerk, and others.

On the last folio there is an Index of subjects, extending over the two sides.

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ADDENDA.

(PRINCIPAL REGISTRY OF THE DIOCESE.)

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GLASNEY.

*Ordination of the Canons of Glasney, dated 26th March, 1267.*

Sown with other documents, at the beginning of the Register of Bishop Bronscombe (so-called), is the following very interesting Deed, ordaining Canons for the (then) newly-erected Collegiate Church of Glasney. It bears date at Glasney on the very day of the Consecration of the buildings and churchyard; and it has an additional value from the fact, that from it the year of the Foundation can be deduced with precision. Oliver, probably from this very Document, gives the year 1264, but incorrectly. It should be 1265. He is not exact in other respects, as appears by the particulars set forth in the Deed. It begins:—

“To all who the present Letter shall see, Walter by Divine compassion, Bishop of Exeter, Greeting in the Lord everlasting and perpetual memory of the thing done.”

After some preamble as to following the example set by the Divine Founder of the Christian profession, the Bishop goes on to say that, desiring to bring workers into the vineyard of the Lord of Sabaoth, and to profit by the infusion of the Holy Spirit into the faithful in Christ, he has caused to be built in competent manner a Collegiate Church in honour of the Holy Mother of God and of Saint Thomas the glorious Martyr, in the place called Glasney, within the parochial limits of the church of Saint Budock in Cornwall, to which on account of its slender revenues, he has united the church of Saint Thomas of Penren, likewise poorly endowed, to be henceforth dependent and attached; assigning to this Collegiate Church, these revenues, and in addition all the fruits and profits of the church of Saint Feock—the portions of the Vicars serving those several churches being only excepted—for the living and support of Clerks, for ever ministering there. The Bishop continues (from this point I give the words of the Deed):—

“We ordain also and entitle in the said church thirteen persons at present to be instituted, whom We will to be called secular Canons decreeing that they observe there for ever the laudable customs of the church of Exeter, approved and to be approved; and that every of them,

by themselves, or by proper Vicars (who are to receive yearly 20 shillings out of their Masters' portions), shall honourably and continually serve in the same Church. Further, in addition to the premises, We ordain, that one of the said portioners shall be Proctor of the College, and shall be called by the name of *Proctor*, until concerning the Chief Ruler or Warden after more ample deliberation had with our Chapter we shall cause otherwise to be ordained. And that each of those thirteen persons shall receive yearly six marks [i.e. four pounds] out of the proceeds of the parish churches before assigned. So, that is to say, that whatever, out of goods assigned or to be assigned by the pious collation of the faithful for the support of such ministers, shall increase in time to come beyond the said sum of 6 marks, (the Lord being the augmentor) shall accrue in the name of daily distribution to those yearly resident, or present at High Mass, or using the principal table at Refection; whereto We will that the Canons entering [i.e. coming into residence] be admitted on the first day of their arrival. To define these things, We ordain, That in each of the 3 churches one be nominated Perpetual Vicar, to be canonically instituted by Us or our Successors, who shall have the cure of the people, and each one in his Vicarage shall make continual residence in person; and that the collation of the said vicarages, and also of the portions of the said Collegiate Church, shall appertain in time to come to Us and to our Successors. We retain also unto Us the power of increasing the number of Ministers, and of supplying their portions, when We shall deem expedient as the faculties of the place increase, and of changing other things perchance deserving reform. All the premises, moreover, We have done and ordained, Saving in all things our Episcopal dignity and honour, the right of the Church of Exeter, and the right of the Archdeacon in the places as well appropriated as to be appropriated. In witness whereof for everlasting memory by the addition of our Seal and the Seal of the Dean and Chapter of Exeter We have caused the present leaf to be strengthened. Done and given at Glasney, the seventh of the Kalends (or before the Kalends) of April, in the year of the Incarnation of Our Lord one thousand two hundred and sixty seven, of our Consecration the tenth, and of the foundation of the place aforesaid the third."

Now, the seventh day before the Kalends of April answers to the twenty-sixth day of March, the morrow, that is, of the Annunciation of the Blessed Virgin Mary, on which (as we learn from the Cartulary) the Bishop, two years from the foundations being completed, consecrated the Church and burying ground. This, then, was the first day of the third year; and so we arrive exactly at the year of Our Lord 1265. But we have yet one more date to guide us, for mention (as we have just heard) is made of the *tenth* year of the Bishop's consecration. That event is dated 25 February, 1258 (New Style), or 1257-8 (Old Style). Just a calendar month prior to the act of consecrating the church and ordaining the Canons, the Bishop had completed nine years and entered on the tenth. We have thus the year of Our Lord and the year of the Bishop's Consecration agreeing together, and fixing with certainty the year of the foundation as 1265.

There is another circumstance connected with the Deed under consideration, which I will not pass over. On the back, in addition to the ancient endorsement:—"Ordinacio Canonicorum de Glaney," there is this direction:—

To be put into the booke of all  
Donations and next to the Donation  
of the Rectory of Buckland  
Filleigh, by Henry Bolt to  
Walter, Bp. of Exon:

Nov. 11th, 1667.

(Signed) SETH SARUM.

This was Seth Ward, first Dean of Exeter, then made Bishop of Exeter in 1662, and translated to Salisbury in 1667 [5th September, 1667.] To his care we are indebted for the preservation of this document. It only remains for me to say, that the parchment is in excellent condition, and the handwriting a clear and beautiful specimen of the period.

AUGMENTATION OFFICE, MISCELLANEOUS BOOKS, VOL. 67. FO. 174 b.

A Certificat of the belles, Leade, Stones and Timber, apparteineng to the Church of the late Colledge of Sainte Thomas Glasney, now comnlye called of Ladye of Glasney in the saide Countye.

In primis in the Steple of the saide Colledge  
ar v Bell waieng

<sup>ml</sup>  
iiij weighte at xx<sup>a</sup> the C—xl<sup>ll</sup>.

Item in the saide Steple is one litell bell  
named the Marowmasse bell wayeng

<sup>o</sup>  
j weighte at xx<sup>a</sup> the C—xx<sup>a</sup>.

Item thupper parte of the steple is all  
covered w<sup>t</sup> Leade and the church parte w<sup>t</sup>  
Leade and parte w<sup>t</sup> Stone named Slate in  
that Cuntrye. A greate parte of the Leade  
that covereth the saide Church by vertue of  
warrant from the Counsell was sente to thiles  
of Sille for the Kinges Maiesties fortificacos  
there the Leade that remayneth vpon the  
saide Church and Steple being new cast will  
be

xxij foder at iiij<sup>h</sup> the fother  
<sup>xx</sup>  
iiij viij<sup>h</sup>.

Every ffooder of newe cast Leade is worth  
in that Countrye

<sup>h</sup> <sup>a</sup> <sup>d</sup>  
iiij xiiij iiij.

Everie hundred weight of bell metell in  
that centrey is worthe

xx<sup>a</sup>.

The Stones and Timber of the saide Church  
w<sup>t</sup> the Cloister and Steple is worthe

xx<sup>h</sup>.

p Johem Grainfelde, Supvis.

xxj Die Decēbr Anno Sedo Rs E vj<sup>h</sup> and Egideo Kelwaye generos.

The premisses ar solde to him for the sōme  
of

Cxlix<sup>h</sup> on in compo de a<sup>o</sup> iiij

To be paid all in hande.

Re pd

Sol Thes x<sup>o</sup> februar anno predeo.

Gyles Keylwaye.

Past in the name of John Perient Knight, and Thomas Reve as poell of  
the sōme of m<sup>l</sup>m<sup>l</sup> viij<sup>o</sup> x<sup>h</sup> xj<sup>d</sup> ob 9<sup>a</sup>

*Chantry Certificate, (Cornwall,) Roll 9.*

The Certificat off Will<sup>m</sup> Godolfyn knyght, John Graynfeld and Henry Chyverton Esquyers Comission's Appoynted by vertue of the Kyngs Maiesties Comysson to them and others Directed berynge Date the xiiij of february in the Secounde yere of the reigne of Edwarde the Syxth by the grace of God Kyng of Englonde fraunce and Ireland Defendor of the faythe, And in this Church of Englonde and also of Ireland Sup<sup>r</sup>me hedde to take the survey of all Colledges Chauntres free chapells and other lyke wthin the said Countie of Cornuewall, as hereafter ensuyth :

The Colledge of Seynt Thomas of Glasney standyng in the said Towne being no pishe Church, Off the foundacon of Walter Goode sometyne Bysshoppe of Exceter, to fynde A Provost xij p<sup>r</sup>bendaryes whereof the said Provost and vij of the said p<sup>r</sup>bendaryes be nowe Resident, and v not residente vij vicars, a chapell clerke, a Bell-rynger, iiij querysters, and iij Chauntre, preste to celebrate in the said Colledge.

M<sup>d</sup>.—That this Colledge standeth vpon a fayer havyn named ffalmouth, where as well all kynde of Straung<sup>r</sup>s as other vpon any arryvall in to that pties have there accessse so y<sup>t</sup> some tymes in the yere there Repayreth to the said haven for herborowe C greate Shypes, whiche beinge there have allwayes vsed to resorte to the said Colledge to se the Mynystracon, And the walls of the saide Colledge on the southeside well fortyfied w<sup>t</sup> Towers and Ordinaunce in the same for the Defence of the said towne and the ryver cōmynge to the same whych Ordinaunce pteyn to the men of the said towne.

This Colledge standeth Dystaunte ffrom the pishe Church half a myle and more, whyche pishe Church ys very litle for the nombre of the People in the said towne.

This ys a meate place to establyshe a learned man to teache scollers and to be a p<sup>r</sup>cher.

John Lybbe, a man well-learned, Provost there of thage of lx yerres hathe for his sallarye in the said Colledge bysides his promociō in other places x<sup>li</sup>.

Rauff Trelobbes, of thage of lxx yerres hath for his salary in the said Colledge xj<sup>li</sup> bysides his promociōs in other places xx<sup>li</sup>.

Thomas Vyvian, of thage of lxx yerres hathe for his Salary in the said Colledge xij<sup>li</sup> bysides his promociōs in other places vj<sup>li</sup>.

Mathewe Newcombe, of thage of lx yerres hath for his salary there xj<sup>li</sup> besides his pmocons in other Places xl<sup>li</sup>.

Mathewe Broke, of thage of xlv yerres hathe for his salarye there xj<sup>li</sup> besydes his promociōs in other places xx<sup>li</sup>.

Gerens John, of thage of xlvj yerres hathe for his salarye there xj<sup>li</sup>, And hathe other Promociōs c<sup>a</sup>.

John Harrys, of thage of iiij<sup>xx</sup> yeres hathe for his salarye there xj<sup>li</sup> And hath other pmocions viij<sup>li</sup>. } xj<sup>li</sup>.

Nycholas Nicolls, of thage of xlv yeres hathe for his sallary xj<sup>li</sup> besydes his pmocions in other places xx<sup>li</sup>, whiche Nicholas was admytted in the said Colledge but one daye before o<sup>r</sup> cōmyng to take the survey there. } xj<sup>li</sup>.

*Prebendaryes not Resident.*

Henry Kylyffree, Thomas Molsworthe, Rauf Coche ev<sup>ry</sup> of them not resident hathe yerely for their salaryes, xxvj<sup>s</sup> no<sup>t</sup> for Raufe Coche, M . . . bys scole The twoo other places be nowe voyde. } lxxviij<sup>s</sup>.

*The Names of the Vicars.*

Will<sup>m</sup> Kneben of thage of lv yeres, John Kysya of thage of xxxv<sup>li</sup> yeres, Robert Morse of thage of xl<sup>li</sup> yeres, William Hawton of thage of l<sup>li</sup> yeres, and Robt James of thage of xxx<sup>li</sup> yeres, evy of them hathe for their salarye in the said Colledge vij<sup>li</sup> x<sup>s</sup>. The ij other places of y<sup>e</sup> said vij vicars be nowe voyde and other promocons none. } xxxviij<sup>li</sup> x<sup>s</sup>.

*The Names of iij Chauntre prestes.*

John Chymowe of thage of xl<sup>li</sup> yeres hathe for his salarye in the said Colledge vij<sup>li</sup> x<sup>s</sup>. Thomas Michell of thage of xxxv<sup>li</sup> yeres hathe for his salary in the said Colledge c<sup>s</sup>. Rauff Rycharde of thage of xxx<sup>li</sup> yeres hathe for his salarye c<sup>s</sup>. And other lyvyngs have they none. } xviij<sup>li</sup> xs

*The Chapell Clerk.*

Rauff Coche, Chapell Clarke of thage of l<sup>li</sup> yeres hath for his salary in the said Colledge vj<sup>li</sup> xij<sup>d</sup> bysydes his meate and drinke and hath no other promotions. } vj<sup>li</sup> xij<sup>d</sup>.

*The Names of the querysters.*

Henry Mychell of thage of x yeres, Thom<sup>s</sup> Wykes of thage of xij yeres, Henry Couche of thage of xiiij, Henry Goodalle of thage of xij, ev<sup>ry</sup> of them hathe for his sallary xx<sup>s</sup> and other lyvyng have they none. }

*The Bell Rynger.*

John Pownde bell rynger there of thage of xxx<sup>li</sup> yeres hathe for his salarye ther xl<sup>s</sup>, As well for teachyng of pore mens childe<sup>n</sup> there A.B.C. as for ryngyng the Belles. } xl<sup>s</sup>.

The yerely values of y<sup>e</sup> land and yerely ppfette pteynynge and belongynge to y<sup>e</sup> said Colledge together w<sup>t</sup> v acres di of Woode whereof } ccxxviij<sup>li</sup> iij<sup>s</sup> vij<sup>d</sup>.

Paied oute in Reprises to divs psones } vj<sup>li</sup> v<sup>s</sup> iij<sup>d</sup>.



XI.—*Note on some Relations of Land and Sea Temperature in the South West of England.*—By C. BARHAM, M.D., Cantab., V.-P., R.I.C.

THE purpose of this note is to furnish some materials for a correct estimate of the reciprocal influences of the land and sea on the temperature of the air in the south-west of England, and inferentially on that of the more eastern districts.

The physical geography, and the position of Cornwall, as a great promontory, traversed through its length by high lands, and thrust out into the warm Atlantic, with the Isles of Scilly moored, as it were, thirty miles from its extremity in the midst of the ocean, render this county very interesting in its meteorology, and also a sensitive instrument from nature's workshop, hardly to be equalled elsewhere, for the display, and to some extent for the measurement of the operations of some of the chief factors of climate. Temperature, the most potent probably of them, is here alone considered.

I wish to make a preliminary remark on the insufficiency of the comparison of means, the method usually followed, for a just estimate of the climate of one locality in relation to that of another. It is clear that the mean temperature of the year, of the seasons, and of the several months, will often be about the same in places where the temperature is very equable, and in those where its fluctuations are most wide, although these climates are utterly opposed in character; and the comparison of the means of maxima and minima is a very partial correction, these extremes being subject to like differences in the extent of oscillation on each side of their means; nor is the comparison of the extreme range free from objection, This will be very evident in the instances about to be considered. In fact the knowledge of such means, as of isotherms, is chiefly valuable for the purposes of what may be called *telluric* meteorology, and for comparison of climates of the *same* class in places wide apart. The differences between climates *dissimilar* in general character, especially when the localities concerned are at no great distance, are more accurately ascertained by a comparison of daily records, during times of exceptional heat and cold. By this method the extremes are brought into prominent relief—a matter of the

utmost consequence for judging of a climate in its bearing on animal and vegetable life and health—and the effects of modifying influences are conspicuously shown, if the existence of such influence be not even exexpectedly *detected*. At the same time where, as in the present inquiry, an estimate of the operation of widely acting forces is aimed at, some approach to precision of measurement may thus be best attained.

Turning to our field of observation, the stations chosen for comparison are, (1) *St. Mary's, Scilly*, a type almost purely oceanic; (2) *Penzance*, representing the western peninsula of England, bathed, with exception of four miles of isthmus, by the same warm sea as the islands; but also influenced by a continuous belt of hill to the north and northwest, reaching a height of 800 feet, as well as by contiguity with the mainland of Cornwall; (3) *Helston*, near the south coast, and only a few miles to the east of the isthmus, yet subject to and very clearly exhibiting the influences of land contrasted with those of sea; (4) *Falmouth*, the principal harbour in Cornwall, about halfway between the Land's End and Plymouth, and the site of a Government Observatory, where too the late Mr Dymond's excellent observations during three years on the temperature of the sea were made; (5) *Truro*, equidistant between the two seas, but comparatively little under their influence, a station whose climate has been determined by the uninterrupted observations of forty years; (6) *Plymouth*, where the action of the southern sea is interchanged with that of the large elevated tract of Dartmoor; (7) *Guernsey*, essentially climatized by the Gulf Stream, but within range of the mainland air of France; and lastly, (8) *Greenwich*, as a generally accepted standard of reference, where, thanks especially to the unwearied labours of Mr. Glaisher, an immense series of accurate observations has been analysed, so as to furnish a comparative estimate of the influence of every meteorological condition.

For the comparison of these eight stations in regard to temperature, I have taken *all* the periods of remarkable heat or cold which occurred in the west of Cornwall, in the four years, 1871 to 1874, the latest for which the daily record at the Greenwich Observatory has been published. The following tables give the whole of the daily records as to temperature and direction of wind in one view.



TABLE 1.] Daily Highest and Lowest Temperature during Periods of Remarkable Heat and Cold, in the years 1871-1874, at the Stations named.  
Winds Generally Easterly.

SUMMER.										
WIND.										
MINIMA.										
Date.	Bally.	Pennance	Helicon	Falmouth	Tarro	Plymouth	Guernsey	Greenwich	Date.	Greenwich
1871.										
Aug. 9	70	70.5	84	72.0	85	78	72.5	82.5	1871.	81.9
" 10	73	72.5	86	72.0	84	78	74.5	85	Aug. 9	81.9
" 11	74	73.5	86	71.2	82	76	76.5	85	" 10	82.7
" 12	74	73.5	86	72.5	83	77	73.5	88.2	" 11	82.7
" 13	73	73.0	84	79.0	84	77	75.5	80.2	" 12	82.7
" 13	73	73.0	84	79.0	84	77	75.5	80.2	" 13	82.7
Means	72.8	72.4	83.5	73.4	83.5	76.4	74.4	86.4	Means	84.5
1872.									1872.	
July 20	69	71.5	74	67.8	75	71	73.5	83.9	July 20	84.1
" 21	71	70.5	74	71.4	83	75	78.5	87.5	" 21	84.1
" 22	73	69.5	74	70.0	78	81	72.5	87.1	" 22	84.1
Means	71.0	70.0	77.0	69.73	77.0	75.7	74.5	86.7	Means	86.8
Aug. 16	69	68.5	73	68.4	73	70	71.5	73.7	Aug. 16	81.7
" 17	70	69.5	84	69.1	79	71	74.5	81.7	" 17	81.7
" 18	71	71.5	78	69.3	83	77	74.5	78.1	" 18	81.7
" 19	70	69.5	75	66.5	74	77	67.5	75.1	" 19	81.7
" 20	68	68.5	74	67.0	75	72	69.5	77.1	" 20	81.7
" 21	69	68.5	76	71.0	75	73	67.5	78.3	" 21	81.7
Means	69.4	69.3	76.7	68.82	76.0	73.3	70.5	77.3	Means	84.3
1873.									1873.	
July 20	67	68.5	74	66.5	75	69	68.5	87.2	July 20	85.4
" 21	71	68.5	80	68.2	78	68	76.5	86.5	" 21	85.4
" 22	71	75.5	80	76.0	79	80	81.5	88.7	" 22	85.4
Means	69.7	70.5	78.0	70.3	77.3	72.3	75.3	86.8	Means	87.0
1874.									1874.	
July 14	73	73.5	76	71.1	74	69	67.5	86.7	July 14	87.5
" 15	71	72.5	75	71.4	73	71	81.3	86.7	" 15	87.5
" 16	72	70.5	75	67.7	76	73	68.5	87.5	" 16	87.5
" 17	74	70.5	75	66.6	75	74	68.5	87.5	" 17	87.5
" 18	71	70.5	75	66.5	74	75	66.5	87.5	" 18	87.5
" 19	72	71.5	82	68.1	73	75	70.5	88.7	" 19	87.5
" 20	74	69.5	75	70.5	73	73	70.5	91.5	" 20	87.5
Means	73.3	70.7	76.6	68.76	74.9	73.1	68.5	89.4	Means	89.5
General Means	71.86	70.56	78.78	69.86	77.76	74.16	72.70	85.92	General Means	86.92

TABLE II.

## WINTER.

MAXIMA.												WIND.												MINIMA.											
Date.	Solly.	Falmouth.	Truro.	Plymouth.	Guernsey.	Greenwich.	Pennance.	Helston.	Palmouth.	Truro.	Plymouth.	Greenwich.	Solly.	Pennance.	Helston.	Falmouth.	Truro.	Plymouth.	Guernsey.	Greenwich.	Date.														
1871. Jan. 1	43	40.5	43	40.5	37.5	39.7	N	S	N.E.	S	N.E.	S	38.5	38.5	39.5	36.4	18	31	31.5	10.3															
" 24	34	30.5	30	30.5	28.5	34.5	N	N.E.	N.E.	N	N.E.	N	34	34	35	31.3	27	35	31.5	28.5															
" 27	27	27	28	28	24.5	34.5	N	N.E.	N.E.	N	N.E.	N	25	25	26	23	23	24	24.5	24.4															
" 28	40	37	38	38	35	34.5	N	N.E.	N.E.	N	N.E.	N	38	38	39	35	35	36	36	36															
Means	39.0	37.13	37.50	37.50	35.03	37.37	N	N	N.E.	N	N.E.	N	34.50	34.50	35.50	32.35	24.00	24.00	24.00	24.13															
Nov. 11	43	45.5	41	45.5	43.7	41.7	N	S	N	N	N	N	44	44	45	42.3	35	35	35	35															
" 13	45	45.5	41	45.5	43.7	41.7	N	S	N	N	N	N	40	40	41	37	35	35	35	35															
" 18	40	40	43	40	37.7	37.7	N	S	N	N	N	N	40	40	41	37	35	35	35	35															
Means	41.33	43.17	41.00	43.17	40.76	40.7	N	S	N	N	N	N	41.00	41.00	42.00	37.67	35.00	35.00	35.00	35.00															
Dec. 3	43	43	43	43	44.3	38	N	N	N	N	N	N	43	43	44	40	34	34	34	34															
" 4	45	45	43	43	43.3	38	N	N	N	N	N	N	43	43	44	40	34	34	34	34															
" 6	41	35	41	35	43.3	38	N	N	N	N	N	N	43	43	44	40	34	34	34	34															
" 8	45	45	43	43	44	38	N	N	N	N	N	N	43	43	44	40	34	34	34	34															
" 9	40	40	40	40	41	38	N	N	N	N	N	N	40	40	41	38	35	35	35	35															
Means	43.28	43.20	43.17	43.17	43.00	43.08	N	N	N	N	N	N	43.50	43.50	44.00	40.67	35.00	35.00	35.00	35.00															
1872. Mar. 23	44	41	47	47	43.0	40.5	N	N	N	N	N	N	43	43	44	40	30	30	30	30															
" 24	43	41	45	45	41	38	N	N	N	N	N	N	43	43	44	40	30	30	30	30															
" 25	43	44	45	45	43	43	N	N	N	N	N	N	43	43	44	40	30	30	30	30															
" 26	43	43	45	45	43	43	N	N	N	N	N	N	43	43	44	40	30	30	30	30															
" 28	43	43	45	45	43	43	N	N	N	N	N	N	43	43	44	40	30	30	30	30															
Means	43.00	43.20	47.00	47.00	43.4	43.4	N	N	N	N	N	N	43.50	43.50	44.00	40.67	30.00	30.00	30.00	30.00															
1873. April 24	47	43	50	50	47.5	50.7	N	N	N	N	N	N	43	43	44	40	30	30	30	30															
" 26	46	43	48	48	47	48	N	N	N	N	N	N	43	43	44	40	30	30	30	30															
" 28	46	43	48	48	47	48	N	N	N	N	N	N	43	43	44	40	30	30	30	30															
Means	46.33	43.00	48.33	48.33	47.4	49.4	N	N	N	N	N	N	43.33	43.33	44.00	40.67	30.00	30.00	30.00	30.00															
Dec. 9	48	43	50	50	48	48	N	N	N	N	N	N	43	43	44	40	30	30	30	30															
" 10	48	43	50	50	48	48	N	N	N	N	N	N	43	43	44	40	30	30	30	30															
" 11	48	43	50	50	48	48	N	N	N	N	N	N	43	43	44	40	30	30	30	30															
Means	48.00	43.00	50.00	50.00	48.00	48.00	N	N	N	N	N	N	43.00	43.00	44.00	40.67	30.00	30.00	30.00	30.00															
1874. Mar. 7	53	45	55	55	50.5	50.0	N	N	N	N	N	N	43	43	44	40	30	30	30	30															
" 8	53	45	55	55	50.5	50.0	N	N	N	N	N	N	43	43	44	40	30	30	30	30															
" 10	53	45	55	55	50.5	50.0	N	N	N	N	N	N	43	43	44	40	30	30	30	30															
" 11	53	45	55	55	50.5	50.0	N	N	N	N	N	N	43	43	44	40	30	30	30	30															
Means	53.00	45.00	55.00	55.00	50.50	50.00	N	N	N	N	N	N	43.00	43.00	44.00	40.67	30.00	30.00	30.00	30.00															
Dec. 9	48	43	50	50	48	48	N	N	N	N	N	N	43	43	44	40	30	30	30	30															
" 10	48	43	50	50	48	48	N	N	N	N	N	N	43	43	44	40	30	30	30	30															
" 11	48	43	50	50	48	48	N	N	N	N	N	N	43	43	44	40	30	30	30	30															
Means	48.00	43.00	50.00	50.00	48.00	48.00	N	N	N	N	N	N	43.00	43.00	44.00	40.67	30.00	30.00	30.00	30.00															
General Mean	45.07	43.43	49.06	49.06	43.50	43.50							38.78	38.78	39.13	36.13	26.48	26.13	26.36	26.36															

The results of the whole series, given in the two following tables (3 and 4), for the summer and the winter months respectively, present a view approximately correct of the influence on temperature, of winds blowing over long tracts of land, and its modification by their approach to and contact with the sea, their direction being, with very few exceptions, from east to west.

Table 3.—Results of all observations, shewing Absolute Highest and Lowest, and the Means and Ranges.

SUMMER MONTHS.	Mean of Highest.	Mean of Lowest.	Range.	Absolute Highest	Absolute Lowest	Range.
Scilly, St. Mary's...	71·38	59·86	11·52	74	57	17
„ Tresco .....	75·50	56·33	19·17	84	52	32
Penzance .....	70·58	59·30	11·28	75	53	22
Helston .....	78·78	53·40	20·38	86	52	34
Falmouth .....	69·86	59·69	10·17	79	56·5	22·5
Truro .....	77·76	56·88	21·88	85	51	34
Plymouth .....	74·16	59·32	14·84	81	54	27
Guernsey .....	72·70	61·18	11·52	78·5	54·5	23
Greenwich .....	83·52	55·22	28·30	91·8	46·2	45·6

The mean temperature of the sea at Scilly and around our coasts in the height of summer is about 60°, and its influence is well shewn in this table in abstracting more than 8° from the average heat of the hottest days in the few miles between Helston and the shore of Mount's Bay, at Penzance. There is comparatively little difference between the latter and Scilly; the peninsular character of the land west of the line of the Hayle estuary probably gives to the whole district a strictly marine climate, which terminates abruptly east of that line. Observations at St. Ives and other western localities are needed for the determination of this point; but close proximity to the sea would account for the difference, as it must do for that between Truro and Falmouth, again just 8°; the latter place showing the lowest average maxima in the whole series. The indications for Truro and Helston are nearly alike, and the passage of the land wind over the whole distance from Greenwich cools it by only about 5 or 6 degrees. The influence of the sea is perhaps even more strongly marked at night in these periods of exceptionally hot weather, the minima at the island and coast stations being kept, by the equable warmth of the surrounding

NOTE.—The Thermometers at Tresco, the register of which has been kindly sent to me by Mr. Dorrien-Smith, are much more freely exposed than those at St. Mary's, Falmouth, Truro, and the other stations except Penzance and Helston, with which they are fairly comparable.

or neighbouring waters, several degrees above those of the places which were so much hotter by day. There results of course a much wider range of temperature at the inland stations. It is  $28^{\circ}30$  at Greenwich,  $21^{\circ}88$  at Truro, and only between 11 and 12 degrees at Penzance, Scilly, and Guernsey. The difference between the greatest cold of night, and the greatest heat of day is still more marked, being  $45^{\circ}6$  at Greenwich,  $34^{\circ}$  at Truro and Helston,  $22^{\circ}$  at Penzance,  $17^{\circ}$  at Scilly, and  $23^{\circ}$  at Guernsey. The cold winter periods are next represented.

*Table 4.*—Results of all observations, shewing absolute highest and lowest, and the Means and Ranges.

WINTER MONTHS.	Mean of Highest.	Mean of Lowest.	Range.	Absolute Highest.	Absolute Lowest.	Range.
Scilly, St. Mary's...	45.07	38.83	6.24	52	33	19
" Treco .....	46.47	34.47	12.00	56.0	26.0	30.0
Penzance .....	43.42	34.34	9.08	49.5	28	21.5
Helston .....	49.87	32.56	17.31	56	26	30
Falmouth .....	44.66	36.13	8.53	52.8	28.2	24.6
Truro .....	46.66	25.43	21.23	55	18	37
Plymouth .....	44.33	29.13	15.20	53	21	32
Guernsey .....	43.59	34.26	9.33	50.5	25.5	25
Greenwich .....	39.54	26.25	13.29	55.2	18.6	36.6

The mean temperature of these seas is about  $50^{\circ}$  in the winter months, and its effect is to prevent great cold at places under its influence by the same equalising action which reduces extreme heat in summer. The difference between Penzance and Scilly is, however, here  $4\frac{1}{4}$  degrees; and Helston falls more within the reach of the marine warmth, whilst Truro gains no mitigation of the cold of night. Guernsey corresponds closely with Penzance, suffering somewhat from its nearness to France.

It is to be remarked that the diffused warmth derived from the sea makes itself sensibly felt at the inland stations of Cornwall during the daytime, the average of the greatest daily warmth being 46.66 at Truro, and only 39.54 at Greenwich. It may also be noticed that the mean highest temperature of day is lower at Penzance and Scilly, than at Truro and Helston, owing, it may be surmised, to greater interruption of the sun's rays by moisture.

It follows that, as in summer so in winter, the range of temperature is much the greater inland; the main difference in this particular between the two seasons being that this contrast

of day and night at the two classes of locality is a good deal stronger in very cold weather in Cornwall than at Greenwich; the average range at the latter station being 13.29, whilst at Truro it is 21.23; that for Penzance being 9.08, and for Scilly only 6.24.

These tables (3 and 4) exhibit the differences of the stations in regard to extremes of temperature with general correctness, but a closer examination of the daily observations is required for an accurate estimate of the effect of the several influences at work. Such a detailed analysis would occupy too much space here, and those interested in the subject will find the materials for it in table 1. The direction of the wind is a most important element, and it should be borne in mind that there is a hilly tract to the north and northwest of Penzance, reaching a height of 800 feet; that Helston, open from E.S.E. to W, has some high hills to W.N.W., and an extensive granitic district of like elevation from N. to E.N.E; and that Plymouth is within the influence of the wide range of Dartmoor, rising to the N. and E. from 1500 to 2000 feet. Again the proximity of France renders the climate of Guernsey much less equable than that of Scilly, which is more purely oceanic.

The records so far adduced serve to exhibit the effect of the temperature of the sea surrounding our shores, when the surface wind proceeds from inland districts and has only a very limited contact with the water. This effect may be in some sort measured in the case of such a transit as that of the thirty miles between the Land's End and Scilly, when the temperature at the two termini, that of the intervening sea, and the velocity of the wind are known. In calm and settled weather, the local sea and land alternating breezes modify the effects of the main current of easterly wind, to say nothing of reciprocal radiation and convection.

In the case of westerly and south westerly winds a practically unlimited ocean of still warmer water has been traversed, and the effect of the current of air coming thence over the land must be separately traced in order to a true estimate of the factors of our climate. The following table gives the results of observations with westerly winds, in the same years, 1871—74, and forming generally portions of the same periods to which the facts already stated belong:—

TABLE V.] *Daily Highest and Lowest Temperature in some Periods of Remarkable Heat and Cold in the Years 1871 to 1874, at Scilly, Truro, and Greenwich. Wind generally Westerly.*

SUMMER.											
DATE.	Maxima.			Minima.			Date.	Maxima.			Wind.
	Bally.	Truro.	Greenwich.	Bally.	Truro.	Greenwich.		Bally.	Truro.	Greenwich.	
1872.							1871.				
July 23	69	71	81.9	58	60	59.0	Dec. 9	40	39	33.5	N.E.S.W
" 24	70	71	83.3	60	61	59.9	" 10	41	43	36.3	S.W.N.W
" 25	76	73	90.9	60	58	64.4	" 11	46	60	40.8	N.W.S.W
" 26	63	71	83.8	60	64	66.1	" 12	49	49	44.7	N.W.W
" 27	68	72	81.2	60	63	58.7	" 13	49	60	44.4	W.W
" 28	69	70	80.3	60	63	56.7	" 14	49	51	47.3	W.W
" 29	68	68	78.2	59	60	59	" 15	50	61	46.9	N.S.W
" 30	68	68	78.2	59	60	59	" 16	50	60	46.5	N.S.W
Means	68.15	70.84	82.80	59.57	59.29	60.44	" 17	49	60	43.2	N.S.W
1873.							" 18	51	63	47.7	S.W.S.W
July 23	66	70	87.2	58	60	63	" 19	53	63	49.8	S.W.N.W
" 24	68	67	80	60	53	52.8	" 20	53	60	47.5	S.W.N.W
" 25	68	64	82.1	60	58	57	" 21	50	60	44	W by S.S.W
" 26	63	67	74	55	53	52.8	Mean	48.31	49.00	43.98	
" 27	64	67	77.1	56	48	51.1					
" 28	64	68	76.6	56	48	51.1					
" 29	68	73	80.1	56	43	49.9					
" 30	71	70	83.6	60	54	59.3					
Aug. 1	68	68	73	58	53	54.4					
Aug. 2	64	69	76.4	58	54	51.3					
" 3	67	71	76.1	59	58	53					
" 4	69	68	78.5	61	63	59.8					
" 5	69	70	82.7	59	59	60.4					
" 6	67	81	83	59	61	58.6					
" 7	67	69	87.3	58	56	57.2					
" 8	67	69	87.3	58	56	57.2					
Means	67.06	69.65	79.73	53.29	53.78	55.95	1874.				
March 13	47	50	46.2	41	43	31.7					
" 14	48	63	61.6	44	45	39.3					
" 15	50	60	53.1	46	47	42					
" 16	50	63	54.9	46	46	41.7					
" 17	53	63	55.1	49	48	45.5					
" 18	53	66	58	46	49	41					
" 19	53	63	61.6	44	33	34.3					
" 20	53	58	49.7	46	45	38.9					
" 21	53	58	54.8	46	45	38					
Means	50.89	52.99	52.76	45.44	44.22	39.14					
1874.											
July 31	69	69	80	57	59	59.2					
" 22	66	66	75	59	56	52.9					
" 23	67	69	79.4	58	51	54					
" 24	67	68	76.4	55	57	50.1					
" 25	63	70	74.7	55	49	47.1					
" 26	65	68	77.1	58	57	55.4					
Means	66.38	68.33	76.93	56.85	54.87	53.95					

The comparison of Scilly, Truro, and Greenwich, may be sufficient in this bearing. It will be seen that the heat of the summer day at Truro, instead of approaching that of Greenwich, as in the case of easterly winds, is little raised above that of Scilly, whilst the cooling influence of the sea breeze is gradually expended, and has quite died out between Cornwall and Greenwich, where the day temperature is very high. At night, the warmth of the surrounding ocean keeps the air at Scilly nearly up to its own point of 59·5, whilst radiation lowers that at Greenwich almost to the level of Truro. The operation of the current of sea air is equally exemplified in winter, but now in raising the temperature at Truro to equality with Scilly, whilst that at Greenwich is about 5° lower. At night, the same equalisation of the heat of sea and air, noticed in Scilly for the summer, is maintained; but the cold of night at Truro is not then mitigated. In the cold March of 1874, however, the nights at Truro differ little from those at Scilly, while at Greenwich they are on the average 6½ degrees colder.

The temperature of the surface water of our western seas, the most potent cause of the peculiarities of climate just referred to, was many years ago laboriously recorded, and traced along the course of the Gulf Stream, by our Honorary Secretary, Mr. Whitley, who pointed out its bearings on our seasons, in regard to agriculture especially, with great cogency, in several very valuable essays. Observations had then been and have been since taken at intervals at the Seven Stones, a few miles from Scilly, but the most continuous and reliable recent series is that made and registered at Falmouth, by the late Mr. W. P. Dymond, during the years 1872, '73 and '74. The results are closely in accordance with those previously obtained, and leave little or nothing to be desired. They are summarised in the following table, which shews the absolute maxima and minima of the sea, at the time of day observation, for each month, averaged for the three years, together with their differences from the simultaneous temperature of the air on shore, marked by a *plus* or *minus* sign:

	JAN.		FEB.		MARCH.		APRIL.	
Sea Temperature ...	MAX. 50·2	MIN. 47·8	MAX. 49·0	MIN. 46·5	MAX. 49·3	MIN. 47·3	MAX. 52·3	MIN. 48·7
Difference from Air	-- 2·8	+ 12·4	-- 4·5	+ 10·1	-- 6·4	+ 15·1	-- 8·3	+ 12·5

	MAY.		JUNE.		JULY.		AUGUST.	
Sea Temperature ...	MAX. 54.0	MIN. 51.0	MAX. 58.0	MIN. 53.8	MAX. 62.7	MIN. 56.2	MAX. 60.3	MIN. 56.7
Difference from Air	-10.9	+11.0	-12.0	+5.6	-10.3	+4.9	-11.1	+5.1

	SEPT.		OCT.		NOV.		DEC.	
Sea Temperature ...	MAX. 59.7	MIN. 56.8	MAX. 57.8	MIN. 54.2	MAX. 54.8	MIN. 50.5	MAX. 51.7	MIN. 48.5
Difference from Air	-6.7	+10.6	-5.0	+13.5	-2.5	+13.8	-2.7	+13.6

The highest recorded temperature of the sea was 64°, the lowest 45°; that of the air being 76° and 28°·4; giving an extreme range for the former of 19°, for the latter of 47·6. The highest temperature of the air exceeds that of the sea by much less than the lowest temperature of the sea exceeds that of the air; the mean difference between the maxima being 6°·9; that between the minima 10°·7. The mitigation of winter cold would consequently be more marked than the tempering of the heats of summer.

This note, which deals intentionally with periods of extreme temperature, would not be complete without some general view of the results of observations on that great element of climate through the whole year, at a few of the selected localities. Such a statement for Scilly, Truro, and Greenwich, for the year 1874, may be sufficient:—(Table VII next page.)

A minute comparison of the results here shown with these obtained from the daily observations in periods of exceptional heat and cold, on which my remarks are based, would be more tedious than instructive, because the conditions are essentially different. It will, I think, be admitted that a comparison of records of phenomena occurring simultaneously is indispensable for an accurate estimate of the special climates of particular localities, and also for just conclusions in regard to the relative influence of the several factors of our climate generally, with a view to the advancement of meteorological science.



TABLE VII.

## TEMPERATURE 1874.

STATIONS.	JANUARY.						FEBRUARY.						MARCH.						APRIL.					
	MEAN.			ABSOLUTE.			MEAN.			ABSOLUTE.			MEAN.			ABSOLUTE.			MEAN.			ABSOLUTE.		
	MAX.	MIN.	RANGE	MAX.	MIN.	RANGE	MAX.	MIN.	RANGE	MAX.	MIN.	RANGE	MAX.	MIN.	RANGE	MAX.	MIN.	RANGE	MAX.	MIN.	RANGE	MAX.	MIN.	RANGE
Selly .....	50.1	44.4	5.7	53.	39.	14.	49.6	43.2	6.4	53.	30.	23.	50.9	44.7	6.2	56.	34.	22.	55.8	46.7	9.1	69.	33.	37.
Truro .....	51.0	41.0	10.0	55.	30.	25.	50.3	40.5	9.8	53.	31.	22.	52.7	43.3	10.4	58.	28.	30.	58.0	44.7	13.3	70.	30.	40.
Greenwich ...	47.3	36.2	11.1	55.0	28.1	26.9	45.0	33.5	11.5	55.9	21.0	34.9	52.8	36.6	16.2	65.4	23.6	42.8	61.5	41.3	20.2	79.7	30.5	49.2
STATIONS.	MAY.						JUNE.						JULY.						AUGUST.					
	MEAN.			ABSOLUTE.			MEAN.			ABSOLUTE.			MEAN.			ABSOLUTE.			MEAN.			ABSOLUTE.		
	MAX.	MIN.	RANGE	MAX.	MIN.	RANGE	MAX.	MIN.	RANGE	MAX.	MIN.	RANGE	MAX.	MIN.	RANGE	MAX.	MIN.	RANGE	MAX.	MIN.	RANGE	MAX.	MIN.	RANGE
Selly .....	59.0	49.3	8.7	65.	40.	25.	64.2	55.0	9.2	68.	50.	18.	68.5	58.1	10.4	79.	53.	26.	65.2	57.3	7.9	71.	55.	16.
Truro .....	61.0	48.0	13.0	69.	31.	38.	67.8	50.3	17.5	75.	41.	34.	70.0	54.5	15.5	78.	41.	37.	68.0	54.0	14.0	79.	45.	34.
Greenwich ...	63.2	40.7	22.5	77.6	31.1	46.5	71.1	46.3	24.8	83.7	37.5	46.2	79.0	53.6	25.4	92.0	46.2	45.8	72.1	51.5	20.6	81.2	44.0	37.2
STATIONS.	SEPTEMBER.						OCTOBER.						NOVEMBER.						DECEMBER.					
	MEAN.			ABSOLUTE.			MEAN.			ABSOLUTE.			MEAN.			ABSOLUTE.			MEAN.			ABSOLUTE.		
	MAX.	MIN.	RANGE	MAX.	MIN.	RANGE	MAX.	MIN.	RANGE	MAX.	MIN.	RANGE	MAX.	MIN.	RANGE	MAX.	MIN.	RANGE	MAX.	MIN.	RANGE	MAX.	MIN.	RANGE
Selly .....	62.3	55.2	7.1	68.	50.	18.	57.3	51.0	6.3	61.	46.	15.	53.8	48.0	5.8	57.	39.	18.	48.5	40.4	8.1	54.	30.	24.
Truro .....	65.0	52.6	12.4	74.	39.	35.	59.0	48.0	11.0	63.	39.	25.	54.4	44.3	10.1	61.	31.	30.	46.5	35.5	11.0	54.	28.	26.
Greenwich ...	68.4	50.3	18.1	78.1	43.4	34.7	59.5	45.7	13.8	69.6	36.0	33.6	46.4	36.6	11.8	62.6	25.0	37.6	37.9	28.6	9.3	53.8	18.5	35.3

XII.—*Note on the Winter of 1878-9.*—BY C. BARHAM, M.D.,  
(Cantab) V.-P., R.I.C.

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THE exceptionally severe winter we have just passed through calls for some special notice in connection with the meteorological records of this Institution. It will also be of value in illustration of the normal conditions of the climate of the south-west of England as influenced by the mutual relations of land and sea, as a supplement to some remarks offered by me last year, but not yet printed; as no one of the winters I was then able to deal with was marked by cold at all equalling this in continuous intensity.

I have called the last winter exceptionally severe; Mr. Glaisher says of it:—"The mean temperature of the 155 days from October 27th, 1878, to 31st March was 36·9, being 3·4 below the average of 60 years; this long period of cold weather, extending over five months, is more remarkable for its persistence than for its severity at any particular time; it is also noteworthy on account of the almost continual cloudiness of the sky, which was such that the sun's place was seldom visible." This picture, although a description of the winter at Greenwich, is not far from true in regard to our own. Thus, the mean temperature of these five months at Truro 41·14, or 4·24 higher than Greenwich, was 3·6 below the average of 25 years; here the difference amounting to 7·1 in December, and 5·1 in January, February alone being in accordance with the usual mean. In a good many instances, in the course of that long period, the mean temperature of individual months was lower than during the last winter, but, taking the five months together, it was never before so low.

But, as I have pointed out more than once, the statement of mean temperatures can furnish only a very imperfect estimate of seasons, whether for a single locality, or for its comparison with others. Knowledge of the extremes of heat and cold is of much more value both for scientific meteorology and for practical uses. For our present purpose I have put into a tabular form the mean and absolute highest and lowest temperature, with the direction of wind, on the coldest days of last winter at Scilly, Penzance, Falmouth, Truro, and Blackheath, and have represented the chief results in diagrams. My purpose here is to show, through this typical example, not merely the facts as they have just occurred, but the character of our Cornish climate, or rather climates, in colder seasons, as they are modified by the influences of the mainland or of the sea.

Those interested in the subject will find much matter for study in this table; but I must confine myself to a few principal results derived from the days represented on the diagrams. The means of the *maxima* (highest temperature of day) are for Scilly, 41·835; Penzance, 37·475; Falmouth, 36·270; Truro, 38·87; Blackheath, 31·82; shewing Scilly nearly  $4\frac{1}{2}$  degrees warmer than Penzance, 3 degs. than Truro, and 10 degs. than Blackheath; whilst Truro is more than  $2\frac{1}{2}$  degs. above Falmouth, and 7 degs. above Blackheath. The mean of the *minima*, or greatest cold at night, are for Scilly, 31·965; Penzance, 33·140; Falmouth, 31·32; Truro, 25·765; Blackheath, 24·23. Here we find Scilly more than a degree below Penzance, which is the least cold of all the stations, more than 6 degs. above Truro, which is only  $1\frac{1}{2}$  deg. above Blackheath; whilst it is nearly  $7\frac{1}{2}$  degs. below Penzance, and  $6\frac{1}{2}$  degs. below Falmouth. The highest temperature reached was at Scilly, 49; Penzance, 50; Falmouth, 48·7; Truro, 51; and Blackheath, 35—a difference from 14 to 16 degs. between the Cornish stations and London. The greatest cold was at Scilly, 28; Penzance, 26; Falmouth, 24; Truro, 13; and Blackheath, 15·9; shewing that the most intense cold at Scilly, Penzance, and Falmouth was exceeded at Truro by 15, 13, and 11 degrees respectively; whilst even that at Blackheath was nearly 2 degs. less severe. It is thus manifest that in this recent period of great cold, as in those formerly compared, and probably in all such, the reduction of the mean temperature in the east of England, as represented by Greenwich,

TABLE 1. *Highest and Lowest Temperature, on Days named, in December, 1878.*

Stations	9th		10th		11th		12th		13th		14th		16th		17th		23rd		24th		25th	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Selly, Tresco .....	45	26	43	30	42	28	39	28	40	33	42	33	42	33	47	34	49	33	44	35	44	35
Pensance .....	40	29	36	27.5	34	27	35	30	40	33	35	31	43	38	44	40	41	32	39	38	43	43
Falmouth .....	38.4	31.0	35.0	26.5	32.3	24.0	37.1	26.3	40.0	34.0	38.7	28.9	42.4	31.0	39.2	31.0	40.0	33.0	40.7	33.7	47.0	36.3
Truro .....	40	23	36	25	36	13	39	14	40	33	36	31	43	30	44	25	43	28	43	24	51	28
Blackheath .....	38.4	27.9	30.8	26	33.9	25.9	29.5	25.7	29.8	20.4	30.8	19.2	35.0	20.2	32.4	25.4	31.7	21.1	27.5	15.2	33.0	19.9

*Highest and Lowest Temperature, on Days named, in January, February, and March, 1879.*

STATIONS	Jan. 9th		10th		11th		12th		22nd		23rd		24th		25th		26th		27th		28th		29th		30th		31st	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Selly, Tresco .....	43	33	29	39	30	43	30	44	31	34	29	36	28	38	31	40	30	43	35	42	35	40	36	41	39	43	36	
„ St. Mary's .....	35	43	32	37	33	43	33	44	33	35	32	35	31	36	34	39	34	42	38	42	38	40	37	40	37	43	39	
Pensance .....	40	39	33.5	30	33	26	50	47	33	27	30	28	32	30	33	29.5	37	35	38	33	35	32	34	34	38	38	39	
Falmouth .....	38.9	31.8	36.2	21.7	34.0	26.5	49.7	24.7	33.4	29.0	31.9	26.2	33.0	29.1	33.6	30.1	36.7	32.2	28.3	34.4	35.7	33.8	37.2	32.3	37.4	34.2	40.0	37.2
Truro .....	39	25	36	23	31	28	61	16	34	27	34	24	33	28	35	30	38	30	39	33	36	33	35	32	38	31	41	33
Blackheath .....	39.3	23.0	29.5	22.1	27	20.9	34.5	20	31.1	26.3	30.5	22.3	30.7	26.1	33.5	26.4	34.2	31.0	34.7	31.3	32.9	29.3	33.6	28.0	33.1	30.1	33.4	28.2

STATIONS	Feb. 1st		2nd		3rd		4th		5th		24th		Mar. 23rd		26th		28th		29th		30th	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Selly, Tresco .....	45	39	43	46	44	38	43	40	45	37	45	37	47	39	45	33	43	33	38	31	43	33
„ St. Mary's .....	48	42	51	47	53	47	47	41	48	40	44	38	45	39	41	35	41	35	44	35	44	35
Pensance .....	46	46	46	46	47	35	46	40	50	46	41	29	41	33	45	31.5	45	46	43.5	38	43.5	38
Falmouth .....	45.7	39.6	50.2	43.9	48.3	41.3	41.2	34.9	50.1	40.9	38.8	31.7	39.6	34.7	36.8	32.7	38.0	32.0	42.6	36.0	42.6	36.0
Truro .....	46	37	50	40	51	44	45	32	50	38	41	28	41	34	40	33	43	31	44	34	44	34
Blackheath .....	31.5	25.3	37.5	30.5	37.2	32.5	34.8	29.4	39.8	28.1	40.8	22.7	35.5	35.5	33.0	28.1	34.2	26.8	36.3	30.1	36.3	30.1

below the level of Cornwall, is occasioned by the greater coldness of the daytime at the former; and that in our western country, the lowering of the mean temperature at an inland station like Truro, as compared with Scilly and the seaboard, depends on the greater coldness of the interior at night.

A more minute scrutiny of the table is full of interest, affording as it does an almost exact measure of the effect of more or less direct currents from the sea, deriving thence a temperature of about 50, in warming the air inland; but I must content myself with one instance. On the 12th January the wind was N.E. in the morning, and the minimum at Truro was 16, and at Falmouth 24·7; it shifted in the course of the day, and only for a few hours, to S.W., and the temperature rose at both places to the highest point attained at all, 51 and 48·7 respectively; but at Blackheath, although a like transient S.W. current reached it, the warmth was expended, and the temperature was only raised from 20 to 34·5.

I must allude in the same cursory manner to the effect of the warmth emanating from the sea in mitigating the cold of the mainland, even when the wind blows from the shore. As exemplifying this, I may adduce the two coldest days of the winter—the 11th and 12th December—when the minima at Truro were 13 and 14; although the wind was N. the lowest points at Penzance were 27 and 30, and at Falmouth 24 and 26. Penzance, and indeed the whole peninsular portion of Penwith, is under this marine influence, which may be regarded as almost a fixed quantity, the temperature of the surrounding sea only varying between 60 degrees in summer and 50 degrees in winter.

The prevalence of E. and N.E. winds was, no doubt, the most efficient proximate cause of the continuance of the winter cold. In each of the six months from October to March, the frequency of these winds was above the average; it was nearly twice as great (as 55 to 29) in the whole period, and nearly four times as great (as 15 to 4) in January.

To give a wider comparative view of the greatest cold in different places, I have made a table of minima for the severest days of December, adding to the stations already mentioned, Guernsey, Helston, Plymouth, Torquay, and Oxford.

*Lowest Temperature on certain days in December, 1878, at the Stations named.*

Stations.	9th	10th	11th	12th	13th	14th	15th	17th	23rd	24th	25th
Guernsey .....	33·0	31·0	28·5	29·0	28·0	31·5	31·5	34·0	33·5	31·0	33·0
Scilly .....	29·0	30·0	28·0	28·0	32·0	32·0	33·0	34·0	33·0	35·0	35·0
Penzance .....	29·0	27·5	27·0	30·0	32·0	31·0	38·0	40·0	32·0	38·0	43·0
Helston .....	24·0	21·0	20·0	22·0	32·0	22·0	33·0	26·0	26·0	30·0	36·0
Falmouth .....	31·0	28·5	24·0	26·3	34·0	28·9	31·0	31·0	33·0	32·7	36·3
Truro .....	23·0	25·0	13·0	14·0	22·0	31·0	20·0	25·0	26·0	24·0	28·0
Plymouth .....	26·0	26·0	23·0	20·5	22·0	29·0	19·0	27·5	25·0	25·5	28·0
Torquay .....	26·8	24·1	20·6	24·3	23·1	23·9	20·6	28·0	26·2	27·8	34·1
Blackheath .....	27·9	26·0	25·9	25·7	20·4	19·2	20·2	25·4	21·1	17·0	15·9
Oxford .....	23·3	22·1	25·8	23·5	16·9	21·5	28·1	25·2	12·1	5·1	26·6

I must not venture into minute comparisons, and will only remark that there is little difference between Guernsey, Scilly, and Penzance; that Helston, notwithstanding its proximity to Mount's Bay, presents here, as it has usually done during the long series of years included in Mr. Moyle's excellent observations, published in the Reports of the Polytechnic Society, the characteristics rather of an inland station, not differing widely from Truro, except in a few cases of extreme cold. Plymouth is less cold than Truro, more cold than Falmouth, and differs little from Torquay. As a distinctly inland station Oxford might be expected to shew more extreme cold than it does; the only great dip below the others is on December 24th, when it fell to 5·1. Generally in the east the most severe weather occurred at Christmas; here it was very sharp then, but not so intense as a fortnight earlier. Further north, the temperature was still lower. At Buxton, for instance, the lowest point on the 24th was 2½, and on the 13th at Gainford, near Darlington, it was -2, 4½ degrees lower still. At Altarnun the minimum was 8 degrees, on 11th December; whilst the lowest at Bodmin, an inland station only a few miles off, was 23·0. The conditions of the several observations must be briefly stated. At Scilly I have adopted for the above comparisons the results of the thermometers placed by Mr. Dorrien-Smith, on an open stand at the flag staff, at Tresco, about 70 feet above the sea level, as most similarly situated to those at Penzance; but I have added, for 1879, as nearer in conditions to the instruments at the other stations, those at St. Mary's registered for the Meteorological Office, in a Stevenson's screen, which is secured from direct and reflected

rays. There the minimum through the winter was never below 32; whilst at Tresco it was 28 on three occasions. At Penzance the instruments are also unenclosed. At the Falmouth observatory they are placed in a louvred case fixed on its wall, in a rather confined court; at Truro, in a louvred shed, exposed on all sides on the flat roof of the Museum. At Blackheath Mr. Glaisher uses his own open stand. The close screens are valuable for securing uniformity of conditions of exposure of the instruments at numerous stations; but the results should be supplemented by thermometers more freely exposed, in order to a just estimate of each climate. In regard to Truro, this has been done for many years by Mr. Whitley and myself, at Penarth and Strangways terrace, by means of stands open on one or more of their sides. A somewhat larger range between maxima and minima is thus obtained, together with a truer view of our climate; but a recent examination of the three registers has satisfied us of the trustworthiness of the observations recorded for this Institution. It should also be borne in mind that the uncovered vegetation has to bear a cold yet greater than that indicated by the instruments in these stands. Thermometers placed on the grass and fully exposed, have been kept under observation near the two houses mentioned, and have usually fallen from 5 to 10 degrees below those in the stands in the frosty nights of this winter.

The foregoing remarks refer to that season as ending by common law on the 31st March; but April, and even May, are entitled to be affiliated to it. Down to the 18th of April there were ten sharp frosts, and two falls of snow. Mr. Dorrien-Smith, observes for Tresco:—"The lowest temperature within one degree during the winter occurred on the morning of April 13th (29 degs.,) destroying the most forward potatoes. At St. Mary's only 36 degs. was registered." Every now and then the graphic line—

"And winter, lingering, chills the lap of May," has been appositely quoted; still, happily, to have frost on more than half of its first ten days and hail and snow on two other days, is a very exceptional experience.

I have dealt with the subject of temperature only, as the great point in winter; and it involves most of the other elements of that season. The rainfall presents no peculiar feature, unless,

to use an Hibernicism, that it was largely constituted of melted snow; indeed, the frequency of falls of snow—not less than eight during the winter—was one of its most rare incidents at Truro. Judging from my own garden, the injury done to plants was greater than in any other of the last 25 years: a just estimate of this damage may be formed from the interesting communication from Mr. Rogers, which immediately follows this note. I may point out the distinction to be drawn between the effect of very intense but transient frost, which breaks up the vascular structures, and thus cuts the plant down to the ground, without necessarily damaging the root, and the mischief done by prolonged cold, even of less intensity, which is convected gradually deeper and deeper from the surface, and reaches the sources of the life of the tree to their destruction. The Greenwich underground observations shew that whilst the lowest mean temperature of the *air* occurs at the end of January, that of the *earth* six feet below the surface is deferred till a month later, that at 12 feet for two months, while at 25½ feet it is postponed till June. I must conclude by expressing my thanks to Mr. Dorrien-Smith, of Tresco Abbey, Mr. Hosken Richards, of Penzance, and Mr. Scott, of the Meteorological Office, as authorising the ready hand of Mr. Edward Kitto, of Falmouth, for their communications in regard to those stations; to Canon Phillpotts I am indebted for a mass of materials; and I need scarcely say that Mr. Whitley has treated me as he always has done, as a partner in a tribute pitch.



XIII.—*Note of the Effect of the Winter of 1878-9 on Shrubs and Plants at Penross.*—By JOHN JOSE ROGERS.

IT may be useful to compare the result of the past severe season with that of the winter of 1860-61, which was recorded at page 252 of our Journal for September, 1876. One important difference is observable in the effect exercised by these two seasons on the spring vegetation, viz.:—that almost all flowering shrubs, except Rhododendrons, have flowered more abundantly than usual this spring, whereas I do not remember that to have been the case in the spring which followed the winter of 1860-61. The reason for this difference is to be found, I think, in the difference between the autumn seasons which preceded these two winters, August, 1860, was a cloudy, wet month (21 days rain), and the winter began before the summer shoots of shrubs had an opportunity of ripening: whereas the autumn of 1878 was very warm, dry and sunny, and all flower buds were well developed, and young wood ripened, before the commencement of winter, which was at an early date in each instance.

Some shrubs reported as killed in 1861 will not be found among the killed in 1879, because no attempt has since been made to replace them.

<i>Killed.</i>		<i>Injured severely.</i>	
Abutilon striatum,	the only one.	Coronella.	
Aster argophyllus,	the only one.	Farfugium grande.	
Calceolaria aurea floribunda,	all.	Hebrothamnus elegans.	
Cassia corymbosa,	the only one.	Myrtle.	
Escallonia macrantha, where exposed		Rhododendrons,	some.
Eucalyptus globulus,	the only one.	Veronica Andersoni.	
Fuchsias, (killed to ground)	all.	Vitex agnus castus.	
Geraniums, various,	all.		
Locust Tree,	the only one.		
Physianthus albiflora	all.		
Polygonium complexum,	several.	<i>Injured slightly.</i>	
Spiræa Lindleyana,	the only one.	Camellias, in foliage,	some.
Veronica,	several.	Euonymus, Japonica.	
Verbena Aloysia citriodora,		variegata aurea.	
and almost the entire stock of		Laurel,	some.
frame plants and cuttings, except		Myosotis dissitiflora.	
Verbenas, and Chrysanthemums.		Ozothamnus thyrsoides.	
		Taxodium sempervirens.	

*Escaped uninjured.*

*Acacia dealbata.*  
*Berberis Darwinii.*  
 ——— *Intermedia.*  
*Bocconia Japonica.*  
*Chamærops excelsa.*  
*Camellias.*  
*Cryptomeria Japonica.*  
 ——— *elegans.*  
*Forsythia viridissima.*  
*Gunnera scabra.*  
*Hydrangeas.*  
*Japanese Honeysuckle.*  
 ——— *Primula.*  
*Liquid-amber.*  
*Louis Philippe Rose.*

some.

*Magnolia conspicua.*  
*Maclura aurantiaca.*  
 Marshal Niel Rose, on S.W. wall.  
*Myrsine undulata.*  
*Panlownia Imperialis.*  
*Phormium tenax.*  
*Simplocos Japonica.*  
*Soyadopitys Verticillata.*  
*Smilax aspera.*  
*Thuja Donneyana.*  
*Pinus austriaca, pinus pinaster, and*  
*Pinus insignis, which suffered*  
*more or less in 1880-1, seem to*  
*have escaped uninjured, in all sit-*  
*uations, this season.*  
 May 21st, 1879.

NOTE.—The *Wellingtonia gigantea*, *Ilex aquifolium*, and Lombardy Poplar, (*P. dilatata*), killed or nearly so in my garden, escaped uninjured at Penrose; on the other hand, *Taxodium sempervirens* which has been often cut here, and was so last winter at Penrose, did not suffer at all.

C. BARHAM.

## THE AUTUMN EXCURSION.\*

The annual excursion took place on Friday, August 1st, when nearly 60 members and friends mustered at the Penzance Railway Station about 11 o' clock in the morning, most of them having come from Truro. Here carriages were in waiting, and a very pleasant drive over the breezy moorland to St. Just where the newly-restored Church was visited, and a walk to the fine headland of Cape Cornwall, prepared the party for the thorough enjoyment of luncheon. However, as the programme of the day was an exceedingly comprehensive one, little time was allowed for social enjoyment. The party were soon again on the move, the ruins of an ancient oratory were inspected, the hospitality of Capt. Bennetts, at St Just United, partaken of by some of the party, a peep taken from the picturesque summit of Karn Gluze, and a more prolonged halt made at Ballowal Cairn, where the great stone tumulus, opened by the president, was inspected under his pleasant guidance. A second halt was made at St. Just, on the site of the restored Plan-an-gùarè, to hear a paper from the Rev W. S. Lach-Szyrma on Cornish miracle plays. Cornwall he styled the home of the Plan-an-gùarè; he, however regarded the Cornish amphitheatre not as a Celtic institution, but as a development of the Roman amphitheatre. It is a curious fact, that, although the drama is now so unpopular in Cornwall, yet about three quarters of the existing literature of mediæval Cornwall is dramatic poetry, and these dramas are intimately connected with the plan-an-gùarè. There were four times as many theatres in Cornwall in the reign of Edward IV. as there are under Victoria, and the drama had ten times the influence it now has. In fact, in a rude way, the drama was, probably, as important an element in the intellectual and religious life of old Cornwall as in Athens. The apparent inconsistency may be explained. The objection to the drama at present in Cornwall is religious, the object of the drama in the fifteenth century was religious. It is the tone of the drama, said Mr Lach-Szyrma, that has changed, and not the ideas of the Cornish people.

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\* Principally from the *Cornish Telegraph*.

On the return to Penzance the Church of St Buryan, which has been very carefully restored and contains many features of great interest to the archaeologist, was visited, and a further halt was made at Rosemodd circle, to view the melancholy sight of the 19 merry maidens, who, as tradition has it, were turned into stone for dancing on a Sunday, and the two giant pipers hard by, who were overtaken by the same fate during their vain attempt at flight. The next move was to the Union Hotel, Penzance, where the members had been bidden by Mr and Mrs Borlase, and where they found a very choice dinner in readiness, which did infinite credit to the resources of the establishment, as well as to the hospitality of the president. About sixty ladies and gentlemen were present. If brevity be the soul of wit, the speeches may be commended for this valuable quality, for they were brief. The chairman gave the laudable example, and the Mayor of Penzance followed suit by welcoming the members within the precincts of the borough, in few but earnest words, and by proposing the prosperity of the Royal Institution of Cornwall. Dr Barham, whose name was coupled with the toast, responded, declaring that the day's excursion was a proof of the prosperity of the Society as it was of the eminence of its president. In Mr. Borlase they had the rare instance of a man who was in a position to enjoy his ease and follow his studies quietly in his own particular way and without any great exertion or devotion to the services of the world at large, and yet had given up time and energy to the very serious study of subjects of great interest, particularly to the archaeologist, and had worked at them in a way which had not only raised him to great distinction in Penzance and the county, but wherever antiquities were cared for and studied. This he had accomplished, first in connection with the work on *The Old Tin Trade of Cornwall*; then in *Nenia Cornubiæ*, an account of the ancient plans of interments in Celtic counties, especially in Cornwall; and finally, a year ago, in his essay on *The Age of the Saints*. All these were elaborate works, such as nothing but very devoted study could possibly have enabled him to produce. It was an exertion on the part of a private gentleman who might do as he liked with his time, and it deserved all possible honour from those interested in the cultivation of knowledge. In this course he could only suppose that their president had been inspired by

the recollection of the work done by the most eminent of all county antiquarians, his great-great-grandfather, Dr. Borlase—(hear hear). That the blood of Dr Borlase flowed in the veins of their president none acquainted with him could doubt, from the kindred spirit with which he worked out his subjects, and what the president had been able to do for them that day was the end that crowned the work—(hear hear). Certainly they had had the feast of reason during the excursion, and the flow of soul at the dinner—(laughter). They had many good presidents, he hoped, in store, and in Mr. Borlase they had a president in reserve, and on whom the Society in years to come would call for future benefits. In conclusion, he asked the company with the heartiest cordiality to drink to the health of their president

The President, in responding, said he should have felt very deeply, as coming from any member of the Royal Institution of Cornwall such words as had just been applied to him, but he felt them still more deeply as coming from Dr. Barham, who had been so long acquainted with the Society, and had gained for himself to such an extent the love of every member of it. Dr. Barham had been the prop of the society for many years, and his words had filled him with a gratitude it was difficult for him to express. As to what he had been enabled to do for them that day it had given him great pleasure. As a selfish gratification they might, therefore, accept his services, which had been amply rewarded in their coming to dine with himself and Mrs Borlase—(applause). If they had spent a happy day none of them were happier than his wife and himself in that knowledge.

The ladies then retired, and a few other toasts (including Mrs. Borlase and the ladies), brought the proceedings to a close.

A railway train was awaiting the Truro guests, who reached home about midnight.

*Summary of Meteorological Observations at Truro, in Lat. 50° 17' N., Long. 5° 4' W., for the year 1879,  
from Registers kept at the Royal Institution of Cornwall.*

TABLE No. 1.

METEOROLOGY.

1879.		MONTHLY MEANS OF THE BAROMETER. Cistern 43 feet above mean sea level.																
Month.	Mean pressure corrected to 32 deg. Fahr. at sea level.			Mean of monthly means.	Mean correction for diurnal range.	True mean of monthly means.	Mean force of vapour.	Mean pressure of dry air.	Corrected absolute maximum observed.	Day.	Corrected absolute minimum observed.	Day.	Extreme range for the month.	Mean diurnal range.	Greatest range from 9 a.m. to 9 p.m.	Day.	Greatest range in any consecutive 24 hours.	Between which days it occurred.
	9 a.m.	3 p.m.	9 p.m.															
January	29.969	29.943	29.959	29.957	.004	29.953	0.208	29.745	30.401	27	29.303	8	1.098	.131	.53	1	.68	1 & 2
February	29.568	29.546	29.566	29.560	.003	29.557	0.255	29.302	30.269	26	28.874	10	1.395	.126	.36	1	.80	11 & 12
March	30.013	29.987	29.990	29.997	.007	29.990	0.244	29.756	30.510	10	29.500	25	1.010	.060	.19	12	.32	5 & 6
April	29.710	29.706	29.728	29.715	.004	29.714	0.265	29.449	30.387	29	29.243	8	1.144	.109	.28	19	.59	23 & 24
May	30.070	30.064	30.074	30.069	.003	30.066	0.298	29.768	30.540	5	29.490	28	1.050	.059	.24	17	.31	5 & 6
June	29.805	29.817	29.833	29.818	.001	29.817	0.368	29.439	30.194	13	29.435	8	0.609	.095	.32	9	.42	9 & 10
July	29.890	29.904	29.920	29.905	.002	29.903	0.405	29.498	30.224	24	29.413	1	0.811	.079	.21	12	.43	19 & 20
August	29.877	29.881	29.894	29.884	.004	29.880	0.407	29.473	30.337	31	29.580	29	0.757	.076	.24	15	.36	13 & 14
Sept	30.015	30.010	30.013	30.013	.004	30.009	0.391	29.618	30.494	1	29.437	7	1.057	.080	.21	9	.37	11 & 12
Oct.	30.154	30.151	30.164	30.156	.006	30.150	0.347	29.803	30.488	11	29.663	20	0.825	.041	.18	1	.22	19 & 20
Nov	30.286	30.260	30.273	30.273	.004	30.269	0.234	30.035	30.667	7	29.846	21	0.819	.051	.16	21	.28	1 & 2
Dec	30.325	30.321	30.291	30.312	.003	30.309	0.218	30.091	30.756	13	29.514	4	1.242	.059	.29	6	.56	& 6
Means	29.974	29.966	29.975	29.972	.004	29.968	0.304	29.664	30.438		29.446							

REMARKS.—The Barometer used is a Standard, made by Barrow, and compared with the Standard Barometer at the Royal Observatory, Greenwich, by Mr. Glaisher. The corrections for Index Error (+0.008), Capillarity (+0.012), height above sea (43 feet), and temperature, have been applied.

METEOROLOGY.

TABLE No. 2.

1879.		MONTHLY MEANS OF THE THERMOMETER.																								
Month.	MASON'S HYGROMETER.						SELF REGISTERING.						ABSOLUTE.													
	9 a.m.		8 p.m.		9 p.m.		Mean of Dry Bulb.	Mean correction for diurnal range.	True mean of Dry Bulb.	Mean of Wet Bulb.	Mean correction for diurnal range.	Mean temp. of evaporation.	Wet Therm. below dry.	Mean dew point.	Dew point below Dry Therm.	Mean of all the Maxima.	Mean of all the Minima.	Approximate mean temp.	Correction for the month.	Adopted mean temp.	Daily mean range.	Maximum.	Day.	Minimum.	Day.	Range.
	Dry Bulb.	Wet Bulb.	Dry Bulb.	Wet Bulb.	Dry Bulb.	Wet Bulb.																				
January	38.0	36.4	40.7	38.7	38.0	36.5	38.9	0.4	38.5	37.2	0.3	36.9	1.8	35.6	2.9	42.7	34.0	38.3	0.1	38.2	8.7	53	13	16	12	37
February	43.0	41.7	46.7	45.0	42.6	41.5	44.1	0.7	43.4	42.7	0.5	42.2	1.2	40.8	2.6	48.9	38.4	43.6	0.1	43.5	10.5	54	8	25	25	29
March	42.7	41.2	49.9	46.0	42.4	41.3	45.0	1.0	44.0	42.8	0.6	42.2	2.7	39.6	4.4	51.1	33.9	43.3	0.2	43.1	15.2	61	19	24	14	37
April	47.6	45.8	50.8	47.5	44.0	42.8	47.5	1.6	45.9	45.4	1.3	44.1	1.8	41.7	4.2	54.0	38.3	46.1	0.1	46.0	15.7	60	29	24	12	36
May	51.6	49.4	55.1	50.6	48.3	46.7	51.7	2.3	49.4	45.6	1.4	47.2	2.2	44.8	4.6	57.2	43.8	50.5	0.8	49.7	13.4	64	5	31	8	33
June	56.8	54.2	60.5	56.0	55.0	53.4	57.4	2.9	54.5	54.5	1.7	52.8	1.9	52.0	2.5	62.9	51.7	57.3	0.3	57.0	11.2	68	14	47	8	21
July	58.0	55.6	61.6	57.4	56.8	55.0	58.8	2.1	56.7	56.0	1.2	54.8	1.9	53.2	4.8	61.1	33.5	58.8	0.3	58.5	10.6	74	29	47	25	27
August	60.1	57.1	63.6	59.0	58.3	56.5	61.0	2.0	59.0	57.5	1.2	56.3	2.7	53.3	5.7	66.1	54.3	60.2	0.3	59.9	11.8	73	12	41	30	32
Sept.	57.3	54.4	61.3	56.3	54.5	53.2	57.7	1.7	56.0	54.9	0.9	54.0	2.0	52.1	3.9	63.8	46.3	56.0	0.2	55.8	15.5	70	2	35	2	35
Oct.	53.0	51.2	57.4	53.2	51.0	49.3	53.8	0.8	53.0	51.2	0.6	50.6	2.4	49.0	4.0	59.4	46.6	53.0	0.4	52.6	12.8	66	6	31	16	35
Nov.	41.9	40.1	46.0	43.9	42.0	40.0	43.9	0.6	43.3	41.3	0.5	40.8	2.5	38.6	4.7	50.0	35.6	42.8	0.1	42.7	13.4	56	17	25	30	31
Dec.	36.7	35.5	43.6	41.0	38.8	37.5	39.6	0.2	39.4	38.0	0.3	37.7	1.7	36.7	2.7	45.9	31.8	38.8	0.0	38.8	14.1	54	27	17	2	37
Means	48.9	46.8	53.3	49.5	47.6	46.1	49.9	1.4	48.5	47.5	0.9	46.8	2.1	44.8	3.9	55.5	42.7	49.1	0.2	48.0	12.8	63.1		30.2		

The Thermometers are placed on the roof of the Royal Institution in a wooden shed, through which the air passes freely. The Standard Wet and Dry Bulbs are by Negretti and Zambra, and have been corrected by Mr. Glaisher.

METEOROLOGY.

TABLE No. 3.

WINDS.

1879.

Month.

	N.			N.E.			E.			S.W.			W.			N.W.			N.			N.E.			AVERAGE FORCE.					
	dir.	freq.	dir.	dir.	freq.	dir.	dir.	freq.	dir.	freq.	dir.	dir.	freq.	dir.	freq.	dir.	freq.	dir.	dir.	freq.	dir.	freq.	dir.	freq.	dir.	freq.	dir.			
January	5	6	4	7	8	8	0	0	0	2	3	3	4	3	3	0	1	1	4	1	2	9	9	10	22	27	25 25			
February	2	1	1	2	1	1	3	3	2	8	7	6	0	3	5	7	7	9	3	3	3	3	1	21	29	22 24				
March	4	4	1	2	3	5	2	1	1	6	8	10	2	4	2	5	4	4	6	2	5	4	5	3	20	26	17 21			
April	1	0	1	2	2	2	2	2	2	5	3	2	4	5	6	5	9	10	4	2	3	7	6	5	23	30	17 23			
May	5	1	1	2	3	2	4	3	1	2	4	2	1	4	8	11	11	10	2	3	4	4	2	3	25	33	20 26			
June	1	1	3	2	1	2	5	9	6	12	10	12	5	7	5	5	2	2	0	0	0	0	0	0	28	30	21 26			
July	0	0	0	2	2	0	3	2	3	3	7	9	9	8	8	11	11	10	3	1	1	0	0	0	26	30	21 28			
August	2	2	1	3	1	2	5	5	6	7	11	9	7	5	8	3	3	4	3	3	2	1	0	0	25	28	16 23			
Sept.	2	1	3	2	5	4	3	0	1	4	6	5	7	7	5	3	5	7	7	5	4	2	1	1	19	23	13 18			
Oct.	9	10	10	3	5	4	1	0	0	2	1	1	8	7	5	2	5	6	1	2	3	5	1	2	19	25	15 20			
Nov.	3	3	2	1	2	2	0	1	1	2	1	1	3	2	0	3	3	6	8	5	8	10	12	11	12	21	12 18			
Dec.	1	4	5	5	9	6	3	3	1	3	2	4	3	6	5	3	4	2	7	1	3	6	1	6	12	22	15 16			
Total	35	33	32	38	42	38	31	29	24	56	63	64	53	61	60	58	65	71	48	28	38	51	40	42	252	324	214 268			
Means	33.3			37.7			28.0			61.0			59.0			64.7			38.0			44.3			21.1			27.1		

The force of the Wind is estimated on a scale from 0 to 6, from calm to violent storm.



METEOROLOGY.

TABLE 4.

1870.

Month.

AVERAGE CLOUDINESS.

9 a.m.

3 p.m.

9 p.m.

Mean.

RAINFALL.

Rainfall in inches.

No. of days in which rain fell.

Penarth.

Truro.

Depth.

Greatest fall in 24 hours, Truro.

Mean weight of vapour in a cubic foot of air.

Mean additional weight required for saturation of the air.

Mean humidity of atmosphere.

Mean elastic force of vapour.

Mean weight in grains of a cubic foot of air.

Amount of water in a vertical column of air.

SUN.

Shine.

Gleam.

Cloud.

Dry.

Wet.

REMARKS.

January

Feb.

March

April

May

June

July

August

Sept.

Oct.

Nov.

Dec.

Means

Frost 5, 9, 10, 11, 12, 16, 17, 19, 22, 23, 24, 25, 26, 27, 28, 30, 31. Gale 8, 10. Snow 10. Fog 13, 15. Remarkable Rain 24.

Frost 22, 24, 25, 27, 28. Snow 25. Hall 17, 18, 19, 21, 22, 23.

Frost 1, 2, 3, 4, 7, 8, 10, 14, 15, 23, 24, 25. Snow 22. Hall 31. Fog 11.

Frost 1, 2, 3, 5, 9, 12, 13, 17, 18. Snow 12.

Frost 2, 3, 4. Hall 1. Snow 7.

Gale 21, 30.

Gale 8, 9, 20.

Thunder Storm 2. Hall 2. Remarkable Rain 2. Gale 27.

Frost 1, 2. Fog 20.

Gale 19, 20. Remarkable Rain 25.

Frost 4, 6, 11, 14, 15, 16, 17, 20, 21, 22, 23, 24, 25, 27, 28, 29, 30. Snow 30. Hall 20. Remarkable Rain 24.

Frost 1, 2, 3, 4, 6, 9, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30. Thunder 24. Fog 8, 14, 15, 16. Thunder Storm 30. Hall 20. Gale 30, 31.

26.4

4.5

29.9

76.4

14.8

Cloudiness is estimated by dividing the sky into ten parts, and noting how many of these are obscured. The rain gauge at Truro is placed on the roof of the Royal Institution, at about 40 feet from the ground, and 30 feet above the sea. Gleam is recorded when the sun's disk is visible through a film of cloud. The rain gauge at Penarth, near Truro, is 100 feet above the mean level of the sea.

# JOURNAL

OF THE

## ROYAL INSTITUTION OF CORNWALL.

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MARCH.

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XIV.—*Notice of HENRY BONE, R.A., and his works, together with those of his son, HENRY PIERCE BONE, and of other Members of the family.*—BY J. JOPE ROGERS.

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*Read 27th May, 1879.*

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HENRY BONE, a native of Truro, may justly be considered the most celebrated of British enamellists. He was appointed painter in enamel to our kings, George III, George IV, and William IV, successively; and he won his honours so entirely by his industry and skill in the pursuit of an attractive art, that a brief record of his career seems to be demanded by the Journal of our Institution, in his native town.

The only existing notices of him of which I am aware, are to be found in the Art Dictionaries of Pilkington, Bryan, Redgrave, and others, and in the incidental references to his works which occur in other books which treat of this branch of art.

None of these notices, however, are sufficiently detailed to satisfy the enquiry of a Cornish lover of art, though quite as full as limited space could be expected to allow in such publications.

When, therefore, in the course of my researches for the completion of the catalogue of the works of John Opie, R.A., the discovery of a portrait of Henry Bone by his friend and contemporary, took me to the house of Mr. Bone's grandson, who possesses it, I was gradually led to collect the information

respecting his family and their works, which is now offered to our Journal.

It is not necessary, nor would space permit me, to enter at any length into the history of the beautiful and attractive art of enamelling, in which Henry Bone excelled, nor to describe the various methods by which enamels have been made in different countries, and in different ages.

The art has generally been supposed to have had its origin in the East, and to have found its way gradually Westward into Europe and North Africa; but whilst the well-known enamels of China and Japan appear to have reached a high degree of excellence at a very early date, and to have been made for centuries with little or no change or improvement in the method of their manufacture, or in the beauty of their designs, the skill by which the material has been made subservient to art has been brought to the highest perfection since its first introduction into Europe.

The subject of this notice being chiefly connected with portraiture, it may be useful to state that the earliest known portrait in enamel is believed to be that of King Constantine Porphyrogenitus, which was sent by him from Constantinople to the Caliph Abd-ur-rahmán, at Cordova, in the year 949.\* But although the representation of the human figure is to be found on numberless examples of enamelling, down to the time when the city of Limoges established its enduring fame in the art, it does not appear that this material was much used for the purpose of contemporary portraiture, until the seventeenth century.

It was then that the famous John Petitot the elder, who was born at Geneva in 1607, after practising the art of enamelling in the course of his profession of a jeweller, was induced to apply himself to portrait painting, and under the patronage of our king, Charles I, in England, and after his death, under that of Louis XIV, in Paris, succeeded in bringing the art to such perfection as has perhaps never been surpassed. He died at Vevay, not far from his native town, in 1691, at the advanced age of 84†.

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\*Archæological Journal, Vol. VIII, page 57.

†Bryan's Dictionary of Painters, roy. 8vo, 1878.

Boit, a native of Stockholm, but of French parentage, came also to England with the intention of following his profession of a jeweller, but soon turned his attention to enamelling, which he practised with great success in the reign of Queen Anne, and finally retired from London to Paris, where he was patronized by the Regent, and died there in 1726.

Christian Zincke, who was born at Dresden, in 1684, came to England in 1706, studied under Boit, was patronized by George II and his Queen, and painted with great skill and success for many years, until the failure of his eyesight in 1746 compelled him to retire from the profession.

The great beauty of the works of these 3 foreign artists seems to have challenged the emulation of our countrymen, and produced Jarvis (or Gervase) Spencer, a self-taught artist, who painted in miniature and enamel about the middle of the last century. Edwards\* says of him that he was originally a gentleman's servant, but, having a natural turn to the pursuits of art, he amused himself with drawing. It happened that one of the family with whom he lived sat for a miniature portrait; upon this being shown to Spencer, he observed that he thought he could copy it. This hint was received with much surprise, but he was indulged with permission to make the attempt, and his success was such that he not only gave perfect satisfaction, but also acquired the encouragement and patronage of those he served, and by their interest became a fashionable painter of the day. He died in 1763.† Mr. Redgrave considers that some excellent enamels signed "G. S." were probably by him.‡

Spencer was followed by Nathaniel Hone, R.A., who was born at Dublin, about 1730, came to England early, and after painting in the provinces, settled in London as a portrait painter in miniature and oil, and finally and more especially in enamel; becoming, after the death of Zincke, the most distinguished enamellist of his day. He died in 1784, and it was not long before our Cornish artist came to supply his place.

Henry Bone, the principal object of this notice, was the son of Henry Bone, a carver in wood and cabinetmaker, and was

\*Anecdotes of Painters, by E. Edwards, 1808.

†M. Bryan's Dictionary of Painters, by Stanley, roy. 8vo, 1878.

‡Catalogue of Loan Collection of Portrait Miniatures, 1865.

born in Truro, February 6th, 1755. A specimen of his father's skill is preserved in the pulpit of St. Mary's Church, which is now the Cathedral of the Diocese. At the age of twelve, he is believed to have gone with his father to Plymouth, where, as Mr. Marryatt, in his book on pottery, 3rd edition, page 387, states, he painted birds on china for Cookworthy, in the china manufactory which he had established there. On the removal of that establishment to Bristol at the latter end of 1771, under the direction of Messrs. Champion & Co., Bone, at their request, accompanied it, and early in 1772 was apprenticed at Bristol to Richard Champion, at the age of seventeen. Hugh Owen\* gives a fac-simile of the record of this fact, as it appears in the Book of Apprentices kept by the Corporation of Bristol, on Plate XV of his work :

"20th Jany., 1772.

"Henry Bone, son of Henry Bone of Plymouth, in the county of Devon, cabinet-maker, puts, &c., to Richard Champion, china manufacturer, and Judith his wife, for seven years."

Champion failed in 1778, before the expiration of this term, and Bone went to London in August of that year,† and soon obtained employment by painting designs for lockets, watches, and jewellery in the manner which was then fashionable : but a caprice soon changed the public taste, the fashion died out, and our young artist sought a new subject for his skill by painting miniature portraits in water colours. He had not been long in London before he also began to look out for a wife, and his love of art seems to have guided him in this choice, as it did in every other step in his life, for he married Miss Elizabeth Van der Meullen, who was a lineal descendant of the painter, Peter Van der Meullen, who came to England in 1670, and was employed by our King William III in celebrating his exploits, as his brother Antony Francis was in painting the battles and sieges of Louis XIV of France. Henry Bone's marriage took place on the 24th of January, 1779. Many specimens of his early miniatures are to be found in the cabinets of Cornish families, and he continued occasionally to paint on ivory until the close of the century.

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\* Two centuries of Ceramic Art in Bristol, Roy. 8vo, 1873, p. 294.

† European Magazine, LXXXI (1822).

These works may be recognized by an unobtrusive cypher, composed of the initials of his name H.B. inserted in shadow, the form of the cypher being precisely that which was subsequently used by Doyle in his well-known "Political Caricatures by H.B."

Whether he had any opportunity of seeing the works of the celebrated artists in enamel who have been mentioned, and was roused by the sight of them to the emulation of their skill, or whether his inborn talent and his familiarity with the kindred art of painting on china suggested to his mind the first intention of working in enamel, cannot now be determined, but it is certain that he not only painted the small designs for jewellery which have been spoken of, but also turned his attention to portraiture in enamel as soon as he reached London.

Here, after carefully studying the use of the fluxes necessary for the different colours, he succeeded in finishing an enamel portrait of his wife in 1780, and exhibited it at the Royal Academy, in 1781, as a 'portrait of a lady.' This was followed in 1782 by an enamel of himself, which he also exhibited there as a 'portrait of a gentleman.' The approval with which these two attempts were rewarded, encouraged the artist to persevere, and he gradually ceased to paint on ivory, except for Cornish friends, and devoted himself entirely to enamel painting.

The list of his works exhibited at the Royal Academy contains only seven miniatures on ivory; and although many more are known to exist, the Academy catalogues contain none after the year 1796.

He did not, however, confine himself to portraits, for as early as 1789 he exhibited a 'Muse and Cupid,' after his own design, and of a size far exceeding any work hitherto executed in enamel.\*

In 1794, his 'Sleeping Girl,' after Reynolds, was much admired at the Academy; and in 1798 his portrait of Lord Eglintoun attracted the attention of the Prince of Wales, afterwards George IV, who purchased it, and for several years continued to patronize Bone by acquiring many of his best works.

Rising thus steadily in public estimation, he was elected an Associate of the Royal Academy in 1801, and was appointed

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\*Dictionary of English Artists, by Samuel Redgrave, 8vo, 1874.

painter in enamel to King George III. In this year he exhibited his first attempt at an enamel reduction from one of the ancient masters, viz. : his Jupiter and Iö, after Correggio. His 'Angel from the St. Barbara of Raffaele,' which appears in the Academy catalogue in 1797, is not taken into account, though exhibited earlier, first, because it was only a part of a subject, and further, because the angel seems to be erroneously attributed to Raffaele, as no such subject is mentioned in the full list of the works of that great master by Passavant, Roy. 8vo, 1872.

The success of his Correggio, and of his enamel after Leonardo Da Vinci's well-known picture of Christ disputing with the Doctors, now in the National Gallery, exhibited by him in 1802, encouraged him to continue this branch of his art, in which he was generously aided by the loan of some of the most celebrated examples, both in the Royal collections and in private galleries.

In 1811 he was elected an Academician, and he shortly afterwards produced his largest enamel, 18 by 16 inches, after Titian's Bacchus and Ariadne. This was purchased for the large sum of 2,200 guineas, by Mr. George Bowles, of Wanstead; and Mr. Bone narrowly escaped losing the money by the failure of the bank on which Mr. Bowles' cheque was drawn on the day after it was cashed.

Between the years 1801 and 1828 he exhibited enamels after no less than twenty-eight of the ancient masters, amongst whom are to be found the names of Barsaccio, the two Caracci's, Claude, Correggio, Da Vinci, Carlo Dolci, Domenichino, Guido, Murillo, Seb. del Piombo, Nic. Poussin, Rembrandt, Rubens, Titian, Vandyke, Velasquez, Paul Veronese, with others scarcely less famous, for whose names and the subjects chosen from their works, the reader is referred to the lists which follow.

In 1822, he exhibited at his house, 15 Berners Street, a series of 54 enamels from portraits of illustrious characters in the reign of Queen Elizabeth, of which a printed catalogue is preserved at South Kensington Museum. He continued to add to this series for some years, increasing the number of historical personages represented to 85, as appears by a sale catalogue dated 1836. The contents of these two catalogues are given in a concise form herein. These portraits were executed with wonderful precision and beauty, and are perhaps the works upon which

his fame will chiefly rest. In 1825, a catalogue was also privately printed for the Duke of Bedford, containing portraits in enamel by Bone, after the originals at Woburn Abbey, representing solely members of the Russell family, who were distinguished in history.\*

But whilst Bone was engaged on this important series of historical portraits, he continued to follow his attractive art in its other departments, by painting original portraits in enamel, and by copying those of the most famous persons of his own time by the leading painters of the day, as well as sacred and subject pictures of the best old masters.

A glance at the following lists will shew the versatility of his talent, and the wide field from which he chose his work.

Several portraits of him exist, by himself and his eldest son, in miniature, besides the oil painting by Opie, now in the possession of his grandson; a fine painting by Harlow, on a small oval mahogany panel, at Woburn Abbey, which has been engraved; and a bust by Sir Francis Chantrey, at the Royal Academy: an engraving of this by Thomson, after a drawing by H. Corbould, is given in the *European Magazine* LXXXI, (1822). It is easy to recognize in some of these portraits the keenly observant eye, delicately modelled hand, and refined features of the author of these imperishable works.

His first residence in London after his marriage, was at Islington, and removing thence in 1782, he settled in Little Russell Street, Bloomsbury in 1791, after several intermediate changes of abode, is found at 17 Hanover Street in 1794, and removed to 15 Berners Street, near Opie's house, in 1802. Here in 1832, his eyesight failed him, and he retired to Clarendon Square, Somerstown, where he died of paralysis in his eightieth year, on the 17th of December, 1834, after exhibiting his works at the Royal Academy for a period of more than half a century.

Henry Bone brought up and educated a family of six sons and one daughter, besides other children, who died young; and it is remarkable that each of the six sons who grew up inherited more or less of their father's talent for art.

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\*Only twelve copies were printed, one of which may be seen at South Kensington Museum.



His eldest son, Henry Pierce Bone, of whom more presently, assisted his father for many years in the production of his enamels, and so far succeeded in the art as to leave a large collection of his own paintings in enamel, which are quite distinguishable in style from those of his father, but chiefly representing similar though not the same subjects.

His second son, Peter Joseph, was born in 1785, and served his country as an officer in the army; his fifth son, Thomas Main, born in 1798, was a naval officer, exhibiting two pictures of boats in 1817; whilst his sixth son, Samuel Vallis Bone, was educated for the bar, and exhibited two pictures in oil in 1821 and 1824.

The age in which Henry Bone lived was not distinguished for its encouragement of the arts, and we need not therefore be surprised at finding that the education of a large family and a liberal expenditure at home prevented him from enriching himself by the devotion of a long and busy life to that branch of it which he had chosen.

Many of his most important enamels, notably the series of Historical portraits, remained in his hands at the date of his death. The nation had been offered an opportunity of purchasing them for four thousand pounds during his life time, and they were afterwards disposed of by public auction for some two thousand guineas, to be found in our days in the cabinets of the wealthy, where they must always possess a high intrinsic value, from their imperishable nature, and varied beauty.

Some idea of the number of his works may be formed from the imperfect summary here attempted.

Exhibited at Royal Academy	.. .. .	241
Historical Portraits	..	85
Less exhibited at R. A.	14 .. .. .	71
<hr/>		
Sold in 1832.. .. .		71
Less exhibited at R. A.	5 .. .. .	66
<hr/>		
Exhibited at British Institution, (a few may be identical with some included above)	..	88
At loan Exhibition 1865	26	
Less exhibited at R. A.	6 .. .. .	20
<hr/>		<hr/>
		486

Very many enamels were also painted on commission for the Prince Regent and other patrons, of which it is impossible to estimate the number.

241 miniatures and enamels exhibited by Henry Bone, R.A., at the Royal Academy, 1781—1832.

The miniatures on ivory are marked thus \*, and are only seven in number. The rest are painted in enamel.

The numbers and titles are those which appear in the catalogues of the Royal Academy.

A.D.	No.	TITLE.
1781	328	—Portrait of a lady ( <i>the Artist's wife</i> ).
1782	272	—Portrait of a gentleman ( <i>the Artist</i> ).
	293	—Portrait of a lady.
1784	313	—Portrait of a child.
1785	327	—Portrait of a gentleman.
1786	323	—Portrait of a lady.
1787	365	—Portrait of a child.
1788	307	—Portrait of a child.
1786	292	—A Muse and Cupid (original), from Shenstone's <i>Anacreontic</i> .
1790	307	—*Portrait of a Clergyman.
	324	—*Portrait of a lady.
1791	336	—*Portrait of an artist.
1792	276	—Portrait of Mr. Fox.
1793	461	—A frame with three portraits.
1794	459	—*Portrait of a gentleman.
	472	—*Portrait of Peter Pindar.
	473	—Portrait of an artist.
	474	—Portrait of an artist.
	487	—Portrait of the late President of the R.A. (Sir Joshua Reynolds).
	488	—Portrait of a lady.
	494	—Portrait of a gentleman.
	520	—Portrait of a lady.
	534	—*Portrait of a nobleman.
	546	—A sleeping girl.
1795	471	—A boy.
	509	—A frame containing 4 portraits.
1796	561	—*An old lady.
	583	—A frame containing 4 portraits.
1797	855	—A bull dog.
	940	—A frame containing 4 portraits, viz. :
		H.R.H. Princess Mary.
		A lady of quality.
		A nobleman, and
		A gentleman.
	953	—An angel, from the St. Barbara of Raffaele

- | A.D. | NO. | TITLE.   |
|------|-----|--|
| 1798 | 797 | —A frame containing portraits of<br>John Hunter.<br>Mrs. Siddons<br>Earl of Eglington.<br>J. Trotter, Esq., and<br>A girl and kitten.                    |
|      | 878 | —A frame containing portraits of<br>H.R.H. the Prince of Wales,<br>H.R.H. the Princess Amelia,<br>Mrs. Gooch,<br>Lady Young,<br>Sir John St. Aubyn.      |
| 1800 | 575 | —Her Majesty.  |
|      | 896 | —Portraits of S. Lyons, Esq.,<br>The Earl of Carnarvon,<br>Warren Hastings, Esq.,<br>Lady Beechey and child,<br>Archbishop of York,<br>A lady.           |
| 1801 | 573 | —Jupiter and Io, after Correggio.  |
|      | 574 | —Portrait of General Washington.   |
|      | 727 | —A frame containing portraits of<br>His Majesty,<br>Mrs. J. Lock,<br>Lord Hobart,<br>Lady Cawdor,<br>Mr. Tomkins,<br>Lady Carnarvon,<br>Lord Porchester. |
| 1802 | 530 | —Madonna and child, after Ludovico Caracci.  |
|      | 531 | —Christ and the Doctors, after Leonardo da Vinci.  |
|      | 532 | —A frame containing portraits of<br>Her Majesty,<br>H.R.H. the Prince of Orange,<br>H.R.H. the Duke of Sussex.   |
|      | 538 | —Virgin and child, after Baroccio.   |
|      | 883 | —Venus, after Titian.  |
| 1803 | 628 | —Danaë, after Titian.  |
|      | 629 | —Portrait of H. P. Hope, Esq.  |
|      | 634 | —A frame containing portraits of<br>Marquis of Exeter,<br>Lady Hamilton, as a Bacchante.<br>Wm., Earl of Mansfield.                                      |
|      | 635 | —A frame containing<br>Holy family, after S. da Pesaro,<br>Virgin and child, after L. da Vinci.<br>Earl of Arundel, after Vandyke.                       |
| 1804 | 350 | —Portrait of H.R.H. Princess Sophia of Gloucester.   |
|      | 352 | —Landscape, after Rubens.  |
|      | 353 | —Portrait of Admiral Payne.  |

- | A.D. | NO.  | TITLE.   |
|------|------|--|
|      | 354— | Cupid and Psyche, after Reynolds.  |
|      | 355— | Portrait of B. West. P.R.A.  |
|      | 357— | Landscape, after Claude.   |
|      | 358— | Portrait of I. Watt.   |
|      | 359— | A youth reading.   |
| 1805 | 363— | Death of Dido, after Reynolds.   |
|      | 422— | Miss E. Trevelyan, after S. Woodforde.   |
|      | 426— | A girl, after Reynolds.  |
|      | 427— | Lady F. Morton and children, after Sir W. Beechey, R.A.  |
|      | 428— | Juliet in the Balcony, after Opie.   |
|      | 429— | Lord Viscount Nelson, after Hoppner.   |
|      | 430— | Earl of St. Vincent, after Beechey.  |
| 1806 | 700— | Rt. Hon. C. J. Fox, after Opie.  |
|      | 706— | Hebe, after Beechey.   |
|      | 712— | Madonna, after Schidone.   |
|      | 713— | Christ, after Guido.   |
|      | 714— | Cymon and Iphigenia, after Reynolds.   |
|      | 730— | A frame containing portraits of<br>Earl of Charlemont,<br>J. C. Beresford,<br>T. Bainbridge,<br>Colonel Vereker,<br>Mrs. Bernard, (originals).<br>Bishop of Waterford, after Mr. Hamilton.<br>Sir J. Beaumont and his daughter, after old masters. |
|      | 731— | Sir Joshua Reynolds, after his own portrait.   |
|      | 765— | A frame containing portraits of<br>Lord Henry Petty, after —Walton, Esq.<br>J. Heaviside, after Beechey.   |
| 1807 | 739— | Late Marquis of Lansdowne, after Reynolds.   |
|      | 745— | Nymph and Cupid, after Reynolds,<br>St. Agnes, after Domenichino,<br>Holy Family, after An. Caracci.   |
|      | 747— | Portrait of a lady, after Lawrence.  |
| 1808 | 356— | Sophonisba Regina, after Lord Kinnaird's Titian.   |
|      | 357— | Earl of Buckinghamshire.   |
|      | 360— | The virgin, after Baroccio.  |
|      | 361— | Hope and love, after Reynolds.   |
|      | 362— | W. Camden, the historian, after the original (Painter-Stainer's<br>Company.)   |
|      | 363— | Earl of Arundel.   |
| 1809 | 301— | A frame containing portraits of<br>A nobleman, deceased, after Romney;<br>Late Countess Dysart, after Reynolds;<br>Late Marquis of Thomond, after Hoppner;<br>Late Sir R. Abercromby, after Hoppner;<br>Osias Humphry, R.A., after Romney.         |
|      | 302— | Holy Family, with St. John, after Baroccio, (now in the National<br>Gallery.   |

- | A.D. | NO.  | TITLE.  |
|------|------|---|
|      |      | 628—Sir Walter Raleigh, after Jansen.   |
| 1810 | 388  | —Our Saviour, after Lord Darnley's Titian.  |
|      | 648  | —A portrait after Lord Kinnaird's Velasquez.  |
|      | 652  | —Danaë, after Lord Darnley's Titian.  |
|      | 653  | —A frame containing<br>Colina, after Reynolds ;<br>Earl St. Vincent, after Beechey ;<br>Late Duchesse de Gramont, after Madame le Brun ;<br>A gentleman, after Hoppner ;<br>A gentleman, deceased, after Hoppner ;  |
| 1811 | 321  | —A frame containing portraits of<br>Sir J. Reynolds, after Lady Thomond's picture, by himself ;<br>Late George Stubbs, after Oz. Humphry ;<br>Lord Setone, after Lord Somerville's, by Sir A. More ;<br>Lord Kinnaird, after Northcote ;<br>Duke of Devonshire, after Reynolds. |
|      | 338  | —St. Cecilia, after Domenichino (Mr. Wells').   |
| 1812 | 402  | —Sir P. Sidney, after Sir A. More, at Woburn Abbey.   |
|      | 403  | —Lady and page, after Lord Suffolk's Titian.  |
|      | 404  | —Virgin, child, and St. John. after Titian, Marquis of Lansdowne's.   |
|      | 405  | —Cecil Lord Burghley, after Zuccherò, at Hatfield House.  |
|      | 406  | —Madonna, after Mr. Morland's Guido.  |
|      | 408  | —Courtenay, Earl of Devonshire, after Sir Anto. More, at Woburn Abbey   |
|      | 409  | —Sylvia, after Reynolds.  |
| 1813 | 577  | —Mr. Hope, after G. Dawe.   |
|      | 592a | —Frame containing three pictures, viz. :<br>Christ bearing his cross, after Sir Thos. Baring's Carlo<br>Dolci ;<br>David ; and<br>Christ on the Cross, after Mr Poole's Guido.  |
|      | 393  | —A frame containing portraits of<br>Henry Carey, Lord Hunsdon, after Marc Garrard, at<br>Cranford ;<br>Earl of Essex, after Hoppner ;<br>Lord Redesdale, after Lawrence ;<br>Lady Redesdale, after Hoppner.   |
| 1814 | 475  | —Earl of Southampton, after C. Jansen, at Woburn Abbey.   |
|      | 480  | —Girl and puppy, after Gainsborough.  |
|      | 488  | —Lord Fredk. Campbell, after Edridge.   |
| 1815 | 142  | —Sir Francis Drake, after the picture at Knole.   |
|      | 413  | —Lord Chancellor Bacon, after Vansomer, at Gorhambury.  |
|      | 418  | —Salutation of the Virgin Mary, after Seb. del Piombo (Mr. Anderdon's).   |
|      | 419  | —Lady Anne Bacon, after Vansomer, at Gorhambury.  |
|      | 716  | —A frame containing portraits of<br>Countess Charlemont and her children, after Stewart.  |

- | A.D. | NO.  | TITLE.   |
|------|------|--|
| 1816 | 656— | Ben Jonson, after G. Honthorst, at Knoie.  |
|      | 657— | Shakspeare, after the picture at Knoie.  |
|      | 658— | Sir Thomas Gresham, after Mr. W. G. Taylor's Sir Anto. More.   |
|      | 707— | A frame containing portraits of<br>H.R.H. the Duke of Cambridge, after Mr. Saunders;<br>Madame le Brun, after a picture by herself;<br>Andrea del Sarto, after Lord Radstock's original, by himself. |
|      | 708— | Sir J. Banks, Bart., after Phillips.   |
| 1817 | 463— | Hon. Mrs. Vernon, after Beechey.   |
|      | 464— | John Fletcher, poet, after Lord Clarendon's C. Jansen.   |
|      | 465— | Lord Mornington.   |
|      | 471— | Assumption of the Virgin, after Sir Thos. Baring's Murillo.  |
| 1818 | 449— | Edward VI, after Sir G. Osborn's Holbein.  |
|      | 450— | La belle Vierge, after Lord Stafford's Raffaele.   |
|      | 820— | A frame containing portraits of<br>Late J. Clements, Esq., after Smart;<br>Earl of Darnley, after Phillips.<br>Mary Queen of Scots, when a child, after Zuccherò, at Knoie.                          |
| 1819 | 502— | A frame containing portraits of<br>Earl of Suffolk, after Lawrence;<br>Lady and Child, after a picture of Lord Somerville's;<br>John Clements, Esq., after Shee.                                     |
| 1820 | 466— | Venus and Cupid, after Sir Simon Clarke's Paul Veronese.   |
|      | 479— | Earl of Verulam, after W. Owen.  |
|      | 480— | Rembrandt's Wife, after Sir Simon Clarke's Rembrandt.  |
|      | 486— | Duke of Bedford, after G. Hayter.  |
|      | 490— | His late Majesty George III, after Beechey, the horse by Ward.   |
|      | 847— | Sir Saml. Romilly, after Lawrence.   |
|      | 848— | Miss Mure, after Watson.   |
|      | 852— | Lady Romilly, after Hoppner.   |
| 1821 | 456— | Lady Elizabeth Belgrave, after Lawrence.   |
|      | 466— | Her late Majesty Queen Charlotte, after Edridge.   |
|      | 467— | Late Lord Curzon, after A. W. Davis  |
|      | 474— | Canova, the sculptor, after J. Jackson, for Chantrey.  |
|      | 476— | Marquis of Stafford, after Phillips.   |
|      | 477— | Late Duchess of Leinster, after Ramsay.  |
|      | 491— | William Manning, M.P., after J. Lonsdale.  |
|      | 506— | Venus, after Lord Stafford's Titian.   |
| 1822 | 430— | Lady Aubigny, after Lord Clarendon's Vandyck.  |
|      | 431— | Late Princess Charlotte, after Hayter.   |
|      | 433— | H.R.H. the Duke of York, after Lawrence.   |
|      | 434— | Rembrandt's Standard Bearer, after Sir Simon Clarke's original.  |
|      | 439— | Otho, after Sir Abr. Hume's Titian.  |
|      | 440— | Sir John Minors, after Lord Clarendon's Vandyck.   |
|      | 441— | Bacchanalian, after J. Hamlet's Nic. Poussain.   |
|      | 446— | Sir Wm. Curtis, Bart., after Lawrence.   |
| 1823 | 495— | Countess of Powis, after Reynolds.   |
|      | 496— | Madonna and Child, after Carlo Dolci.  |
|      | 500— | Countess of Dysart, after Reynolds.  |



A.D.	NO.	TITLE.
	501—	Lord William Russell, after Wissing.
	506—	Duke of Wellington, after Lawrence.
	509—	St. John, after Reynolds.
1824	432—	H.B.H. the Duchess of Kent, and the Princess Victoria, after Beechey.
	437—	Lady De Dunstanville, after Gainsborough.
	446—	Mary Queen of Scots, after Sir Anto. More.
	447—	Countess of Dysart, after Hoppner.
1825	440—	Jane, Duchess of Gordon, after Reynolds.
	445—	Charles 1st, after Lord Surrey's Vandyck.
	453—	Count Michael Woronzow, after Lawrence.
	454—	Portrait of Vandyck, as Paris, after Lord Hertford's Vandyck.
1826	422—	Lord Bexley, after Lawrence.
	430—	Diana and Actæon, after Lord Stafford's Titian.
	431—	Lady Jane Grey, after Sir Jacob Astley's picture.
	436—	Lady Georgiana Agar Ellis, after Jackson.
1827	450—	Assumption of the Virgin, after Mr. Tupper's Murillo.
	453—	Lord Rolle, after Lawrence.
	459—	Right Hon. Hookham Frere, after Hoppner.
1828	502—	George IV, as Prince of Wales, after Reynolds.
	503—	Sir Anthony Carlisle, after Shee.
	515—	Holy Family, after Lord Lansdowne's Andrea del Sarto.
	516—	Angel, after Albano.
	517—	Countess of Somerset, after the picture at Woburn Abbey.
1829	488—	Henry Bone, R.A., after Jackson.
	489—	John Flaxman, R.A., after Jackson.
1830	463—	Capt. Sir Wm. Hoste, Bart., K.C.B.
1831	455—	F. Chantrey, R.A., after Jackson.
	458—	George IV, after Lawrence.
	464—	William IV, after A. Morton.
1832	491—	Charles X of France, after Gerard, painted for the king, as a present to Lady Salisbury.

70\* paintings in enamel by Henry Bone, R.A., sold June 30, 1832, in his lifetime, at Christie's.

For convenience of reference, the portraits are separated from the subject pictures.

The enamels vary in size from 3½, by 2½, to 16½ by 12½ inches.

#### PORTRAITS.

TITLE	AFTER	TITLE	AFTER
H.B.H. Princess Amelia	<i>Beechey.</i>	Lyndhurst, Lady	<i>Lawrence</i>
Bedford, Duke of	<i>Hayter.</i>	Mary, Queen of Scots	<i>Sir A. More.</i>
Banks, Sir Joseph	<i>Phillips.</i>	Same	<i>N. Hilliard.</i>
H.B.H. Duke of Cambridge,	<i>Saunders.</i>	Manning, Wm. Esq.	<i>Lonsdale.</i>
Campbell, Lord Fred.	<i>Edrige.</i>	Nelson, Lord	<i>Abbott.</i>
Caracci, A.	<i>himself.</i>	Otho, the Emperor	<i>Titian.</i>
Queen Charlotte	<i>Beechey.</i>	H.B.H. the Prince of Wales	<i>Reynolds.</i>

\* The Sale Catalogue contains 71, the portrait of William IV being in duplicate.

PORTRAITS *Continued.*

TITLE.	AFTER.	TITLE.	AFTER.
Clarendon, Lord Chancellor	<i>Lely.</i>	H.B.H. the Prince of Wales	<i>Le Brun.</i>
Darnby, Earl	<i>Phillips.</i>	H.B.H. the Prince Regent	<i>Phillips.</i>
Dover, Lady	<i>Jackson.</i>	Payne, Adml., his secretary	<i>Hoppner.</i>
Ducie, Lady, and her children,	<i>Beechey.</i>	Reynolds, Sir Joshua	<i>himself.</i>
Dysart, Countess of	<i>Hoppner.</i>	Romilly, Sir Samuel	<i>Lawrence.</i>
Edward VI	<i>Holbein.</i>	Russell, William, Lord	<i>Wissing.</i>
Flaxman, John	<i>Jackson.</i>	Somerset, Countess of	<i>C. Jansen.</i>
Fraser, Capt. Percy	<i>H. Bone.</i>	Stafford, Marquis of	<i>Phillips.</i>
Frere, John	<i>Hoppner.</i>	Sterne, Laurence	<i>Reynolds.</i>
Fox, C. J.	<i>Opie.</i>	Stubbs, George	<i>O. Humphrey.</i>
George III	<i>Hopkins.</i>	Suffolk, Earl of	<i>Lawrence.</i>
George IV (robed)	<i>Lawrence.</i>	Todd, Captain	<i>Opie.</i>
H.B.H. Princess Sophia of Gloucester.	<i>Beechey.</i>	Verulam Earl of	<i>Owen.</i>
Gordon, the Duchess of	<i>Reynolds.</i>	William IV.	<i>Morton.</i>
Hatton, Sir Christopher	<i>Phillips.</i>	Washington, General	<i>Stewart.</i>
Heathfield, Lord	<i>Reynolds.</i>	Wellington, Duke of	<i>Lawrence.</i>
Hoste, Capt. Sir William	<i>Edridge.</i>	Whitshed, Adml.	<i>Northcote.</i>
H.B.H. the Duchess of Kent and Princess Victoria	<i>Beechey.</i>	Woronzow, Count Michl.	<i>Lawrence.</i>
		H.B.H. the Duke of York	<i>Lawrence.</i>

## SUBJECT PICTURES.

TITLE.	AFTER.	TITLE.	AFTER.
A Boy	<i>Reynolds.</i>	Landscape, with lighthouse	<i>Rubens.</i>
Bacchanalians	<i>Poussin.</i>	Madonna and Child	<i>Coreggio.</i>
Crucifixion, The	<i>Guido.</i>	Magdalene, A.	<i>Elsheimer.</i>
David	<i>Guido.</i>	Man's portrait, A	<i>Rembrandt.</i>
Diana and Calisto	<i>Titian.</i>	Rabeteur, le.	<i>An. Caracci.</i>
Good Shepherd, The	<i>Murillo.</i>	Salutation, The	<i>Seb del Piombo.</i>
Holy Family	<i>A. del Sarto.</i>	Venus and Adonis	<i>Titian.</i>
St. John (young)	<i>Murillo.</i>	Venus and Cupid	<i>Paul Veronese.</i>
St. John	<i>Reynolds.</i>	Virgin, head of the	<i>Guido.</i>
Jupiter and Io	<i>Coreggio.</i>		

The series of 85 portraits of Historical personages in the reigns of Queen Elizabeth and other English Sovereigns, painted in enamel by Henry Bone, R.A., from the originals by old masters, and sold by order of his executors, April 22, 1836.

The numbers in the margin are those of the Sale Catalogue, which forms part of Vol. XXI of "Picture Catalogues," in the library of South Kensington Museum.

NO.	TITLE.
36	Arundel, Henry Fitzalan, Earl of.
83	Arundel, Philip, Earl of.
56	Astley, Sir John.
58	Aston, Sir Walter.
37	Bacon, Francis, Viscount St. Albans.



NO.	TITLE
38	Bacon, Sir Nicholas.
80	Bacon, Anne, Lady.
24	Beaumont, Francis, dramatist.
5	Bedford, Francis, 2nd Earl of.
45	Bedford, Lucy, Countess of.
51	Berkeley, Elizabeth Carey, Lady.
14	Bingham, Sir Richard.
33	Burleigh, William Cecil, Lord.
9	Byron, Sir John.
7	Camden, William (Clarencieux).
48	Canterbury, Edward Grindal, Archbishop of.
50	Canterbury, Mat. Parker, Archbishop of.
52	Canterbury, J. Whitgift, Archbishop of.
63	Cave, Sir Ambrose.
28	Coke, Sir Edward, robed as C. J.
34	Cooke, Lady of Sir Anthony Cooke.
81	Cooke, Elizabeth, daughter of Sir Anthony.
67	Cumberland, George, Earl.
43	Devonshire, Charles Blount, Earl of, K.G.
47	Devonshire, Edward Courtenay, 12th Earl of.
79	Donne, Sir John.
68	Dorset, Thomas, 1st Earl of.
64	Drake, Sir Francis.
78	Drayton, Michael, Poet.
21	Elizabeth as Princess, <i>set</i> 25.
39	Elizabeth as Queen, <i>set</i> 32.
62	Elizabeth, Queen.
70	Ellesmere, Thomas, Earl of.
84	Essex, Robert Devereux, Earl of.
46	Essex, Walter Devereux, Earl of.
16	Fletcher, John, dramatist.
12	Frobisher, Sir Martin.
69	Gresham, Sir Thomas.
76	Grimstone, Sir Edward.
35	Hatton, Sir Christopher.
42	Hunsdon, Henry Carey, Lord.
10	Hunsdon, Lady, his wife.
18	Jonson, Ben.
25	Lee, Sir Henry, and his mastiff.
23	Leicester. Robert Dudley, Earl of.
41	Lincoln, Edward, Earl of.
66	Lincoln, Countess of.
49	Maltravers, Lord.
1	Manners, Lord, 1st Earl of Rutland.
2	Manners, Lady, 1st Countess of Rutland.
19	Mary, Queen of Scots, <i>set</i> 17.
61	Mary, Queen of Scots, <i>set</i> 32.
65	Mildmay, Sir Walter.
53	Monmouth, Robert, Earl of.
82	Myddleton, Sir Hugh.

NO.	TITLE.
11	Norfolk, Thomas, 4th Duke of.
57	Norris, Sir John.
32	Nottingham, Charles, 1st Earl of.
73	Paget, the Lady.
26	Raleigh, Sir Walter.
85	Rogers, Sir Edward, P.C.
8	Russell, Sir Francis, Lord Russell.
54	Russell, of Thornhaugh, William, Lord.
6	Russell, of Thornhaugh, Lady.
71	Salisbury, Robert, 1st Earl of.
15	Seton, George, Lord.
22	Shakspeare, William.
31	Sidney, Lady (Mother of Sir Philip.)
17	Sidney, Sir Philip.
72	Sidney, Frances, his wife.
75	Sidney, Sir Henry.
13	Smythe, Sir Thomas.
27	Southampton, Henry, 3rd Earl of.
77	Spelman, Sir Henry.
20	Spenser, Edmund.
40	Sussex, Thomas, Earl of.
60	Sutton, Thomas (founder of Charterhouse).
44	Throckmorton, Sir Nicholas.
74	Walsingham, Sir Francis.
30	Warwick, Ambrose, Earl of.
55	Warwick, Anne, Countess of.
3	Winchester, William, 1st Marquis of.
29	Worcester, Edward, Earl of.
59	Wotton, Sir Henry.
4	Wray, Sir Christopher.

20 Portrait miniatures by Henry Bone, R.A., exhibited on loan at the South Kensington Museum, June, 1865. Two only of these were painted on ivory, and are here marked thus.\* The rest were painted in enamel.

The numbers are those of the loan catalogue of 1865. None of these miniatures appear in the catalogues of the Royal Academy.

NO.	TITLE.
2721	Hon. L. Beresford, wife of Thomas Hope.
907	Sir George Baker, Bart., after O. Humphrey, 1817.
906	Jane, Lady Baker, dated 1817.
2636	Robert Bloomfield, poet.
661	George Bowles, Esq.
1517	Manners Sutton, Archbishop of Canterbury.
2610	James, first Earl of Charlemont.
2424	King Charles I, and Henrietta Maria, his Queen, on either face of an enamelled gold box.

NO.	TITLE.
1807-8	James, 7th Earl of Derby, and Charlotte, his famous Countess, after Vandyck.
607	Georgiana, Duchess of Devonshire.
405	Portrait of a gentleman.
601	Sir Thomas More, Lord Chancellor.
2362	Emily Ogilvie, Mrs. C. G. Beauchamp, dated 1800.
2360	Vice-Admiral Sir Tremayne Rodd, 1805.
1941	John Russell, R.A., the painter (said to be.)
2367*	Mr. George Vaughan, 1794, on ivory.
588	Sir Robert Walpole, cr. Earl of Oxford 1742.
230*	Lady William Young, dated 1796, on ivory.

*Henry Pierce Bone*, the eldest son of *Henry Bone, R.A.*, was born at Islington, on the 6th November, 1779. He received his earliest education at Tooting, after which he was trained under his father's direction, and, inheriting his talent, devoted himself early to that kind of painting in enamel which his father had chosen, and in which he had himself already achieved much success. But although he continued to help his father with his enamels until his death, he worked also in oils, and exhibited his first picture in that medium at the Royal Academy in his 20th year, 1799.

It will be seen from the list of his exhibited works that he continued to send pictures to the Academy regularly during the rest of his father's life, and that these comprised portraits from life, together with sacred, historical, poetical, and fancy subjects.

On the death of his father, in 1832, he abandoned oil-painting, and availing himself of the ripe experience which he had gained as an enameller, he commenced a series of representations in that material which, though perhaps less delicately finished than those of Henry Bone, are remarkable for their rich and effective colouring, faithful adherence to the character of the originals, and of a size larger than any of those which were executed by his father. These were interspersed with occasional portraits from life. A glance at the list of his works will show the variety of styles which he copied, as well as the industry with which he worked. Very soon after his father's death, viz., in 1833, he was appointed enamel painter to the Queen, the Duchess of Kent, and Princess Victoria; in 1839 to Queen Victoria; and in 1841 to Prince Albert also.

In 1805, on the fifth of October, he married Anna Maria, daughter of Mr. John Long, at Clerkenwell. The issue of this marriage was four sons and one daughter, one of whom only, George, survives; the others were Henry Thomas, who exhibited two portraits in oil at the Royal Academy in 1826, and died in 1830; Charles Richard, who exhibited several pictures, portraits and enamels, 1826—1848; William, the younger, who also exhibited in oils and enamel, 1827—1851; and Louisa, who exhibited her only work, a portrait of a lady, in 1844.

Their father, Henry Pierce Bone, died in London, Oct. 21, 1855, and in the following year the enamels which remained in his possession were disposed of by auction at Messrs. Christies', March 13th and 14th, 1856. They comprised 172 of his finest works, and the Sale Catalogue announces "on the back of each enamel is indelibly recorded its history." This practice of describing and signing *in enamel* every work executed in that material, was common to the father and the son, and adds value to their works by making their identity indisputable. Amongst the numerous portraits of celebrated personages which were copied by them, only two originals appear to have been used by both of them, namely, those of Spenser the poet, and Shakspeare; so that we have two separate sets of imperishable representations of our most distinguished historical characters.

List of 210 pictures, miniatures and enamels, exhibited by Henry Pierce Bone, at the Royal Academy, 1799—1855.

The numbers and titles are taken from the catalogues of the Royal Academy.

A.D.	No.	TITLE.
1799	226—	Portrait of Mrs. Corbould.
	263—	" Mrs. R. T. Bone.
	559—	" himself.
1800	158—	Portrait of a Boy.
	238—	" Children.
	323—	" Captain Oates.
	395—	" Mr. G. Heath.
	696—	" Mr. Corbould.
1801	220—	Portrait of a young gentleman.
	254—	" the late Mr. Morris.
	684—	" himself.
1802	113—	Portrait of a young gentleman.
1803	254—	Portrait of Sir J. Malcolm.
	515—	" a young gentleman.
	642—	" an Artist.
1805	155—	Italian subject.

A.D.	NO.	TITLE.
	268	Tale of Armin (Ossian.)
1806	140	Portrait of S. H. Jackson.
	294	Darthula (Ossian.)
	316	Belisarius.
	622	Solitude.
1807	260	Bragela (Ossian.)
	523	Allegory of Religion and Superstition, Rambler, Vol. 1, No. 44.
	527	Emma (Edwin and Emma).
	672	Portrait of a gentleman.
1808	184	A village girl.
	287	Macbeth; scene, Banquo and Macbeth.
1818	48	Christ and the woman of Samaria.
1811	11	A Gleaner returning home.
	455	Christ raising the daughter of Jairus.
1812	41	Portrait of a young gentleman.
	80	Tempest, Act 1, scene 2 (spirit scene)
	93	Portrait of a Lady.
	140	Margaret of Anjou after the battle of Hexham
1813	216	The Goblin Cave, Lady of the Lake, canto 3.
1814	9	The Baptism, a sketch.
	227	The Widow's son raised, Luke vii, 12
	352	Wife and sons of Hastings, the Danish chief, before Alfred the Great (Hume).
1815	141	Interment of Made. Montoni (Udolpho.)
	265	Hagar in distress. Gen. XXI, 16.
	298	Departure of Hagar and Ishmael.
1816	335	The women at the Sepulchre.
1817	244	Moses breaketh the tables.
	276	Moses found by Pharoah's daughter, is given to his mother to nurse.
1818	199	The exposure of Moses, Josephus 11, 9.
	314	Valentine, Proteus, Silvia, Julia, as a page (Two Gent of Verona.)
1819	42	Portrait of J. Neeld, Esq., Principal of Clements Inn.
	282	Christ betrayed, a sketch.
	322	Manoah's sacrifice, Judges xiii.
1820	416	Jeroboam's Idolatry reprov'd.
1821	91	Portraits of Children.
	371	Portrait of Dr. King.
	421	The Widow's son rescued by the Prophet Eliash, 2 Kings, ix, 1.
1822	170	A pastoral.
	273	The Death of Priam, Æneid 2.
1823	213	Scipio relating his adventures, (Gil. Blas).
	349	Althes urged by the furies to commit to the flames the brand on which depends the life of Maleager.
	433	Capt. J. Kearney White, R.N.
1824	233	The Story, a group of Portraits.
	337	Portrait of a lady.
	402	Gil Blas and Don Alphonso, with Don Raphael and Ambrose disguised as Hermits. Gil Blas, 2.
	440	Portrait of a Benchman of the Inner Temple.

A.D.	NO.	TITLE.
	721—	Portrait of Mons. Aumer, of the King's Theatre.
	829—	„ S. Sebille, Esq.
1825	251—	Portrait of a lady and child.
	255—	„ B. Dagley, Esq.
	320—	John Giffin, Keeper; for Sir T. E. Tomlins, Steward of Waltham Forest Court.
	328—	The daughter of Œdipus restored by Theseus.
1826	61—	Portrait of Miss Love, of Covent Garden Theatre.
	86—	Scene from "two gentlemen of Verona," discovery of Julia, act 5, scene 4.
	156—	Portrait of a young lady.
	232—	Medea about to restore Æson to youth; Ovid, Met. 7.
1827	33—	Portrait of an Artist.
	114—	Holy family, with angels; a sketch.
	175—	Portrait of Dr. Yates.
	190—	Portrait of Dr. Shearman.
	215—	Portraits of three brothers.
1828	27—	Sir Calpurne rescuing Serena, Spenser's Fairy Queene, vi, .
	156—	Portrait of Philip Fennings, Esq.
	315—	„ Lady Tomlins.
	434—	A lady and her daughter.
1829	37—	A lady.
	39—	Helen seized when bathing.
	294—	Portrait of a young lady.
	357—	Scene from the "Tempest," Act I, scene 2.
1830	91—	Sir Valentine; two gentlemen of Verona, Act v, scene 4.
	270—	Hermione, Mamillius and ladies, Winter's Tale, Act ii, scene 1.
	384—	Portrait of a young lady.
1831	99—	Pan and the Nymphs, Pope's Pastoral.
	145—	Moses and the burning bush, Exod. iii.
	211—	Prospero and Miranda, Tempest, Act I, scene 2.
	249—	Portrait of a young lady.
1832	41—	Accusation of Stephen, Acts vii, 56.
	225—	Sketching from nature—Kensington Garden.
	381—	Portrait in costume of 17th century.
	501—	Virgin and child, with angels, enamel, after Mr. Neeld's Carlo Maratti.
1833	493—	H.R.H. the Duchess of Kent, enamel, after a miniature by Colleen.
	495—	A young lady reading, enamel, original.
	497—	His Majesty William IV, enamel, after Beechey.
	498—	Lady Janet Walrond, enamel, after T. Phillips, R.A.
	506—	Lavinia, second Countess Spencer, enamel, after Reynolds.
	507—	Infant Saviour, enamel, after Mr. Neeld's Murillo.
	508—	Georgiana, 1st Countess of Spencer, enamel, after Reynolds.
1834	442—	Charles Ponsonby, enamel, from life.
	443—	Mrs. Quin, do. do.
	450—	Sir Geo. Farrant, enamel, after H. Wyatt.
	451—	Hon. Miss Lyttelton, enamel, from life.
	452—	Lady Lyttelton, do. do.
	458—	Earl Spencer, K.G., enamel, partly life, partly after Venables.

A.D.	NO.	TITLE
	460—	Lady Jane Grey, in prison, enamel, after Northcote.
1835	430—	Landscape, enamel, after Mr. Neeld's Mola.
	431—	Lord Tullamore, enamel, from life.
	436—	Viscount Althorp, Chancellor of Exchequer, enamel, from life.
	437—	The Infant Academy, enamel, after Lord Palmerston's Reynolds.
	885—	Mr. Stapleton, enamel, from life.
	886—	Hon. Capt. Spencer, R.N., C.B., enamel, from life.
	887—	Rubens, enamel, after the original by Rubens, in the Royal Collection.
	888—	Helena Forman, enamel, after Rubens, in the Royal Collection.
1836	453—	Lords John and Bernard Stuart, enamel, after Earl Grey's Vandyck.
	454—	Lord St. Helens, enamel from life.
	457—	Countess of Morton, enamel, after Lord Spencer's Vandyck.
1837	632—	Lord Burghley and Lord Brownlow Cecil, enamel, from life.
	633—	Countess Craven, enamel, from life.
	636—	Mrs. Miller, enamel, after Mr. Miller's Lawrence.
	644—	Virgin and child, enamel, after Lord F. Egerton's Vandyck.
	653—	Wm. George Craven, enamel, from life.
	654—	Bishop of Ely, (Allen) enamel, after G. Patten.
	658—	Miss Ponsonby, enamel, from life.
	667—	Marquis of Exeter and Lady Mary Cecil, enamel, from life.
1838	670—	Earls Bedford and Bristol, enamel, after Vandyck, at Althorp.
	671—	Sir Horace Seymour, K.C.H., enamel, from life.
	672—	W. H. Miller, M.P., enamel, after Lawrence.
	677—	Duke of Wellington, K.G., enamel, after Lawrence.
	686—	Peter the Great, of Russia, enamel, after Kneller and Vandevelde, in the Royal Collection.
	688—	Countess of Leicester and Countess of Carlisle, enamel, after Lord Craven's Vandyck.
	689—	Lord Byron, the poet, enamel, after Mr. Neeld's W. E. West.
	690—	Portrait of a lady, enamel, from life.
1839	689—	Prince Maurice, enamel, after Lord Craven's Vandyck.
	693—	Lord George Seymour, enamel, after Lord Hastings' Reynolds.
	694—	Portrait of an artist, enamel, from life.
	696—	Lord Grandison, enamel, after Lord Clarendon's Vandyck
	714—	Madame le Brun, enamel, after her own portrait
	716—	(Howley) Archbishop of Canterbury, enamel, after Lawrence, at Winchester College.
	717—	A pastoral, original enamel, from Shakspeare.
	727—	Prince Rupert, enamel, after Lord Craven's Vandyck.
1840	885—	Napoleon, enamel, after Lord Essex's Horace Vernet.
	888—	Lady Mary Fielding, Duchess of Hamilton, enamel, after Lord Denbigh's Vandyck.
	892—	Viscount Melbourne, enamel, after George Hayter.
	893—	Charles 1st, whole length, robed, enamel, after Vandyck, at Lambeth Palace.
	902—	Henrietta Maria, Queen of Charles 1st, enamel, after Lord Clarendon's Vandyck.
	904—	Dr. Calvert, enamel, from life.

- | A.D. | NO.  | TITLE.   |
|------|------|--|
|      | 907  | Nelson, enamel, after Abbott.  |
| 1841 | 587  | James Stuart, Duke of Richmond, enamel, after Lord Clarendon's Vandyck.  |
|      | 588  | Lady Mary Villiers, Duchess of Richmond, enamel, after Lord Clarendon's Vandyck.                                     |
|      | 589  | Napoleon, enamel, after the Duke of Wellington's Gerard.   |
|      | 590  | Lady Ann Bingham, enamel, after Reynolds, at Althorp   |
|      | 592  | Frances, Marchioness Camden, enamel, after Reynolds at Althorp   |
| 1842 | 563  | James Bennell Rodd, enamel, from life.   |
|      | 564  | Vice Admiral Sir J. T. Rodd, K.C.B., enamel, from a miniature by H. Bone, B.A.                                       |
|      | 566  | 1st Duke of Hamilton, enamel, after Lord Denbigh's Vandyck.  |
|      | 567  | A Magdalene, a portrait after Geo. Hayter.   |
|      | 582  | Portrait of a lady, enamel, from life.   |
|      | 584  | Thomas Drummond, enamel, after H. W. Pickersgill.  |
| 1843 | 1095 | Earl of Westmorland, enamel, after Lawrence.   |
|      | 1097 | Lieut. Charles Lucas, enamel, after Dobson.  |
|      | 1100 | Angusta Ann, Lady Cockburn, and her three sons, Sir James, Sir George, and the Dean of York, enamel, after Reynolds. |
|      | 1108 | Cromwell, enamel, after Walker, at Althorp.  |
| 1844 | 993  | Philip, Earl of Pembroke, enamel, after Lord Clarendon's Vandyck.  |
|      | 994  | Lord Lyttelton, enamel, after T. Phillips.   |
|      | 995  | Lord J. Russell, enamel, after T. Carriek, miniature.  |
|      | 1000 | A country girl, enamel, after Lawrence.  |
|      | 1008 | Catherine II, Empress of Russia, from the original, in 1787, given by her to Lord St. Helens.                        |
| 1845 | 685  | H. Bone, B.A., enamel, from a painting by H. P. Bone, in 1805.   |
|      | 686  | Thomson, poet, enamel, after Lord Lyttelton's Aikman.  |
|      | 687  | Pope, poet, enamel, after Lord Lyttelton's Richardson.   |
|      | 691  | Charles I, after Vandyck, at Lambeth.  |
|      | „    | —His Queen Henrietta Maria, after Vandyck, at Hagley.  |
|      | 692  | Frank Hals, enamel, after Vandyck, at Althorp.   |
| 1846 | 729  | Annibale Caracci, painter, enamel, after Mr. J. Neeld's portrait by himself.   |
|      | 730  | Rembrandt, painter, enamel, after Mr. Neeld's portrait by himself.   |
|      | 736  | Holbein, painter, enamel, after Lord Spencer's original by himself.  |
| 1847 | 673  | Sir Isaac Newton, enamel, after the Vandyck in British Museum.   |
|      | 678  | Sir H. Delabeche, enamel, from life.   |
|      | 679  | Shakspeare, enamel, after the British Museum picture.  |
| 1848 | 691  | Milton, enamel, after Mrs. Dymoke Welles, original.  |
|      | 692  | Lady Molesworth, enamel, from life.  |
|      | 697  | Addison, enamel, after Kneller, at Althorp.  |
|      | 690  | The Billet, enamel, after Watteau.   |
| 1849 | 617  | Sir Thomas Gresham, enamel, after Mr. J. Neeld's Sir Anto. More.   |
|      | 627  | Miss Palmer, enamel, from life.  |
|      | 630  | General Monk, enamel, after Lord Craven's Walker.  |
|      | 640  | Caxton, enamel, from an illumination in Lambeth Palace Library.  |
|      | „    | —Luther, enamel, from a picture there.   |
|      | 643  | Sir H. Delabeche, enamel, from life.   |
|      | 653  | Head of the Virgin, enamel, after Mr. J. Neeld's Guido.  |



A.D.	NO.	TITLE.
1850	652	—Portrait of a gentlemen, enamel, from life.
	658	—Portrait of a lady, enamel, from life.
	667	—Virgin and child, enamel, after Padonanino, Mr. Neeld's.
	669	—Late Joseph Neeld, enamel, from H. P. Bone's portrait in 1839.
1851	838	—Sir Isaac Newton, enamel, after Vanderbank, in British Museum.
	839	—Portrait of a lady, enamel, from life.
	846	—Sir Kenelm Digby, enamel, after Lord Craven's Vandyck.
1852	691	—Ben Jonson, enamel, after Honthorst, at Knole.
	693	—Virgin and child, enamel, after Mr. J. Neeld's Sasso Ferrato.
	658	—Spenser, poet. enamel, after Lord Chesterfield's original.
1853	690	—Duke of Wellington, enamel, after Lawrence.
	692	—Made. de Maintenon, enamel, after Mr. J. Neeld's Mignard.
	646	—Christina, Queen of Sweden, enamel, after Mr. J. Neeld's Seb-Bourdon.
	649	—Prof. Edward Forbes, enamel, from life.
1854	666	—Gustavus Adolphus, King of Sweden, enamel, from Lord Craven's original.
1855	699	—Inigo Jones, enamel, after Col. J. Jones's Vandyck.
	728	—Portrait of a lady, enamel, from life.

List of some of the most important paintings in enamel by Henry Pierce Bone, in his possession at the date of his death in 1855, and sold at Messrs. Christies', March 13th and 14th, 1856. The sale catalogue contained 172 lots, the portraits of the poets and artists and some others being sold in duplicate.

Those which appear in the catalogues of the Royal Academy are here marked in the margin with the date of their exhibition.

This entire series was painted from well-known works of old and modern masters, with the exception of four original works by H. P. Bone, which are so designated in italics.

The whole are here grouped for convenience of reference.

*Royal Portraits, British.*

Richard II	}	After British Museum, now Nat. Portrait Gallery.
Henry V		
Henry VI		
Henry VIII		Holbein.
His six wives		—Holbein, Van Orley, &c.
Princess Mary		—Holbein.
Mary, Queen of Scots		—Janet.
1840—Charles I,		whole length,—Vandyck.
1845—Charles I,		bust,—Vandyck.
1840—Henrietta Maria,		his Queen,—Vandyck.
James II,		—after Lely.
Queen Mary II,		—(Spencer collection).

*Royal Portraits, British,—continued.*

A.D.	TITLE.
	Anne,—Kneller.
	George IV,—H. Bone's Lawrence.
	William IV,—Beechey.
	Victoria,—Ross.
	Victoria,—Hayter.
	Victoria,—Winterhalter.
	Prince Albert,—Hayter.
	Prince Albert,—Winterhalter.
1833	Duchess of Kent, after Collen.

*Royal Portraits, Foreign.*

1839	Prince Maurice, after Vandyck.
1839	Prince Rupert, after Vandyck.
1854	Gustavus Adolphus, of Sweden (Lord Craven's).
1853	Christina, of Sweden, after S. Bourdon.
1838	Peter the Great, after Kneller and Vandervelde.
	Prince of Orange, after F. Hals.
1841	Napoleon I, after Gerard.
	Leopold I, of Belgium, after Hayter.
	Landgrave of Hesse, (a miniature).
	Duchess of Saxe Coburg, after Winterhalter.

*Historical and other Portraits.*

	Arundell, Earl of.
	Banks, Lady, after Hoskins.
1841	Bingham, Lady Ann, after Reynolds.
1838	Bristol, Earl of, after Vandyck.
	Buckingham, George Duke of, after Jansen.
1841	Camden, Frances, Marchs., after Reynolds.
	Craven, 1st Earl of, after Mierevelt.
	Craven, Ann, Lady, after Dahl.
1843	Cromwell, Oliver, after Walker.
	De Maulay, Lord, ( <i>original</i> ).
	Denbigh, 1st Earl of, after Mytens.
1851	Digby, Sir Kenelm, after Vandyck.
1839	Grandison, Lord, after Vandyck.
1849	Gresham, Sir Thomas, after A. More.
1834	Grey, Lady Jane, after de Heere.
1842	Hamilton, 1st Duke of, after Vandyck.
1840	Hamilton, 1st Duchess, after Vandyck.
	Hertford, Marquis of, after Vandyck.
	Lindsey, 1st Earl of, after Mierevelt.
	Lucas, Sir Charles, after Dobson.
1849	Luther, (Lambeth Palace).
1844	Lytelton, Lord, after Phillips.
1853	Maintenon, Mde. de, after Mignard.
	Melancthon, after Holbein.
	Montespan, Mde. de, Mignard.
1840	Molesworth, Lady, ( <i>original</i> ).

*Historical and other Portraits,—continued.*

A.D.	TITLE.
	Monk, General, after Walker.
1851—	Newton, Sir Isaac, after Vanderbank.
1844—	Pembroke, Philip, Earl of, after Vandyck.
	Phillips, Mr., H. Bone's, after Phillips.
1841—	Richmond, 1st Duke of, after Vandyck.
1841—	Richmond, 1st Duchess of, after Vandyck.
	Russell Lady, (Lady Hobby) after Holbein.
	Salisbury, 1st Earl of, after Zuccaro.
1833—	Spencer, Georgiana, Countess, after Reynolds.
1833—	Spencer, Lavinia, Countess, after Reynolds.
1833—	Walrond, Lady Janet, after Phillips.
1853—	Wellington, 1st Duke of, after Lawrence.
1843—	Westmoreland, Earl of, after Lawrence.

*Poets.*

1848—	Addison, after Kneller.
	Byron, after Phillips.
	Cowley, after Mrs. Beale.
	Dryden, after Kneller.
	Johnson, Samuel, after Neeld's Opie.
1852—	Jonson, Ben., after Honthorst.
1848—	Milton, after Mrs. D. Welles' original.
1845—	Pope, after Richardson.
	Prior, after Richardson.
	Otway, after Mrs. Beale.
	Richardson, after Hogarth.
1849—	Shakspeare, (Brit. Mus.)
1852—	Spenser, (Lord Chesterfield's).
1845—	Thomson, after Aikman.
	Waller, after Lely.

*Artists.*

	Beechey, after Beechey.
1839—	le Brun, Mde., after le Brun.
1848—	Caracci, A., after Caracci
	Gentileschi, after Gentileschi.
1845—	Hals, F., after Hals.
	Honthorst, after Honthorst.
1855—	Jones, Inigo, after Vandyck.
	Kneller, after Kneller.
	Mierevelt, after Lord Craven's.
	A. More, after A. More.
	Parmegiano, after Parmegiano.
1846—	Rembrandt, after Rembrandt.
	Reynolds, after Reynolds.
	Vandyck, after Vandyck
	Velasquez, after Velasquez.

*Subjects.*

A.D.	TITLE.
1833—	Infant Saviour, after Murillo.
1835—	Grand Landscape, after Mola.
1852—	Virgin and Child, after Sasso Ferrato.
1849—	Mater Dolorosa, after Guido.
	Head of a girl, after Romney.
	Juliet, after Neeld's Opie.
	Sensibility, after Paye.
1833—	A Lady reading, <i>original</i> .
	Oberon and Phillida, <i>original</i> .

16 portrait miniatures in enamel, by Henry Pierce Bone, exhibited on loan at the South Kensington Museum, June, 1865.

The numbers are those of the Loan Catalogue of 1865. None of these miniatures appear in the catalogues of the Royal Academy.

- 1336—Lord Althorp, robed as Chancellor of the Exchequer, painted in 1835.
- 2375—Henrietta, daughter of Charles I, wife of Philip, Duc d'Orleans, after Lord Spencer's Mignard.
- 2376—Nell Gwynne, after Lord Spencer's Lely.
- 2377—Anne, daughter of Charles I, after Lord Spencer's Vandyck.
- 2378—Lady Denham, after Lord Spencer's Lely.
- 2379—Mary, daughter of Charles I, mother of William III, after Lord Spencer's Hanneman.
- 2606—Wm. Henry, Lord Lyttelton, after Phillips.
- 1000—Horatio, Viscount Nelson.
- 2620—General Paoli, Corsican Patriot, after Beechey.
- 933—Margaret Georgiana, 1st Countess Spencer, after Reynolds.
- 975—George John, 2nd Earl Spencer.
- 945—Lavinia, his Countess, after Reynolds.
- 965—George John, 2nd Earl Spencer, partly after Venables.
- 966—John Charles, 3rd Earl of Spencer, after Hayter.
- 967—Georgiana Frances Spencer, life.
- 2602—John, Earl of Westmoreland, after Lawrence.

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*Robert Trewick Bone* was the third son of Henry Bone, R.A., and was born in London, Sept. 24th, 1790.

He was early instructed in art by his father, and lived with him more than twenty years. He painted almost entirely in oils, and for many years, 1813-1837, he continued to exhibit portraits, classic, sacred, and fancy subjects, both at the Royal Academy and the British Institution. The directors of the latter Institution awarded him a premium of one hundred guineas for his

picture "a lady with her attendants at the bath," exhibited there in 1817.\*

He died May 5th, 1840, from the effects of an injury which he had received.

Mr. Redgrave describes his paintings as small in size, tasty and clever in composition, with breadth of effect; and the landscape, accessories, and costume pleasing; but he adds that his art did not find the encouragement which it deserved. He was a Member of the Sketching Club.†

List of 46 pictures in oil, exhibited by Robert Trewick Bone, at the Royal Academy, 1813-1837.

A.D.	No.	TITLE.
1813	214	Nymph and Cupid.
1815	132	Portrait of his Sister.
1816	207	The Bath.
1817	176	Miss Drew.
1818	112	Cupid and Psyche.
	215	Venus, Cupid and the Graces.
	408	Portrait of a lady.
	453	Portrait of Dr. Nuttall.
1819	60	Lord Viscount Cranbourne.
	149	Daughter of Herodias receiving the Head of John the Baptist.
	154	Bacchus and Ariadne, a sketch.
	373	Mrs. Barrett.
	392	W. Whitmore, Esq.
	480	Miss Bone.
1820	233	Vice-Admiral Sir Graham Moore, K.C.B.
	432	Meleager and Atalanta—Ovid Metam. viii.
	824	Mr. W. Anderson.
1821	98	Conversation.
	317	Portrait of a gentleman.
	366	The Nativity—Luke ii, 7.
1822	274	Death of Adonis—Ovid.
1823	169	A musical party.
1824	270	Miss S. Vallis Bone.
	320	Mercury, Argus, and Io—Ovid.
1825	196	A soldier, his wife and child.
	209	Hercules, Nessus, and Dejanira—Ovid.
1826	148	Portrait of a lady.
	355	Cardinal Wolsey, at the Court of Francis I.
1828	320	Chapeau rouge.

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\* Redgrave's Dictionary of English Artists, 8vo, 1874.

† Redgrave's Dictionary.

A.D.	No.	TITLE.
	487—	Dukes of Norfolk and Suffolk demanding the Great Seal of Cardinal Wolsey.
1829	113—	Silvia.
	282—	A Troubadour relating his adventures.
	329—	Hon. Geo. Chas. Grantley, F. Berkeley, and a favourite Deerhound.
1830	86—	Ladies Mary and Emily Berkeley, and Lady Caroline Maxse, and Spaniel.
1831	226—	Lady Macbeth in Duncan's chamber—Act II, scene 2.
1832	99—	J. P. Ord, Esq.
	194—	Much Ado about Nothing.
	323—	Study of Rebekah and Abraham's servants at the Well,—Gen. xxiv, v. 18
	978—	Saml. Bettison, of Margate.
1833	187—	The Rambler—Thomson.
	345—	Miss Ord and her dog.
	381—	Mrs. E. N. Kendall.
	467—	Mrs. Edgall.
1834	333—	Chess Players, a study.
1837	57—	Pleasure Party.
	58—	Retirement.

List of 44 miniatures and enamels, exhibited by William Bone, the elder, at the Royal Academy, 1817-1851:

1817	820—	Portrait of Mrs. Tomlins.
	695—	Portrait of Mrs. Bone and Mr. R. T. Bone.
1820	694—	Miss H. Mure.
	695—	Mrs. Cupon.
	785—	J. G. Murdoch, Esq.
	792—	Miss Bone.
1821	707—	Daughters of late Antony Cardon, Esq.
	774—	Mr. J. Byfield.
1822	669—	Two young ladies.
	674—	Mr. C. Brownlow.
	715—	Mrs. Byfield.
1823	672—	Miss Cupon.
	805—	Miss Louisa Clark Cardon.
1824	643—	Miss Byfield.
1828	696—	H. Bone, Esq., R.A.
1829	670—	Henry Gore, Esq.
	772—	Mrs. Slade.
	815—	John Curtis, M.D.
1830	707—	Portrait of a lady.
	732—	A medical gentleman.
	939—	A. A. Ferrari, Esq., surgeon.
1831	812—	Mr. Thos. E. Tomlins.
	871—	Selina Hewitt, Mary Ann Hague, and Mary Haines.
	905—	Mr. A. G. Goldney.

A.D.	No.	TITLE.
1832	748	Mary Queen of Scots, enamel, after Sir Ant. More.
	923	A girl's head, enamel, after Romney.
	926	H. T. Dore, Esq.
1833	504	Mr. W. G. Bettison.
	509	Henry VIII, enamel, after Lord Dillon's Holbein.
	525	Antony Cardon, Esq., enamel, after A. J. Oliver.
	589	Portrait of a Captain in Hon. Artillery Company.
	694	Portrait of a young lady.
	696	A ring-portrait of Henry Bone, R.A., enamel, after Jackson.
	784	Mrs. J. T. Bridges
1834	453	Portrait of a young gentleman, enamel, after H. P. Bone
	702	Portrait of a lady
1836	910	Henry Bone, R.A., enamel, after J. Jackson, R.A.
1842*	641	John Henderson, Esq., enamel, after H. Howard, R.A.
	643	Late Mrs. Henderson, after an original by Wm. Henderson, Esq.
	793	Mrs. Vallis Bone.
1843	1090	H.M. The King of Hanover, after a miniature by H. Bone, R.A. (enamel ?)
	1110	Henry Bone, R.A., after late R. T. Bone.
	1116	H.R.H. Crown Prince of Hanover, after Stamberg.
1851	847	Martha, mother of W. J. Broderip, F.R.S., enamel.

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List of pictures exhibited by Samuel Vallis Bone, at the Royal Academy, 1821-1824.

- 1821 10—View of a cottage in Surrey  
 1824 513—Mickleham Church, Surrey

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List of pictures exhibited by Henry Thomas Bone, son of H. P. Bone, at the Royal Academy, 1826.

- 1826 255—Instruction, portraits of sisters.  
 262—Portrait of a young gentleman.

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List of 66 portraits, miniatures, and enamels, exhibited by Charles Richard Bone, at the Royal Academy, 1826-1848.

- 1826 628—Portrait of a young gentleman.  
 671—Portrait of a young lady.  
 1827 565—The Portfolio, portraits of a brother and sister.  
 655—Portrait of J. F. Danthamare, Esq.  
 659—Portrait of Mrs. Broughton.  
 1828 637—Portrait of a young gentleman.  
 705—Portrait of a lady in the costume of 17th century.  
 773—Portrait of a young gentleman.  
 910—Portrait of a lady in the costume of 17th century.

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\*Wm. Bone is here first entitled enamel painter to H.M. The King of Hanover, in the R.A. Catalogue.

A.D.	No.	TITLE.
1829	713—	Portrait of J. Millington, Esq.
	733—	Portrait of a lady.
	769—	Portrait of John Steil, Esq.
	776—	A portrait.
	784—	Portrait of Mrs. John Steil.
	964—	Portrait of an artist.
1830	739—	Portrait of Miss Riviere.
	750—	Portrait of Capt. R. H. King, R.N.
	761—	Portrait of a young lady.
	774—	Portrait of a lady.
	802—	Portrait of Miss F. Riviere.
	808—	J. W. Lowry, Esq.
1831	502—	Portrait of Miss Parry.
	510—	Portrait of a gentleman.
	519—	Portrait of a young lady.
	610—	Portrait of a lady and child.
	689—	Portrait of a gentleman.
	742—	Portrait of a young lady.
	933—	Portrait of Mrs. Lowry.
1835	526—	Portrait of a child.
	535—	Portrait of Penry Williams, of Rome.
	632—	Portrait of a gentleman.
	735—	Portrait of R. Wyatt, sculptor.
	763—	Portrait of J. Gibson, sculptor.
	794—	A lady in the festa dress of Albano.
1836	655—	Portrait of a gentleman in Turkish dress.
	802—	Portrait of a lady in Greek dress.
	959—	Contadini Italiani.
1837	478—	Italian banditti.
	788—	Portrait of a lady.
	796—	Portrait of E. L. Wells, Esq.
	880—	Portrait of a lady.
1838	576—	Portrait of a lady.
	598—	Il Viaggiatore.
	1021—	Contadina Italiana.
	1031—	The Troubadour.
1839	609—	Portrait of a young gentleman.
	863—	A Study.
	864—	Portrait of a lady.
	897—	Portrait of Mrs. Wells, of Grebby Hall.
1840	705—	Portrait in dress of an Italian Bandit Chief.
	886—	Italian Peasant.
	891—	A portrait.
1841	674—	A portrait.
	907—	Portrait of H. Robertson, Esq.
1842	586—	Beatrice Cenci, after Guido, Barberini Palace, Rome, an enamel.
	621—	Portrait of an officer in 16th (Queen's) Lancers.
	637—	Portrait of a lady.
1843	834—	Albert Smith.
	1109—	Lord George Seymour, enamel, after Reynolds.



A.D.	No.	TITLE.
1845	726—	Portrait of A. Ure, Esq.
	976—	A hymn to the Virgin.
	991—	A Portrait.
1846	954—	Portrait of Robert Lindley, Esq.
	1030—	Portrait of a gentleman.
1847	1054—	Portrait of a lady.
1848	704—	Late Lord George Seymour, enamel, after Lord Hertford's Reynolds.

List of 15 pictures and enamels, exhibited by William Bone the younger, at the Royal Academy, 1827-1846.

1827	508—	Shells, from nature.
1828	664—	Shells, from nature.
1829	541—	China.
	547—	Still life.
1836	911—	An enamel, after Mr. J. Neeld's Vandevalde.
1837	655—	An enamel, after Mr. J. Neeld's original by Newton.
1838	661—	An enamel, after Mr. Herring's J. Constable.
1839	715—	Girl and kitten, enamel, after Reynolds.
1840	887—	The Spanish gentleman, after Velasquez.
1841	591—	H.M. George IV, enamel, after Lawrence.
1842	569—	Angel's head, enamel, after Reynolds.
1843	1096—	Rubens, enamel, after the original by himself, in the Royal Collection.
1844	1009—	Helena Forman, Rubens' 2nd wife, enamel, after Rubens, in the Royal Collection.
1845	683—	Gervartius, enamel, after Vandyck, in Nat. Gallery.
1846	739—	Duke of Wellington, enamel, after Lawrence.

Summary of recorded works by Henry Bone and others of his family.

Henry Bone, R.A.,	...	...	...	...	(page 295)	...	...	456
Henry Pierce Bone	...	...	...	...	( „ 305)	...	...	398
Peter Joseph Bone, an enamel	...	...	...	...	...	...	...	1
Robert Trewick Bone	...	...	...	...	( „ 314)	...	...	46
William Bone...	...	...	...	...	( „ 315)	...	...	44
Thomas Main Bone	..	...	...	...	( „ 294)	...	...	2
Samuel Vallis Bone	...	...	...	...	( „ 316)	...	...	2
Henry Thomas Bone.	...	...	...	...	( „ 316)	...	...	2
Charles Richard Bone	...	...	...	...	( „ 316)	...	...	66
William Bone, junr.	...	...	...	...	( „ 318)	...	...	15
Louisa Bone	...	..	...	...	( „ 305)	...	...	1

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1063

Duplicates of some of the enamels, as well as many others not recorded here, are to be found in private cabinets.

XIV.—*The Lizard Lighthouses*,<sup>a</sup> by HOWARD FOX.

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*Read 27th May, 1879.*

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THE various histories of Cornwall and Works on Lighthouses appear to make no mention of any Lighthouse at the Lizard prior to the two towers built by Mr. Fonnereau in 1751, or 1752.<sup>b</sup> This gentleman is described as "an adventurer" who came into Cornwall "chiefly for the purpose of constructing Lighthouses on the Lizard Point, under one of the improvident grants which were frequently made in those times." The lanterns in these towers were lighted by coal fires till 1812 or 1813,<sup>d</sup> when the Trinity House substituted oil and Argand burners, which continued to be used until August 1876, when dioptric lights were fixed. On 29th March, 1878, the present electric lights were first employed.

The documents in the Record office, however, show that Sir John Killigrew of Arwenack,<sup>e</sup> obtained a patent from James I in 1619, and erected a lighthouse in the same year. The inhabitants during its construction complained that he was

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<sup>a</sup> The writer is indebted to Mr. Robin Allen, Secretary of the Trinity House, to the Hydrographer of the Admiralty, to Mrs. George Morgan Patmore of London, and to Mr. Henry Cox, of Cadgwith, for many of the particulars given in this paper.

<sup>b</sup> The Admiralty Records, the National Encyclopedia, and A. G. Findlay in his "Lighthouses of the world" 1878, say 1751. The Trinity House Records and Gentlemen's Magazine vol. 22 p. 383 say Aug. 1752; Murray's handbook of Devon and Cornwall says 1792.

<sup>c</sup> Parochial History of Cornwall by Davies Gilbert, vol. II. p. 358.

<sup>d</sup> The Trinity House Records say 1812. The Admiralty Records, W. H. D. Adams in his "Lighthouses and Lightships" 1870, and Murray's handbook Devon and Cornwall say 1813.

<sup>e</sup> There are drawings of Arwenack in Queen Elizabeth's time in the British Museum.

taking away "God's Grace" from them, and the Trinity House strenuously and persistently opposed it, alleging it was both useless and objectionable. Under much discouragement, and at great pecuniary loss Sir John gallantly maintained the light, with the help of some voluntary contributions, for several years. In 1623, his patent which was not entered in the Rolls, seems to have been in question in the Star chamber and probably failed. The light no longer existed in 1631, for in that year Sir William Killigrew sought to have the patent renewed, but without success. In 1661 Capt. Edward Penruddoch offered a project of lights to the King, which included the Lizard. In 1664 Sir John Coryton petitioned for leave to erect lighthouses at the Isle of Wight, Portland Road, Rame Head, and the Lizard Point, for which the merchants and shipowners had several times prayed. Sir John Coryton to receive 6d. per ton on all strangers' vessels anchoring between the Isle of Wight and Mounts Bay. In the same year Henry Brounker, Esq., also tried to obtain the Royal permission for a similar project, but apparently with the same want of success.

The late Mr. Nicholls of Cadgwith remembered the two towers erected by Mr. Fonnereau without any connecting building, but with a small cottage between them inhabited by the superintendent and overlooker, who had a sort of couch to lie on during the night, with a window on each side commanding the respective lanterns. As the bellows blowers were occasionally relax in their duties, he would give them a reminder by blowing a large cows' horn.

Mr. Findlay in his *Lighthouses of the World* says, the oldest lights now existing on the same sites in Great Britain are those of Lowestoft since 1609, Winterton and Dungeness 1615, the North and South Forelands and Orfordness 1634. It is evident that Sir John Killigrew's pluck, enterprise and foresight have hitherto been overlooked or forgotten.

The following are verbatim copies of some of the documents in the Record office bearing on the first Lizard Lighthouse. The letters of Sir John Killigrew are so quaintly and forcibly expressed as to well repay their perusal.

The first document is a petition endorsed in contemporary writing "concerning a Light to be erected for y<sup>e</sup> Safety of

Mariners" from Thos. Locke to Sir Dudley Carleton,\* dated 22nd May, 1619.

My humble duty remembered unto y<sup>r</sup> Love

I did write unto yor Exce and sent bookees by the duch ffaukenor the 18 (7) of this present; the same day I went to the Court with Sir Jo. Killigrew,<sup>b</sup> drew his petition, brought him to Sr. Christopher Perkins, and he hath undertaken the suite, but it is by way of a voluntarie contribution, if it had bin by imposition, it would have had verie hard passage; now this Patent being passed (as Sr. Chr. Perkins maketh no doubt, and holdeth it the best course) if the contribution shall not fall out to be answerable to the charge or his expectation, upon certificate from sea faring men, that such a sea marke is of importance, or upon lres from those parts to the Lo. Caroun or to his Matie desiering that such a light may be erected for the safetie of mariners (both wch may be easily obtained) it will afterwards be easie to obtaine an imposition, but now at the first there is no good ground for it, and if it should be foyled at the first it would never recover, this wilbe a good beginning, and if it passes this way there will be a promise that no other light shal be erected neere that place, so that there will be no feare of prevention. Upon Whiteonday in the morning I receaved yor Lp's lres and the bookees by Hermon† \* \* \* \*

Ffrom the great Almonie  
this 23 of May 1619

Yor Lp's Servant

Th Locke.

To the right hoble Sr Dudley Carleton Kt. Lo. Amb<sup>r</sup>  
for his Matie of Great Britannie with the states of the United Provinces. Haagh.

Locke writes again to Sir Dudley Carleton, 5 June, 1619.

"*Sir Jo. Killigrew hath written to y<sup>r</sup> Lp* (heere-inclosed) about the suite, it was referred to the Mrs. of the Trinitie house, and they have certified against it (who I dare say Sr. Chr. Perkins did not thinck they would have done) Sr. Jo. thincketh it is done out of envie to the Duch, but unlesse the Duch do make suite for it as a thing necessarie and behoofefull for them and that it may come about that way I am somewhat in doubt of the suite, yet Sr. Jo. hath moved some of his hoble freinds heere and they give him fairer promises, but this course to have it moved from thence, would do more than they will do, I feare our Lordis heere will not oppose the Trinitie house, (though I knowe they be no saints) but if that nation should desier such a thing for their safetie, and withall shew their willingness so farr as to offer to pay some reasonable taxe towards the maintenance of it, (as there is great reason they should) I thincke it were the only way, if such a lre could be gott before the States goe it would be the better, but if it come after to Sr. Hoel Carews it will do well. Suite now a dayes are like buds in March and children of Paris (according to the proverb) for one that hitte ten misse, this was thought to be a verie likely suite, and yet it is nipt, unlesse it be recovered this way and by a certificate from expert seafaring men to affirme the necessitie of the works who Sr. Jo. hath begune to do. I did advise him to do it at the first" \* \* \*

Y<sup>r</sup> Lps Servant

Th. Locke.

5 Junii 1619.

To the right hoble my verie good Lo.

Sr. Dudley Carleton &c at the Haagh.

The enclosure referred to in the foregoing letter is a document endorsed. "Lizard, a Deffence for the mayntayning the Light at the Lizard, Cornwall" and appears to be in Sir John Killigrew's own writing. It runs as follows.

\* Sir Dudley Carleton, afterwards Viscount Dorchester, born in Oxfordshire 1573, Ambassador to Holland, distinguished himself favourably in connection with many important embassies. Recalled in 1628 and created Viscount Dorchester.

<sup>b</sup> Sir John Killigrew was Knighted at Whitehall 8 Nov. 1617 (Nichols Progresses of James I. Vol. 3, p. 444.)

† The remainder of the letter contains nothing further about the projected light.

Nothing further in this letter touching the light.

"An Answer to such objections which are made by the Master, Warden and others of the Trinitye house to the proposition of Sir John Killegrew. Knight for erecting a light uppon the Lizard for the better safety of such shippes as shall trade that waye.

*Imprimis*: there are two principall reasons alledged and set down in writing by them, viz. that the coast is bowld; the seas 100 miles in breadth; the channel faire, and the depth good, and therefore not necessarie but disallowed by them; as also that it will give light and knowledge to pirates and any forrayne enemies seeking for a pilot to lead them to a safe place of landing

1 Obieshon answered by yearlie experience.

For answer whereof and according to daily prooffe, that notwithstanding all those former allegations, as the bouldness of the coast, the breadth of the sea, the fairness of the channel and good depth, shippes are oftentimes rocked to the losse of many men and inestimable wealth, therefore seeing that the losses are great and dailie, it rests how to use some means to avoide soe great damage and inconvenience which usually happens; nor cannot be better devised than by a Light, for from that Light a master will shape his course, as knowing where he is.

Defect in Arte to be supplied.

I would ask the best marryner that ever lived, if he will presume soe much upon his Arte (how exactly soever he observes the same, or how carefully he keeps his reckoning) as that he will upon a low shoar in a fogge or in the night stand upon assurance to hit uppon his harbour; I know he will not, for it is as doubtful and uncertaine as if a man should be blinded and enjoyned to passe the River of Thames upon a foot bridge betwixt Putney and Brandford and that missing the bridge he is drownd and perisheth; and where arte faileth in this case, it must be helped by means, and by no means (as I have said) but by a fire.

Lizard, the uttermost Cape and therefore soonest imbayeth shippinge.

Comparison.

It may be demanded whie more uppon the Lizard than any other promontory uppon the coast, I answer because the Lizard is the uttermost Cape of Cornwall, whither ships commonlie

direct their course, and will be the boulder for to doe, if there be a Light kept upon it, for thereby knowing where they are, and either mistrusting the winde or weather, or having defect in ship or men, within two hours they may harbour themselves in Falmouth, if they can weather the Lizard, or if not and that they finde themselves unable to breast the sea, from the tyme they shall descry the light they shall have force to goe round to Sillye and remayne in securitie, whereas if they run as high in the Chanell as the Wight and be taken with an Easterlie winde, in what distresse soever they are, if it be a ship of any charge that cannot put into Weimouth must of necessity put into Dartmouth or Plymmouth, and the like they must do if they be taken with a contrarye winde betwixt the Wight and Dover; put round for the Wight again.

Bouldness of the coast answered by experience of Loss.

To answer boldness of the coast thereabouts it is a lardge winde and a good distance from shore that makes a bold course, but where a man is imbayed as many times shippes are here in Mounts Baye for want of knowledge where they are whie a Light will direct them. In such a case what doth the bouldness of the coast avail them; as I may instance many wracks in that place but two specially of fresh memorie, the one of 89, a prize of my Lord of Cumberlandes in value one hundred thousand pounds cast away in Mounts Baye for want of seeing the Lizard, the other the Gibson (?) amounting to moore £6000, which a light had saved.

Breadth of the Sea answered by President.

In answer of the second objection that the seas are 100 miles in breadth is nothing to the purpose for that if it were as broad again shippes must take the shoare and the Porte whither they are bound, and therefore all the difficultye is in a good landfall, for the seas are but the high waye which shippes must travayle through, before they arrive to their place assigned; and for example in the yeare 1597 the Kinge of Spaine brought downe his fleet to the Groyne, intending the invasion for England, and noe man will denye but the seas are 900 leagues broader betwixt Spaine and America, than betwixt Britaine and our coaste yet notwithstanding 36 shippes with 5000 men and much wealth in provisions were caste away upon the North Cape of Spaine (for

as I said before) notwithstanding the breadth of the sea shippes must seek the land, and I will undertake the Kinge of Spaine had better have kept a fire of Synamon than have endured so greate a losse.

Fairnesse and depth of Channel noe certaine Landmarkes.

The fairness of the Channell and the goode depth is as greate a comforte and helpe to the marryner as can be, but none the more securely when they have made the land, and knowe where they are, for untill then they cannot fail, whether they runne too fast or too slowe; and to presume either uppon depth or grounds they are things most uncertayne, noe man but will confesse; for it will incourage them never a whit the more, to run upon a low shoar, and look after an harbour.

Comfort to the Distressed.

Now I will make a comparison, wherein a land-man that never sawe the sea shall be judge: Suppose a man weare ridynge in a lardge spacious heath whereon he saw neither towne, house nor high waie certainly to direct him, and that he be benighted and taken with a storme of snowe or rayne and forced to remain in that extremitie all the night, think you not that a candle discovered from a cottage or the hearing of a ring of bells would not be a greate comfort to him, as directing him where to have shelter. If so, how much more comfort would a light be unto a ship in near shore, how many men that shall be raised from death to life; for an ancient philosopher recounting the joyes of this worlde affirmeth none so greate as after a dangerous storme to have a sodayne and safe arrivall in a secure port.

Cavendish danger.

How much may one thinke Mr. Cavendish would have given, to have knowne the Lizard by a Light that might be put into the Channell from retourne of his honourable voyadge about the world, who often stated he indured more hazard that one night, having his sailes splitt from the yarde and not having made land, than in circuiting the Globe of the Earth.

Hollanders Approvement.

It seems the Hollanders approve so well of this Light that they are willing and desirous to contribute towards it, and I cannot thinke we have any advantage of them, though England be our naturall cuntrye, for the rockes will have not respect of fellows

but all shippes will taste of unfortune that are driven uppon them.

The 2nd objection turned back.

That now it is alledged by the Trinity house that the Light will be a Pilot to a forrayne enymie to carrye them to a place of safe landynge is wisely and evidentlie foreseen of them, and therefore not onlie to be forbidden, but all other lights whatsoever in tyme of warre, and yet they must confesse that if it be advantageous to direct an enemie, yet it is much more so to a merchant that hath a continuall trade to all his Ma<sup>ties</sup> Portes of England and Scotland.

Notwithstanding this opinion I referre myself to his Ma<sup>ties</sup> consideration, or such as his highnes shall referre the business unto, and will subscribe to any that shall alleadge more effectuell reasons, than I have done to the contrarye."

On the 3 July we have the following letter from Mr. Locke to Sir D. Carleton :—

Sir Jo : Killigrew hath gotten a Patent from the Lo. Admirall, for erecting his light & taketh his jorney upon Monday next towards those parts.  
Mr. Secretary putteth me in good hope of moneys shortly.  
Thus I humbly take leave, resting

Yor Lps: Servant,  
TH. LOCKE.

3 July, 1619.

The Patent reads as follows :—

"George Marques and Earle of Buckingham, Viscounte Villiers, Baron of Whaddon, Knight of y<sup>e</sup> most noble Order of y<sup>e</sup> Garter, Lord High Admirall of England, Ireland & Wales & the Dominions & Seas of the same, of the towne of Callie & Marches of Normandy, Gascoyne & Guines and Captain Generall of his Maj<sup>ties</sup> Seas & navy Royall, To all to whom these presents shall come to be seen, heard, read, or understood.

WHEREAS it is most notoriously known by wofull experience that by reason of Sundry rockes, sandes and other places lying near the Lizarde in the Sea upon the coaste of Cornwall, shippes, barkes & other vessells sayling & traffiqueing in by & along that coaste, have in former tymes in great numbers perished & been utterly lost & are dayly in the like imminent danger of shipwracke for want of sea markes & beacons to give them light & knowledge upon their approach to the said danger & meanes and direction to avoide the same. As to which inconvenience & detrimento to his Maj<sup>tie</sup> & his subjects in losse of many serviceable



shippes, & other vessells of this Realme & the generall prejudice to the comonwealth by decay of traffique by shipwrackes to the utter overthrow of many able merchants Sir John Killegrewe of Arwennecke in the said Countye of Cornwall Knight having entered into a Christian and charitable consideration for the avoyding & preventing of future losse in that kinde, at his owne proper costs & charges & without any taxation or imposition upon any his Maj<sup>ties</sup> Subjects and frendes, hath resolved & undertaken upon the said dangerous point of the Lizard, to buyld, erect & maintayne a sufficient beacon or lighthouse with a light in it that thereby all shippes and vessells passing that waye, may be forwarned & directed to avoyde & escape the shipwrackes which heretofore for want thereof they have incurred.

And for the effecting & preserving of this his good & proffittable design hath desired warrant, power & authority from me the said George Marques & Earle of Buckingham, Lord High Admirall aforesaid. Know YE that I the said Lord High Admirall tenddring (?) the continuance & preservation of navigation in this his Maj<sup>ties</sup> Realme & the safety from henceforth of such shippes and vessells as shall passe & sayle too & attaine neare the place aforesaid, by vertue & authority of his Maj<sup>ties</sup> letters Pattent in this behalf amongst other things therein contayned, to me directed, doe allow of & very much comend the said purpose & intente of the said Sir John Killegrewe & do thinke him worthie by all good meanes to be encouraged therein, doe therefore by vertue hereof appointe, constitute & authorise him the said Sir John Killegrewe & his assignes in such place as shall be thought for that purpose most fitt & convenient by him the said Sir John Killegrewe or his assignes, to buyld, erect, make, sett up and mayntayne upon or near the said Lizard at his owne proper costs & charges for the terme of fifty yeares one convenient & sufficient beacon or lighthouse with a light in it continually burning in the night season, that shippes, hoyes & other vessells sayling & passing that way may the better avoyde & decline the rockes & other dangers that for want thereof in former times they have been subject . and incident unto & there suffered shipwracke. Taking & receiving in regard & consideration thereof such voluntary & free contribuson as the masters, marriners, & owners of shippes, boates & other vessells, as well strangers as of his Maj<sup>ties</sup> subjects that sayle & passe that way, in

regard of the comodity, benefitt & safety which they shall derive thereby to redounde unto them of their owne free will, without any manner of taxe, imposition, constrainte or compulsion, shall freely & of their own accord give or yeald to the said Sir John Killegrew or his Assignes. Provided alwayes that the said Sir John Killegrew his Deputies or Assignes shall heare, or be advertised or shall suspect any enemies to be upon or neare the coast aforesaid that the said light shal be forthwith extinguished & putt out. Straightly charging & requiring all his Maj<sup>ties</sup> subjects whatsoever that they nor any of them be any impediment or hinderance to the said Sir John Killegrew or his assigns in the lawfully erecting & maintenance of the beacon or lighthouse aforesaid upon or neare the Lizard aforesaid nor doe offer or attempt to erect or sett up any other Beacons or Lighthouses in prejudice or crosse of the said Sir John Killegrew & his assigns before mentioned. And in witness hereof I the said Lord High Admirall aforesayde have caused the greate Seale of my Office to be hereunto affixed.

Given at London in his Maj<sup>ties</sup> High Court of Admiralty the nyne and twentieth day of June, in the yeare of our Lord God one thousand, six hundred & nyneteen, And in the year of our Sovereigne Lord James by the grace of God King of England, France and Ireland, Deffender of the Faith, &c., the Seaventeenth & of Scotland the two & fiftyeth."

Having obtained his grant on the 29th June, 1619, Sir John sets about the building at once, and on 15th Sept. reports progress to Sir D. Carleton.

My very good Lord,

(Maye yt please you that having the benefitt of this passage) I thought yt fitt, to give yo: Lopp an account of my proceeding: the Tower or Light: house is well forward, and by: God's assistance, hope to finish yt by the Last of this month.)

I assure yo: Lopp yt hath byn more chargabell and far more Trobellsom then I expected) for the inabytants, neer yt think the suffer in this, erection. The affarme, I take awaye Gods. Grace, from them. There english meaning is, that the now, shall receive no more benefitt by shipwarack) for this will prevent yt) the have byn so, Long used to repe, purchase, by the Callamytie of the Ruin of Shipping) as the clayme yt Heredytarye, and hourly complayne on me: Costom: breeds, strange ills: or goods: but I hope the will now, husband There Land: weh there former idell Lyffe hath omitted in the assurance of there gayne, by Shipwrack: Neer the place wheare I have built this Light: house I told yo: Lopp of a Dutch Ship Lost) ther hath byn Taken up wthin this 30 days, as much Silver in Barre: as amounts to above 3300l) and hopes of much more, weh the Prince, his Highnes hath.

I much deayre to heyre from yo: Lopp. I am most confident of yo: : rare wisdom and care, and therefore most impertinint in me, to press yo: Lopp to use Celerytye wth that alloo. nation) Ceaser atayned his: ends by expedytion I kis yo: hands, fearing I have detayned yo: Lopp from yo: more: grave and solid affayrs, I crav yo pardon and that you would please to accept this Cornish page (?) whe yo: Lopp shall receive: from Captayne Lambert of Roterdame.

## THE LIZARD LIGHTHOUSES.

I present my humble Service, to yo: Lopp and Nobell: Ladye and am faythfully.

(Devoted yo: Loppes humble Servant)

JO. KILLIGREW.

Yo: Lopp will be pleased to give Captayne Lambert Thanks: for the bringing yo: nage over.

From Arwenack this 16th of September 1619.

Sir John writes next from London on December 12.

Right hoble

Being com to this towne I thought yt fitt to yeld yo: Lopp an account, of my proceeding: The Light and Tower on the Lizard is, I prayee God, finished and I presume speaks itself to most parts of Christendom. I have made good what I undertook, if yt please God to bless yo: Lo's proceedings in yo: Provynce I shall drink the wyne of my owne vynard, if yo: Lop fayle, yt is my misfortune, for I am most assured the action is really good, yet I heyre the Captayne Lambert slights yt, I shall forbear farther: to enlarge till it please yo: Lop to wrytt what you have done, only this; the light cannott be mentayned under 10sh a night. I kis yo: hands being much grieved I could nott heyre from yo: Lop since I came from you: do present my services to yo: Self and Ladye remayning yo: Lopp's most devoted Servant.

JO. KILLIGREW.

I have a certificate from most of the gentlemen and Towns next the Light, if there be use, Mr. Lock can send anle letter yo: Lop please to send me.

London Dec. 12th 1619.

To the Right hoble my very good Lord: Sir Dudley: Carleton Knight Ambassador for his Matie of Great: Britayne with the Stats: of the United: Provinces.

at the Hage: in  
Holland.

On the 20 Jan., 1620 (new style) Sir John Killigrew writes a follows to Sir D. Carleton:—

Right hoble

Maye yt please you, to lett me know what yo: Lopp hath don, concerning our busnes: I protest I am out about this busnes: 600l: and yet no return: I deasyre that you would be pleased to wrytt what I shall Trust to, nether had I ingaged myselfe, so far) but the confidence I had of yo: Lopp power in those Provynces) whom I am assured of receved no meane advantage by my charabell services, in the furnishing, this Light for them) wch I hope speaks yt, selfe to the world) if yt take nott yt is my misfortune.

Mr. Lock I presume hath sent yo: Lopp a cople of a certificate from severall Towns near the Lizard, and the chyffest gentillmen: of Cornwall: I have the lyke of som seamen that have put into Falmouth: wch if there be use I heyre inclose a cople of yt.

I am now attemping to gett a imposition(s) lyk the Dungenessot and other Lights in England have) but I dispair in yt this tyme and my misfortunes meet together, as I can promyse my selfe nothing without yo: Lopp comand and extend to me which I atend in much devotion.

I kis yo: hands with yo: Ladye.

Being yo: Lopp's faythfull devoted  
Servant

JO. KILLIGREW.

London January 20th 1619.

\* (Imposition?)

On Jan. 20, Sir John writes to Carleton:—

Right Honorable

I shall still press yo: Lop with my trobellsom Letters: until I heyre som retorne from yo: Lop.

I heyre still go on, hoping to gett a Patent from his Matie with power to compell contrybutions. I am now in the hands of my Lord Marquis, having byn much bound to Mr. Secretery Nauton who I deasyre yo: Lop to take notice of: and that with the first advantage you would thank his hor in my behalfe: to Mr. Lock I am bound, assuring yo: Lop he is much devoted to yo: service.

I humbly kis yo: hand's with my Ladyes. I remain yo: Lopp's Devoted true  
Servant

JO. KILLIGREW.

Black Fryers

Jan. the 20th, 1619.

Mr. Secretary Naunton alluded to in the foregoing letter was Sir Robert Naunton who, in 1601, was elected public orator of Cambridge University, in which capacity he attracted the notice of James I, who made him *Master of the Requests*; Surveyor of the Court of Wards and Secretary of State. He published a work entitled "*Fragmenta Regalia*" in which are interesting details of Queen Elizabeth's reign. He died 1635.

Eight days later Sir John writes again to Carleton—

Right Honorable

Maye yt please you I have now receved the Letter yor Lopp sent me by M<sup>rs</sup> Lamberte—if yt be left to Lamberte opinion I shall hope of smalle good of my sad labors because of som Pryvatt dyslike he bears me, who his insolent condition hath now a fitt occasion to declare, although I am confident, his nation will have tyme to repent if it be not continued, for yt must be granted that the Light is under God, a Particular Advantage that all ships shall often, recover, theare, owne : Ports : by reason that the Light lets them know w<sup>th</sup> assurance wheare the ar : and so the need nott keepe off at sea all night, but direct their course home, wch if the should beate off at sea by the morning against the can make Land agayne : the wynd blows contrarye : and so the are forced in to our harbours ; and comonly ar wyndbound to the overthrow of theare viage : for ship wracks at that place of the Lizard, I am assured the have yearly suffered and for the Armenion (?) Captayne Lambert, Barnavetta meere : Creture : I will send his whoor from Falmouth to Rotterdam to his wyffe who I hope will pull his eyes out for the Proceedings heyre : I am referred by his Majtie to the Trinity house, what the event will prove I knowe nott) it is heyre reported yor Lopp is upon coming for england : I hope yor Lopp will be most carefull to settell this busnes : before yor coming : els yt must periah and I w<sup>th</sup> it for companie, I desyre yor Loppes speediest anser, upon who I will return to my Contrye and ther remaine

Yor Loppes faythfull devoted Servant,

Black Fryers,

26th Jan. 1619.

JO. KILLIGREW.

And on the 17th of the following month he writes again—

Right Honorable,

I have receved yor Loppes Letter where I perceve yor carfull endeavors will nott sort (?) to that ende was expected and maye yt pleas yor Lopp to anser the objection the alledge that if the geve a voluntarie contriubution now yt will hereafter be compeld by there owne act—to avoyd wh : disupt the maye colorably give yt out of there bounty and towards the mayntance of the Light ; who I assure yor Lopp hath cost me 10<sup>sh</sup> in a stormie night, and I am most confident they receive the most benefitt howsoever, Amsterdam affirms that no knowen Loss hath happened, I well know that within this X years. that nation hath lost neer that place 100,000/ but if ther wisdoms shall believe that being up I shall be forced to mantayne yt, I assure them that as my indiscretion made me erect the Mole my late discretion shall turn it into the sea, desyring a Revenge from Neptune, but my good Lord this must be granted, that the Light is so advantageous to them, that the stayne there viages much sooner, and our Western Harbors will suffer wch the will nott frequent because the Light will w<sup>th</sup> confidence make them boldly go on, (wch els the would covett to recover) this is unanswerable, but I dare dispute no more, but if God have decreed, I must suffer (tis my sine) the cause is good, from hence will be no expectation of a Patent from his Majtie with imposition for the Trinity house ether as pretending all Lighte and Sea Marks belongs to the Grand Patent (or rather the inbred hate the carry the Dutch) the saye, the need yt nott, but all els lyk yt and generally approve as a common benefitt, but there insolence since the Officers of the Navye have byn displaced and the put in som Authoritye is equall w<sup>th</sup> brave Lambert who from footing stockings, being drunk seconded Heimakerk at the seige (?) of Gibraltar and did well, thanks to Bacon, but sithence I know no service he hath don more than keeping Falmouth and consuming his Masters Treasure, but leaving him & his mates the Trinity men : I hope yor Lopp will infors yor ablest power to parätt your begun work in those your Provinces, and if your Lopp fynde the cause dispareat to returne me speedye anser that I may no longer periah, that I maye extinguish the Light, heyre I will nott be idell but atempt all I can to stayne a new power to compell and if yor Lopp would be pleased to do me the faver to take me up on yor Loppes credit for a year

*a Flemish Pink of 80 or 90 Tuns well furnished I would secure yor Lp ether by my land or my patent: if it maye be had on your anser I will speedilye send some of my servants to choose her and to bring her for Falmouth for I shall have much use of such a vessell to send to the strayghts with fish: I deayr yor Lps Speedye anser that I maye there on determin, being most confident yor grave and nobill disposition doth tenderly feele what I have and do suffer in this buance, and I shall with what I am wholly and really to obaye all yor comans*

*protesting my selfe*

Yor humble devoted Servant,

JO. KILLIGREW.

\* Not worth the lost Medvall he wears wittnes his last service, having 14 goodly ships and taking on (one) Turk.

(These three lines are added in the margin of Sir J. K's letter: evidently an after thought.)

Yor Lp will be pleased to rembre my service to yor Ladye, and for news I know Mr Lock who is most realy yor Servant doth acquaint yor Lp with the ocurences heyre. I kis yor hands craving yor speedy anser: on wch I will hasten to my contrye, I take my leave.

Black fryers: February the 17th, 1619.

The gentlemen under written agree the Light as most necessary, the being Comanders of the Narrow Seas in his Majties Shiping.

Sr WILL. MONSON,  
Sr THOMAS BUTTON,  
Sr WM. ST. JOHNK,  
Sr RICHARD BENGLY.

To the Right Honorable my singular Good Lord Sr Dudley Carleton Knight, Lo: Ambassador for his Matie with the Lo: the Stats of the United Provynces at the Haagh.

On the 11th March we find the following written from Arwenack.

Right Hoble

This certificat wch Mr Lock will send will declare the misfortun of a ship wch perished thro nott having notice that anie such light was there mantayned and the men Drunk being confessed by them that ar saved. I intreat yor Lo: speedye resolution whether I shall continue the light or nott for the charge hys so heavy as without those parts contribut I must confes (?) I atend yor comand being confident yor nobell disposition needs no further informent, I only suffer in nott heyring from you, I am now gon to my house, and deayr yor Lps speedye anser of my last letter concerning ship which I must huyre. I crave yor pardon being now taking Horse Mr. Lock will acquaint you with all passages heyre.

I humbly rest yor honors

devoted Servant,

JO. KILLIGREW.

March 11, 1619.

To the Right Hoble Sr Dudley Carleton Knight, Lo: Ambassador for his Matie with the Lo: the States of the United Provyns at the Haagh,

The next letter is also from Arwenack two months later, when the light had been put out for want of funds to maintain it.

Right Honorabell,

According to yor comand I have sent such testimonies as at present I can gett, nether is yt possibell to gett parffit notice of whence and what the ships ar that yearly do suffer, on and neer the Lizard, for yt is sildom that anie man escapes and the ships split in small pieces; for ther was a ship nott mentioned in the certificat now sent, lost some X yeares past out of which was saved a chest wth 16 pieces of Italian velvetts, divers parcels of wearyght (P wrought) and figured Taffetas, and much copper wyre, of wch the ship perishing on my Land neer the Lizard, yt fell into my hands to a good value; of wch I deayr nott to be called to account, although on that Land prscription hath made my forefathers demand yt as usual (?) and I have nott lost the right wch custom and decent gave me.

I assure yor Lopp that most of the houses neer the Lizard ar built with the ruins of ships; for the most part heyre by all shippes that come yt is both con-

firmed and desired this should confess a true necessity and those answers to the objections wch the seed of Hagar informed agaynst the necessitye of the work declare, wch I hope yor Lp hath received from Mr. Lock, to answer the rest of yor Lps letter I cannot recall yesterdays, wch if I could, I should not grone under the Burthen of this worke, where I now suffer and have littell hope of ease, but I will adventure the Landing of £50 worth of Cole more for a wynter provvyon, if yor Lp prosper in the desing. being most confident that yor true nobell disposition will omit no means nor power to bring this Chaos to som perfection; this shall keep me from dispayre and make me attend yor comands, referring with all humilyty to the divyne provvydence, whose determinate decrees ar and must be obeyed, to whos protection I comend yor Lp. kising yor and yor nobell Ladys hands, remayning yor hos

humble, reall Servant,  
JO. KILLIGREW.

The ships that transported the 8000 soldyers from Lisborn to Dunkirk looking for the Light, wch I have put out, 6 of the ships wher neer perishing, now as the went to Dunkirk, on the Lizard, wch the expressed there joy wth discharging ther ordinance for so strange a delivery, wch if yt had happened the States would not have byn offended wth such a loss.

Arwenacke, May 4. 1620.

To the Right Honorable Sr Dudley Carleton.

Although the light was put out in May of this year it must have been shortly restored, as in April of the next year we have the following letter to Sir Dudley Carleton :—

Right Honble

Though the time seems longe since I have heard from you, yet ye continuall enquiries I make of ye progression of the bulisise concerninge the light of the Lizard in those partes makes me assure myselfe your endeavours are not wanting in a matter that so much imports both your self and me. I heare yt there ar 60 Schipers or more yt approve the convenience of the light, in ye citie of Amsterdam, wth divers others in other places, all wch I impute to your industrie, for ye approbation of it heere, there comes none of those parts into this place but do applaud it, and by their hands testife ye great benefitt all Sea Adventurers may receyve thereby, amongst manie others Hr. Zwartem Houndt Vice-Admirall of ye Fleet now employed aganist the Turke hath subscrib'd a certificate to yt purpose. My Self have lately been at Lo<sup>n</sup> (whither I am now again goinge) and though I have heretofore had but reasonable successe, there as concerninge this affaire, yet ye generall approvement of ye worke makes me only hope for better, and therefore entreat yor Ho<sup>r</sup> not anie ways to stop ye negotiations thereof there, though I have no assurance of anie thing heere, and yt times such as by reason ye opposition of ye Trinity House I have little hope to bringe it to perfection. I have a certificate of ye losses of 25 Ships there and thereabouts within this dosen or twentie years besides a great numbre of others whose ruines lye neare those rocks and Cliffs, not knowne of whome or what they weare. This is all I can alleadge for it, wch I leave to yor Lops grave consideration.

I kisse yor hands and remaine

Yor Ho<sup>r</sup>s devoted Servant,  
JO. KILLIGREW.

post. for vt I perceyved yor  
Lp to affect fowles net comon  
I thought fitt to send you by  
Capt. Marinne of Delft a Peacock  
and a henne of wch sort I saw  
none there.

Arwennack 7<sup>mo</sup> Aprills 1621.

Sick at heart Sir John writes in August following :—

Right Honorable,

The fitness of this Passeg by Captayne Ghem Hilgen of Rotterdam who will wth his aprovement further the Lizard Lyght makes me to presume to trouble yor Lopp from whom I much desyr to heyre what successe yor Ho<sup>r</sup> hath had in this yett unfur tunat sote of myne, for from my brother Tho: Killigrew, whom I purposely sent over in Maye last to attend yor Lopp I have nott hard and the Easterlie wynds have byn so unacquuted wth this Harbor as I shall dispayre to heyre from yor Lopp without Mr. Locks conveyance, who never fayls to omit anie of yor comands. Good my Lo: lett me know what will becom of this busnes, for ill news long declaring makes ye more

bytter, I will arme my selfe as neere as I can with this resolution that God having  
decreed my Ruin I must submitt. to whos mercyfull Protection I comitt yor Lorde.  
remayning yor hore  
faythfully devoted  
Servant ready  
JO. KILLIGREW.

From Arwenack, in Falmouth Harbor this 8th of August, 1631.  
To the Right Honorable Sr Dadiye Carleton.

The following declaration is endorsed "Sir John Killigrew's  
note concerning a light to be erected at the Lizard in Cornwall—

Maye 8th, old style. 1619.

Whereas : I have propounded to the Right hoble Sir Dudly Carleton, Lord  
Ambassador for his Majtie of England : for the affayrs of the Lords the State of the  
United Provinces, that if there can be a Patent granted that every ship of England :  
and those parts of the United Provynces or els shall yearly contribut for the mayn-  
taining : of a Lyght upon the Lizard in Cornwall, wch maye be under God a  
Preservation for Shipping, which have dayly perished, for the want such a Lyght. the  
Patent to pass in my nam : and I declare that reasy I am redy at all tymes to confirm  
anie grant my sayd Lord Ambassador shall receyve, that he shall receyve the on  
moyety of anie profit for contriutions that shall accrew by the sayd grant ; and  
all expence and charge in following for the obtayning the sayd grant or patent shall  
be equally upon account allowed as betwixt us, all this I am redy to perform, the  
conditions before being affected : to wch I sett my hand.

JO. KILLIGREW.

In addition to the foregoing documents there are many others  
thus described in the Calendar of State Papers which show how  
formidable and successful was the opposition raised by the  
Trinity House to Sir John's scheme.

1619.—(?)—Testimony of Dutch Seamen to the usefulness of a  
lighthouse at the Lizard.

1619.—June.—Certificate of the inhabitants of Bideford,  
Northam, and Abbotsham, parish of Barnstaple, that the light  
proposed to be set up on the Lizard will be rather hurtful than  
beneficial (many signatures).

1623.—Sept. 16.—Sir Fras. Godolphin and Sir Ant. Harris  
Penryn to the Council.

"Have taken the opinions of the masters, shipowners, and  
mariners in the vicinity, and of some strangers, on the utility of  
the light-house lately erected near the Lizard, and all are in its  
favour, except those of Penryn. A Holland Captain declares it  
saved his own ship of 100 men. Cannot ascertain what a contri-  
bution of a half penny per ton (on ships passing) would amount  
to, but the servants of the patentees in Mounts Bay, St. Ives and  
Falmouth, declare they have only received £13 in all these places  
since its first erection."

1623.—Sept. 29.—Account of money received at Dartmouth  
for maintenance of the Lizard Lighthouse, at  $\frac{1}{2}$ d. per ton on  
Vessels, since Christmas last, total £18 7s. With estimate that

the rates of those who refused to pay might amount to £5 13s. 4d. more.

1623.—Oct. 25.—(Officers of the Customs) to the Council.

The most experienced mariners of the town (Weymouth and Melcombe Regis) declare that the light at the Lizard Point is needless, and rather dangerous than profitable, in hazy weather it cannot be seen, and in clear weather the land can be seen, but it may help to conduct enemies & pirates to the coast. The contribution of  $\frac{1}{4}$ d. per ton at this port would yield about £20 per annum.

1623.—Oct. 28.—Pool (Officers of Customs to the Council.)

The "discreetest and most capable shipmasters" declare the Lizard lighthouse to be rather burdensome than commodious, the Lizard being so well known. Have received 21s. 4d. tax for it since Midsummer, chiefly from Newfoundland fishermen, who paid with much grudging. Cannot tell the yearly average, this being the most profitable quarter.

1623.—Dec. 1.—Trinity House, Ratcliffe.—Wardens, &c., of Trinity House to (the Council). Think the light at the Lizard in Cornwall very unnecessary, most ships entering the channel by day, not by night, and the road being so broad that few ever see the Lizard. The tax of  $\frac{1}{4}$ d. per ton on ships would yield about £400 a year. It is a great burden and much complained of.

The following letter is recorded on Feby. 4, 1624 addressed by Sir Wm. Monson\* to the Council, endorsed "a certificate touching the Light house feb. 4th, 1624." Sir William was one of the authorities quoted by Sir John Killigrew, on Feb. 17, 1620. The letter is a full reply to the various petitions against the light.

Right Honble

I most humble desire yor Love to excuse my personall attendance in reason of the ill disposition of my bodie and lamenes of my legges at this present, notwithstanding I have presumed to deliver my opinion in writing concerning y<sup>e</sup> busnes, and have answered such materiall objections which I conjecture may be alleadged against it.

First it maie be alleadged that Shippes coming in wth our channell pass not our Coast in the night but in the day, and therefor needles.

Secondlie that men doe comonlie fall with our Coast about Plymouth or Dartmouth, and that manie ships men see not the Lizard either outwards or homewards.

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\* Sir Wm. Monson, born 1569 died 1642, entered the Naval service, was knighted by the Earl of Essex for his conduct in an expedition to Cadiz. In reign of James I distinguished himself against the Dutch, wrote "Naval Tracts" printed in Churchill's "Collection of Voyages."



Thirdly, that the Channell is there so broad that men may saile as well by night as daie.

Fourthly, the advantage that Piratts will take by a Light there placed.

**An Answer to these Objections.**

In tyme of Warre I hold it dangerous to maintaine a light uppon coast, but in tyme of peace I thinke it very necessarie by the reasons following :

The Arte of Navigation is not soe certaine that a man can assure to himself what land he shall fall withall, or the tyme and therefore since it is undetermined it is most fitt men should be furnished with as manie other helpe as can be devised. But in my owne experience I have oftner fallne with the Lisard in my retourne from the southwards than with all other lands.

There is noe man that hath layne toeing at sea some tyme but will be glad to make the land for the good land fall is the principall thinge to finde cominge for our coast, and men shall be the more imbouldened to beare in with the coast when they shall knowe of a light uppon the Lisard, that will appeare to them 7 or 8 leagues, for I have bene informed it hath been soe farr discried.

Men doe not nowe covett so to the land untill they come as high as Plymouth or Dartmouth which I will suppose to be their Boult, yet when they shall knowe of the Light placed uppon the Lisard they will rather covett to make their course for the Lisard where the light shall appeare to them than for some other headland, that shall have noe such marke. And what a comfort a shipp in distress shall find by this light it is to be imagined by example of a traveller on land, loosing his way in a darke cold night, and discerning a light in a cottage, or hearinge a ringe of bells, by reason of which he maie be directed.

In the yeare 1599, I being at sea with my Lord of Cumberland wee sent home a Spanish prise to the value of a hundred thousand pound, they coming for our Channell and in distress bore in with the land thincking they had bene gott as high as Plymouth, but it happened that they were a litle short of the Lisard and forced into Mounts Baye, there two daies after her comming to an anchor she was cast away. A light from the Lisard at that time had saved a 100 mens lives and 100,000 monye or wealth for if she had knowne herselfe to be soe nigh the Lisard the winds was so large, she might have gotten about the land with her fore sayle, and I dare saie there was as good marriners on boord her as that time could afford.

The year before this I remember Mr. Cavendish, in his retourne voyage about the world, falling with our Channell, somewhat shorte of the Lisard, he was taken with soe greate a storme that he could not make the land, and hath confessed to me, he endured more hasard and trouble in two nights uppon our coast than in his long navigation. Divers other misfortunes I could collect together, with the late fearfull wracks that have been in Mounts baye, which is sufficient to prove the necessarie convenience of a Light to be placed on that Promontarie of the Lisard, soe it be carefully preserved and maintayned with fewell, as I am informed nowe it is.

And for answer of ye broadness of our Channell about ye Lisard, I say howe broad soever ye Channell is, yet shippes must put in with that shore, and noe man but will be glad of that Light and knowledge of land in such a coast.

I remember in the year 1597, that the Spanish Armado was comming from Lisbourne to the Groyne and uppon the North Cape 38 of their Shippes and 5000 men perished and yet the sea was broad enough, for the next land to the Westward was America, yet uppon supposition they were to strike the land which they perished upon, howe would a knowne light from the North Cape have saved this disaster and loss of ships and men.

In answer to the objection of Piratts, this, I saie that the tenth of som thousand shippes that saie that waile is not a piratt and then consider if after that proportion it were fitt to take awaie the light by which men shall receive soe much good.

However the piratts comming for our Coast is nott soe much to robb and spoyle as to be provided with victuals and necessities and to make sale of their stolne goodes. And wee have experience that since there hath been a course taken to punish such men and justice done uppon the persons of piratts when they were taken, the coast hath not been infested with them as in tymes past, neither is there liklyhood soe to be hereafter, if the course of justice be maintained.

A piratt that puts himselfe into our Channell runnes a great hasard, first in respect of shore, of his Majties Shippes and Holland men of warre that keepe uppon our Coast.

Secondlie they shall have no harbor to succour them, only open rodes that are subject to outward winds.

Thirdlie being disbarred the reporte of people to them to buy and sell, they shall be in a continuall feare of invasion from the shore and mutinie on board, for the condition of those people are to surprise and betraye one another, as I can instance manie after their comming uppon our Coast and into Ireland.

And therefore I conclude my poore opinion that neither the spaciousnesse of the Channell comminge in by daye onelle with our Coast, nor fallinge to the Eastward of the Lizard or the objection of piratta, sufficient reasons to hinder the proceedings of soe pious an undertaking as the Light to be maintained on the Lizard, wch intendeth the safetie and lives of his Majties subjects, together with the wealth of the kingdome and increase of his Majties Customs.

Ffor that sundrie times men are mistaken of the land when they fall with it, by which mistakinge manie shippes have perished, but that light will not onlie give knowlege of a land, but what land it is, from whence they may shape their course.

If it be objected the Lizard and Sillie, the Wolfe and Land's End lye East and West, soe that seeking the Lizard they are in danger to fall with the others, therefore they haile not with it in the night. In answer to that objection it maye be said they fall not with the Lizard, but with the land about Plymouth or Dartmouth, wch I will suppose to be the Boul't : If it be soe and that they be assured of such a land fall I saye they maye as well misse Scilly and the Wolfe and fall with the Lizard, as to misse the Lizard and fall with the Boul't, their course beinge but one or two poynts difference, and but 3 or 4 leagues betwixt them in distance.

If it be danger to hayll in with the Lizard, because of Sillie and the Wolfe as perhaps one will alleadge, I saye the like danger is in hayllinge in with the Boul't, in respect of the Edestone, that lyeth more dangerouslye than the Wolfe, because it lyeth in their course.

But suppose a man doe haile eight leagues to the westward or Eastward of the Lizard he shall have sight of the light and knowe certainly where he is; soe that if he should be mistaken sixteen leagues in his reckoning he shall be helped by the view of the light.

If it happen that a man fall betwixt Sillie and the lands end, with a southerly winde, or in the night, or in a fogge, that they cannot deecry land, if they escape the Wolfe, which as I have said is not more dangerous than the Edestone, they shall be more safer than hayllinge in with the shore as high as the Boul't, for they shall have sea roome, and knowe certainly where they are by their soundings, for that syde onlie affords such. As to hayllinge betwixt the Lizard and the Boul't with a southerly winde which is an imbayinge winde, and comonly brings fogges and stormes, a man shall be in danger to be put to the shore; therefore it may appeare it is more safety to seek the Lizard if a light be placed upon it than to seek further into the Channell, having noe help but onlie arte to help them.

WILL. MONSON.

It is thus seen that the light was maintained in February, 1624.

In the Vol. for 1625—27, Sir John Killigrew's name occurs at times, but with no reference to the Lizard Light.

In the Vol. for 1627—28, we find :—

1627 } Sir Jas. Bagg to Nicholas . . . . .  
March 9, } Sir John Killigrew is accused of Piracy : the proofs shall be transmitted.  
Plymouth }

In vol., 1628-29 :—

1628 } Minute of application from Capt. John Mason and Jacob Johnson, to the Duke.  
Aug. 17, } About nine years before, a ship from St. Lucar was wrecked at the Lizard,  
Southwicks } laden with silver in bars and pieces of Eight. The Cornishmen, under Sir John Killigrew have recovered certain parts of the cargo, and threaten death to all persons who attempt to seek after the remainder. The applicants pray the Duke to give them authority to recover the same.

On Jan 17, 1631, Sir Wm. Killigrew writes to Secretary Dorchester praying him to be a suitor to the King for setting up the Lizard light again. The letter is addressed " For the Right Honorable the Lord of Dorchester," and reads as follows :—

My Lord,

Presuminge your noble curtesies will reach as well to those that studdy to deserve, as to those which have already deserved them; though it be more than I

X

can hope, tis noe lesse then I will indenor this confidence makes me presume to beech your Lordp to be a sutor to the Kinge in my behalfe, for the settinge vp of the Lizard Light againe, which heertofore my kinsman Sr John Killigrew had by Pattent from kinge James, which hath binne forbidden, to his great losse, at the request of the Trinity House, consideringe his wronge and the benefit of all seamen, I have compounded with Sir John Killigrew for the former pattent, and am now soe bound, as to desire the Kinge, to grant a new pattent to me; and soe impudent as to intreat your Lordp to vndertake it in my behalfe, tis a thinge all seamen desire, but most : strangest, who wonder by what vnjust complaints soe great a benefit is Lost : every year many shippes are wreckt for want of it : I am at the intrey of all most desired to sett it vp againe. which if the Kinge please to bestowe on mee, shall be better performed then heertofore, and I rest ever thankfull to his Magestie and

Your Lordp most humble seruant,

(s) WILLIAM KILLIGREW.

Pendennis Castle, Janu : 17 : 1630.

XVI.—*Rillaton Manor, Linkinhorne, "A Booke of Sessioning, 1658."*

[The property of Thomas Kittow, of Browda, Esqre. Communicated by JOSEPH POLSUE, of Bodmin, surveyor.] Abstract of the Roll, by REV. W. Iago, B.A., of Westheath, Bodmin, Hon. Sec. for Cornwall of the Society of Antiquaries, London.

**D**UCHY Assessional Rolls contain stores of information useful in genealogical and other researches. It is therefore desirable to record the existence of any such in private possession.

A summary of the contents of the document named at the head of this paper (which document has been kindly lent by the owner, Mr. Kittow, for examination), is here attempted for the information of those interested in the locality and its associations, as well as to afford a clue for further investigation, when necessary, in any of the branches to which it relates.

The roll consists of 13 leaves of paper stitched together along the top edges so as to form a book, the writing being upon one side of each leaf. On the back of the last is this endorsement:

"A Booke of Sessioning, 1658,  
By Tho: Piper, Gent: } for Mr. Lampen.  
& George Mathew, }  
Transcribed into Latine by  
mee Edw: Kneebone."

(In more modern writing these words are added—"Mr. John Gooth's Book.")

The manuscript commences thus:—

"Manner' de } Assessio et arrentatio Maner' de Rillaton predict'  
Rillaton } Tent' apud Linkinghorne infra Comitatus Cornub'  
vicissimo sexto et septimo Julij, Anno Dni: 1659.

Coram { Thomam Piper & } Gener' et Comiss' ibidem.  
Georgium Mathews }

Nomina Juratorum	{	Tho: Budge, Senr.	Robertus John	}	Jurati.
		Tho: Budge, Junr.	Edwardus Stanton, Senr.		
		William Stanton	Johannes Barrett		
		Johannes Dingle	Johannes Dill		
		Henricus Warne	Edwardus John		
		Nicholas Foote	Johannes Whale		
		Johannes Oliver de Milcombe	Johannes Warne		
		Edwardus Davy			

*Tenentes ex Consuetudine ejusdem Manerii.*

Rillaton.      } Alicia Beare vidua morte Johannis Beare mariti  
 Rent v' ij<sup>d</sup>    } pro medietat' ead' Alicia morte dicti Johannis Beare  
 fine lij'       } surren' Sampsoni Oliver surrend' Stephani John  
                   surrend' Henrici John pro octavâ parte. Johannes  
                   Dawe per sur' Edwardi Kneebone Gen: per sur'  
                   Johannis Beare per sur' Edwardi John per morte  
                   Henrici John patris pro viij parte. Petrus Olver  
                   per sur' Johannæ Budge viduæ per morte Edwardi  
                   Budge mariti ejus per sur' Thomæ Budge patris  
                   ejus per sur' Henrici John pro viij parte. Johannes  
                   Kneebone, Generosus, per morte Edwardi Kneebone  
                   gen: per sur' Edwardi John per morte Henrici John  
                   patris pro xvj parte (preter unam domum et ..[&c]  
                   ....) ....[&c]..[&c]..[&c]..[&c].....

This example of the contents of the Roll must here suffice—there not being space in this Journal for a larger quotation from the body of the manuscript.

Such is the style in which the record is continued, at considerable length, abounding in details.

Under marginal references, the rents and fines are given, pertaining to Rillaton, Haydon, Kilquite, Pinfold, Beare, Landy-oake, Broadwood, Oves, Darley, Henwood, Windgate, Uphill, Beneathwood, Coombe, Rilla Mill, Piscarium de Lyner, Officium de Bedell, Pastura de Broadwood, &c. (Sharpator, and several Moors, &c., are named).

Under one of the "Rillaton" headings there is mention of grinding at the Mill, &c., and the roll continues—"Et erunt Præpos', Bedill', et Decimar', cum fuerint electi *et non s'ment filios suos die ad scholas nec filias suas maritare sine licent' d'ni*—et fecerunt fidelitat' p' pledg' Thomæ Budge & Willmi Stanton. Opposite "scholas, &c.," the margin contains the words "*a manu-mission produced.*"

Concerning "Kilquite" reference is made to an Assessioning Roll of the 9th year of King Edward the Fourth, and divers other earlier Rolls, the entry concluding—p' pleg' Joh'is Oliver et Joh'is Dingle.

The "Lyner" fishery," Reddit ij fine nil." Many names are entered in connection with its succession, amongst others Jane, widow of Ambros Manaton, Esqre.

The "Bedell" entry is as follows:—

Officium de Bedell, Reddit } Andreus Fenton generosus præpositus dicti  
vj<sup>o</sup> viij<sup>d</sup> fine } manerii cepit officium de Bedell de Rillaton ad  
nil. } usum omnium Tenent' dicti Manerij; Quod  
Willimus Davy præpositus Ibid cepit in ultimâ  
Assessione Tenend' ut supra Reddent inde An-  
nucet' vj<sup>o</sup> viij<sup>d</sup> ut supra et pro fine nill, et facient.  
omnia alia servicia de jure assuet'. p' pledg'  
omnium Tenentium.

Homage ibi super Sacrament' dicunt Quod ex Antiquo  
(de cujus contrario memoriâ hominum non constat) soliti  
sunt Recipere vj<sup>o</sup> viij<sup>d</sup> de tenentibus de Greston pro  
tempore existentibus.

After the "Broadwood Pasture" paragraph, this note occurs  
"Constat Consuetudo Antiqua Quod Si Aliquis fodit Magnas  
Petras pro frangendo pomorum infra manerium, solvet pro putes  
singulari 1<sup>d</sup> ubi ita fodit petras vocat' Anglice Moorestones. ut  
patet in Rotulis Assessionum de anno xvij<sup>o</sup> Henrici Octavi."

Rents of y<sup>e</sup> Free tenants p' Annum xix<sup>s</sup> j<sup>d</sup>, 1<sup>th</sup> of Peper.

Rents of y<sup>e</sup> customary Tent<sup>s</sup> vj<sup>li</sup> ix<sup>s</sup> x<sup>d</sup>.

Fines and tallage of y<sup>e</sup> sayd customary tenants } xxiiij<sup>li</sup> xxij<sup>d</sup>  
for their Lands & Tenements by them taken to be } ad ij<sup>s</sup> in  
payd in the first six yeers after the 6<sup>d</sup> tearme. } una tenura

Old knowledge of the sayd Customary Tenants to be } iiij<sup>s</sup> iiij<sup>d</sup>  
payd ye first yeere of y<sup>e</sup> sayd tearme

New knowledge of the said Tent<sup>s</sup> this Asses- } xxxv<sup>li</sup> xv<sup>s</sup> v<sup>d</sup>  
sioning for their first ingresse into y<sup>e</sup> sayd Lands } qe. d. q.  
& Tenemts. To be payd at three Michaelmas dayes }  
following. Toll Tynne of y<sup>e</sup> Mannor Aforesaid.

#### *Free Tenants.*

Padreda. } John Lampen Esqr. holdeth one messuage and fower  
Rent } Acres of Land Cornish Sometime John of Paterda in  
iiij<sup>s</sup> viij<sup>d</sup> } Wescot Linkinghorne Milcomb Pengelly Brugeton  
2 p of } Haydon Coome & other places yeeilding therefore  
cummin } yeerely iiij<sup>s</sup> viij<sup>d</sup> and 2<sup>li</sup> of Cummin or 2<sup>d</sup>. And shall

carry every where within the hundred of East wyvell-shire all Letters of all officers, And shall doe suite to y<sup>e</sup> s<sup>d</sup> Mannour Court from 3 weeks to 3 weeks, and shall give for Alewife & shall doe fealty and shall pay for new knowledge 2<sup>s</sup> at every Assessioning.

Peverell } John Lampen by y<sup>e</sup> Alienat' of Bastard for one Moyty  
Rent ij<sup>s</sup> } Jo: Vincent, Gent, for a q<sup>ter</sup> p<sup>te</sup> & John Oliver for a quarter p<sup>te</sup> hold of y<sup>e</sup> Lord in Soccage the fourth part of y<sup>e</sup> Mannor aforesaid—That is Eight Acres and ye Moyty of one farthing of Land Cornish in Henwood, Blackcombe, Broadwillake, Westcot Mill Milcombe, Leverdiscombe Beneathwood Clampit Uphill Coome Tremollow & Lawarne yeilding yeerly ij<sup>s</sup> and shall doe suit to y<sup>e</sup> court & when they shall be warned shall make Distresse in Eastwivell & Eastwivelshire and every fifth yeere shall find a Bedell for y<sup>e</sup> said Mannor.

Pengelly } Jonath' Rashly Esq' by y<sup>e</sup> Alienation of Robt Dayly  
Rent ij<sup>s</sup> } One Messuage and y<sup>e</sup> fourth part of y<sup>e</sup> sayd Mannor That is viij Acres & halfe of one farthing of Land Cornish in Henwood Blackumb Broadwillake Milcombe Leverscombe Beneathwood Clampit Uphill Coome Tremollow Eastera, Westera Tremollow & Lawarne yielding ij<sup>s</sup> and shall doe suite and all services as above.

Tremollet } Jonathan Rashleigh by y<sup>e</sup> Alienat' of Hunkin holdeth  
Reddit } one Messuage and one parcell of y<sup>e</sup> Mannor aforesaid  
1 pound } That is fower Acres of Land Cornish in Tremollow Pengelly Westermollow Coombe Clampit & Notter. Sometime Ralphe de Bello Prato yielding 1 of Pepper or xij<sup>d</sup> and shall doe suit.

Edward Kneebone gent holdeth one halfe Acre of Land Cornish in Stocks or Stoccadon, sometime William at Stocks, By y<sup>e</sup> alienation of Eastcot paying yeerely iij<sup>d</sup>.

Willimus Hooper Gen<sup>r</sup> holdeth one headweare vid' Bed' molendin' paying yeerly 2<sup>d</sup>.

John Coriton Esq' holdeth one Tenemt Sometimes Reynold de Ferriers yeilding yeerely for Rent called Modlet x<sup>s</sup>.

Summe of y<sup>e</sup> Rents of free ten<sup>ur</sup> xix<sup>th</sup> j<sup>d</sup> j<sup>n</sup> of P<sup>r</sup>per  
ij<sup>n</sup> of Commin. And for new knowledge ij<sup>a</sup> to be  
p<sup>d</sup> y<sup>e</sup> first yeere of y<sup>e</sup> tearme.

The Roll concludes with two Tables of Dates.

One, from 1642 to 1653, gives the succession of Lords, Tenements, & manors, which found a yearly "Aletaster," and the final order settled for their proper turns in the same matter "for ever."

The other Table shews the Assessioning times, thus :—

"Assessioning. In the 22<sup>d</sup> of King James, being 1624, it did beginne\* Michaelmas before, viz: 1623.

The next Assessioning in course should be 1630.

The next ..... 1637."

Then follow the entries relating to each succeeding 7th year in perpetuity—opposite one of these, viz: 1658, (the date of this Roll,) is written

"This Sessioning was taken by Mr. Lampen's order, who had then bought this Mannour of y<sup>e</sup>† Usurper."

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\* Rolls older than 1470 are mentioned in this Roll, see "Kilquite."

† Oliver Cromwell.



## APPENDIX.

## NAMES OF PLACES AND PERSONS MENTIONED IN THE ROLL

## PLACES.

Beare  
Beneathwood  
Blackcombe  
Broadwillake  
Broadwood  
Brugeton  
Clampit  
Coombe  
County of Cornwall  
Darley  
Deilston  
Eastoot  
Eastwivell  
Eastwivellshire  
St. Germans  
Greston  
Haydon or Heigham  
Henwood  
Le Homer old Parke  
Kilquite  
Landyoke  
Langston Downe  
Lawarne  
Leverdiscombe  
Linkinghorne  
Lyner (Pisc<sup>m</sup> de)  
Milcombe  
Notter  
Oves  
Padreda or Paterda  
Pengolly  
Peverell  
Pinfold  
Rafters  
Rillaton  
Rillamill  
Sharpator  
Smithmoore  
Stocks or Stoccadon  
Tremollet  
Tremollow  
Do. Eastern & Western  
Turfemoore  
Uphill  
Wardbrooke or Withy-  
brooke  
Westcot  
Westermollow (see Tre-  
mollow)  
Windgate, or Windyate

## PERSONS.

King Edward IV.  
King Henry VIII.  
King James.  
The Usurper.  
The Heirs of the Earl of Huntingdon.

[Various relationships, by descents and marriages,  
are noted concerning several of the following.]

Barrett	John, <i>alias</i> Broadlake
Bastard	Kneebone (Gent.)
Bere or Beare (gent.)	Lampen (Esq.)
Bello Prato (Ralph de)	Landry
Blighe	Luskey
Bray	Malby
Broadlake <i>alias</i> John	Manaton (Esq.)
Budge	Marten
Charke	Mathew, Matthews, (Gent.)
Clatworthy	Michell, Michael
Cole	Nottle
Congdon	Oliver
Coombe or Coome	Olver
Coriton (Esq.)	Ough
Crabb	Piper (Gent.)
Curtis	Pomroy
Daly	Rashly (Esq.)
Davie, Davy	Reede
Dawdaway	Reynold, Reynolds
Dawe, Daw,	Robert, Roberts
Derry	Rundle
Dill	Slade
Dingle	Sleepe
Dingley	Smaly
Fenton (Gent.)	Snell
Ferriers (Reynold de)	Stanning
Footo	Stanton
Gay	Stocks (Wm at)
Glidden	Streeke
Gooth (on exterior)	Tozer, Toser
Grilla, Grils	Trehane
Harper	Treloder, Treloders
Harvie, Harry	Vincent (Gent.)
Hay	Vine
Hawke	Warne
Hender	Webbe
Henwood	Whale
Hooper (Gent.)	Will, Wills
Hunkin	
Jackman	
John	

XVII.—*Notes on C. S. Gilbert, author of an Historical Survey of the County of Cornwall, by SIR JOHN MACLEAN, F.S.A.*

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*Read 27th May, 1879.*

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FEW persons have done more for the History of Cornwall than Mr. C. S. Gilbert, and it is to be regretted that so little is known of his birth, character and history. Some dozen years ago I was accidentally brought into contact with Mr. W. H. Parker, then an artist of considerable merit and reputation\*; and finding that he had been connected with Mr. Gilbert, had assisted him in the production of the "Survey of Cornwall," and had been intimately acquainted with him during all his life, I requested Mr. Parker to do me the favour to state in writing what he knew of the character and career of this Cornish author. This request resulted in the two following letters received from Mr. Parker. They are so characteristic of Mr. Parker, himself a native of Devonport, and give so much information respecting Mr. Gilbert, that although they do not possess much literary merit I think they deserve to be published in our Journal.

The second letter was written in consequence of an enquiry I had made respecting a statement as to Mr. Gilbert's family on his grave-stone. I may add that I did not receive any further communication.

Mr. Parker is now dead, but I fear his desire that his remains should rest beside those of his early friend in the Church-yard of the Savoy, was frustrated in consequence of the Church-yard being closed.

Blenheim Villa, New Road, Hammersmith,  
London, W., February 8th, 1868.

John Maclean Esq., F.S.A.

Dear Sir,

In compliance with your wish that I should commit to paper a few reminiscences of my associations with the late Mr. C. S. Gilbert, Author of the Historical Survey of the County of Cornwall, in whose society I spent so many years of early life, it induces me at the present time most gladly to have

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\* Mr. Parker painted the famous picture of the "Smugglers" and the exploit of Grace Darling, engraved by Akerman. His works were of considerable merit and brought good prices.

the opportunity of the attempt to gratify you ; as well as an additional pleasure of calling up to my memory some happy feelings of bygone days : which although more than half a century has passed over, and my professional labours have been exercised in another part of the kingdom, a few disjointed recollections have occasionally flashed through my mind and revived many delightful feelings, which I with many others (perhaps all) who have enjoyed his friendship, can now no longer possess, this may possibly plead as a sufficient apology for any appearance of presumption in my having the boldness to connect my name with that of so excellent a man, and valuable Historian, as Charles Saunders Gilbert.

My having about the latter end of 1812 began to shew what was considered by a few townsmen of Plymouth Docks (now Devonport) some small degree of talent for the pencil, my early efforts attracted the attention of Mr. G., who being at that time engaged in preparing his work on Cornwall, and requiring the assistance of some one to copy coats of arms, and rude sepulchral remains from previous publications, occasioned my artistic abilities (such as they were) to be of service to him, and consequently led to an almost constant intercourse ; Mr. Gilbert's natural kind and affectionate character, caused him to increase in attachment towards me, so that what with the deep interest he took in my welfare, his love for the fine arts, and the services of my pencil, I was looked upon more as a son than otherwise, and was more at his house than at my father's. Mr. Gilbert's hospitality and amiability of manner caused him to be much beloved by all, but more particularly by those youths who were encouraged to prosecute their studies, whether medical, musical, nautical, literary, or painting. With a spirit of true philanthropy towards the rising generation his table was daily surrounded by a variety of energetic youths anxious to reach the goal of eminence, amongst which was Wm. Snow Harris, afterwards Sir William, of Lightning conductor celebrity ; John Baldy, afterwards M.D. of Devonport ; Robert Hooper, afterwards M.D., and Physician to the King's Bench Prison, London ; Dr. Richards, brother of the editor of the Devonport Telegraph newspaper ; and numerous others whose acquaintance I enjoyed in after years previous to their deaths. Nicholas Candy, an excellent artist, afterwards Lieut. in the 43rd Light Infantry ; Capt. Mark Oats, the companion of the great painter of historic repute,—*Opie*, of Cornish origin (Capt. Oats became Governor of Pendennis Castle near Falmouth, was a very clever artist, and encourager of my humble talent, as well as intimate acquaintance of Mr. Gilbert's) ; my brother, Lieut. Wm. Parker, R.N., whose view of the Longships Lighthouse forms one of the embellishments of "Gilbert's History of Cornwall," often joined in the domestic circle ; John Gabriel, afterwards Capt. in the R.N., an amateur artist, was a frequent partaker of Mr. G's. hospitality and friendship ; Richard Burnet, the founder of the Mechanics Institute or Literary and Philosophical Society of Devonport ; Carrington, Condy, and other Literary characters were likewise proud to enjoy Mr. Gilbert's society and acquaintance. To enumerate all the parties accustomed to participate in the enjoyment of the happy and jocular conviviality of Mr. Gilbert's table, may be foreign to the purposes for which you, Sir, have done me the honour to make enquiry. Enough may have been stated to shew that Mr. G. was beloved and esteemed in his private life, as well as admired and valued as a Public Historian of his county.

To pass on therefore to what I understand to be the object of your desire, for information of my more intimate connection with matters concerning my knowledge of Mr. Gilbert's labours of research for his intended publication, I must omit many little pleasing incidents that can only be interesting to my own

feelings, and consequently destitute of interest to others. And the fear of being considered egotistic is a check to what might not otherwise be irrelevant to the present purpose, destroy that gratification to yourself which I am so desirous to afford. At the risk, however, of having to encounter the accusation of egotism, I venture to proceed, in my humble way, to present these *pen and ink sketches of actual facts*, in the hope that the intention to oblige will be a shield to protect me from misapprehension and censure, and although of a fragmentary character it may be sufficiently comprehensive without the attempt of literary qualifications, of which I feel myself woefully deficient, and desire to avoid any vain display.

Mr. Gilbert found constant employment for my pencil at leisure hours, for his History; and my being so much at his house, receiving so many acts of kindness, I never made any charge for what I did; but in addition (having began to paint in oil) I painted several pictures as presents to him, to be placed on his walls, and he in return omitted no opportunity to shew off "Master Parker's" works and recommend him as a "deserving young Artist," that there was not only a reciprocal feeling of regard, but a mutual desire to assist each other, altho when several years after the publication of the History of Cornwall the worthy author became embarrassed, and his furniture and effects brought to the hammer, he has been known to declare that "Master Parker's" pictures brought in a good round sum.

During this period of our intimacy, my application naturally produced considerable improvement in the Fine Arts department, so that it was resolved I should accompany him in his tours through the county to collect information and take views of places to illustrate the work. These pedestrian excursions were of the highest value to me, as they not only benefitted my health, but opened my mind to the various effects of nature; also by the opportunity of seeing the different collections of paintings in the several noblemen's residences, it afforded a fund for improvement, nor should I omit to state that our rambles together on the wild rocky shores of Cornwall, where we frequently met parties of Smugglers whose picturesque appearance implanted in my mind a feeling for those sort of subjects, which in after life proved very *substantially* that the impression was deep and lasting.

A roving and romantic disposition having dictated a preference in me for the wild and *natural* beauties, to those of the more refined class of elegant mansions and genealogical interest, caused me to feel a sort of distaste for that which to the Historian is of paramount importance, and deprived me from the enjoyment which my friend revel'd in, and consequently prevented a knowledge which I lament I do not possess for the present occasion; notwithstanding the inexhaustable labour that Mr. Gilbert on all opportunities bestowed to cultivate my mind in these matters, I had more pleasure in *obeying his wishes*, by copying such objects as he selected, rather than exercising *my own* artistic taste, in what I considered more picturesque—this may in some measure account for several noblemen having substituted *their own* choice of subject and employed their own artists in those engravings which they presented to the work; for those where absence of picturesque taste in Mr. Gilbert's choice, were (at least in *their estimation*) so evidently perceptive.

Mr. Gilbert's habit of indulging in the vernacular mode of expression would often, (to those who were unacquainted with his abilities) cause them to conclude

that he was an illiterate person ; and further the knowledge of his being a chemist and druggist in Plymouth Dock, and exercising throughout Cornwall for many years the practice of empiricism, assisted materially those prejudicial conclusions as to his qualification to undertake so elaborate a work as an " Historical Survey " of the County. But, amidst these disadvantages, nature had endowed Mr. G. with an extraordinary gift of research, and other valuable powers ; wonderful retentive memory, deep penetration, extreme perseverance &c., &c., so that he was able to grapple with every impediment that stood in his way. And what was more extraordinary still, was that altho in general conversation he invariably outraged the common English grammar, yet whatever he wrote, either for private correspondence or public attention, there was always the nicest observation of the rules of orthography, that might challenge the most scrupulous criticism for accuracy. Mr. Gilbert having for many previous years been a vendor of medicine throughout the county, in co-partnership with a Mr. Powell, almost generally the inhabitants of the various towns and villages, at regular periods, were visited by their "*staff of medical officers.*" And "*Gilbert and Powell's*" Pills, Plaisters, Tinctures and Drops, were considered the universal Panacea ; and sought after by rich and poor with the utmost eagerness, as well as producing great pecuniary benefit and wealth to the aforesaid firm. On Mr. Powell retiring from the business, Mr. G. continued to carry on the same under the title of "*Doctor Gilbert,*" and having the assistance of a very clever, active, and intelligent person (a Mr. Morrish) who took the most praiseworthy means to promote the worthy Doctor's interests in the medical department, but more particularly in the gathering all the information he could as to matters connected with the county.—Mr. Morrish being the head officer of "*the staff,*" (or band of empirics) which consisted of 8 or 9 travellers from town to town, and visiting the various villages, afforded him the means of constantly collecting many interesting and correct accounts (some of a private character), which perhaps could not be obtained by mere casual enquiry, and hence it may be presumed that Mr. Gilbert's statements in his work are entitled to the greatest reliance for accounts *beyond* those given by former Historians, as well as the justice in giving him due credit for his assertions. The many years so actively devoted by *each party* to the purposes of the History may strengthen the conviction that everything related therein is not only entitled to credit, but command that attention and regard which, without such advantages, might be open to contradiction. Notwithstanding these remarks it is but due to Mr. Gilbert's memory to say that he was unceasing in his acknowledgements of the ready assistance he was favoured with from the nobility, and the numerous families of Cornish antiquity and distinction.

Frequently on my accompanying him in his interviews with some of the highest and most distinguished aristocratical personages at their mansions, however unfavourable the *first* impression from his ungrammatical provincialism in his mode of expressing himself, yet the thorough knowledge displayed of his acquaintance with county matters and family pedigrees, presented in his mild and gentle manner and with such modest assurance, that he very soon obtained a deep esteem and friendly regard from every one. His correspondence with most of the highest families, and persons of literary celebrity in the county was numerous, and as the work proceeded the accumulation of interesting information increased, so that the duties of the chemist and druggist shops at Plymouth Dock were conducted by his apprentice, under the superintendence of a Mr. Parrot, who afterwards made arrangements with Dr. Gilbert to become a partner, thus

affording Mr. G. the opportunity to devote the *whole* of his attention and time to the work.

It was about this time that I left Plymouth Dock to commence my profession as an artist, in Newcastle-upon-Tyne. Our correspondence was frequent, and some of my leisure hours were devoted to etching a few of the plates which now appear in the work :—In due time I was informed of the work being published, and a copy was forwarded to me from Mr. Gilbert, which I presented to the Literary and Philosophical Society of Newcastle-upon-Tyne, being a member of that Institution.

Without attempting to go into particulars from my own personal observation and intercourse, I can only state what has been related since to me by those in more intimate connection. From whom I had learnt, that the time demanded from him in the *entire* service of the publication of the history caused an unavoidable neglect of his business, likewise the expense attending the Printing, &c., the Publisher also (Mr. John Congdon) requiring from his own pecuniary embarrassments an unexpected and sudden call upon Mr. G's. resources, caused Mr. G's. affairs to be in such a perplexing and entangled condition which ended in his becoming a bankrupt. The separation from his partner Mr. Parrot enabled Mr. G. to again commence his business of chemist and druggist, not in Plymouth Dock (Devonport), but in London. It was here that in my visits to the London Exhibition, for professional information, my personal communication with the worthy author was renewed, and my being much with him at his shop in the Strand, afforded me frequently the pleasing opportunity of enjoying confidential conversation, which accorded completely with what had been related to me by others, with the *additional* remark, that the expenses and outlay nearly doubled what he expected, at the same time the object so near his heart (from his youth) as being the joint Historian of previous authors of the work on his native County being then accomplished, he considered no amount of trial and depression too great, for the triumph of his cherished hope. As the shop in the Strand afforded, from the back room windows a *look over* the churchyard of the Savoy; often Mr. G. would admire the humble, venerable church, which so often reminded us of the many similar fabrics we had visited in the villages through which we had passed, and very often he would express a fervent desire that the burial ground in the Savoy might be his resting place; this from a slight *wish* in the first place increased to a *request* in the end, and Mr Gilbert's remains were interred there accordingly. It is with some degree of melancholy pleasure, that sincere and affectionate regard for every association with his memory, that I purchased the adjoining piece of ground as a depository for my own remains, since which my eldest son having died in London, he was interred there, close beside one so dear to my recollection; the grave stones of both may be seen at the present day; and altho time has swept away all Mr. Gilbert's friends, to prevent as far as possible so eminent and worthy a man from being lost in *obscurity* by so humble a place of sepulture, in myself however there is still *one* left to do homage to the shrine, and when one head stone requires refreshing, I cheerfully bear the expense of the other to perpetuate Mr. Gilbert's memory, as well as the same to my poor son.

#### SCRAPS.

Mr. G. having left his shop in the Strand, removed to another in Newcastle Street, (since occupied by one of his apprentices, Dr. Richards,) and having retired in moderate good health, was found the next morning dead in his bed, supposed from apoplexy.

The Rev. F. Jago Arundell was in intimate correspondence with Mr. G., and frequently invited me with him to spend a week at his rectory at Landulph; where Mr. G. enjoyed the many relics of monumental antiquity with rapturous delight, particularly that of *Palaologus*, which, with other interesting subjects, occupied the exercise of my pencil. Amongst the other relics that Mr. Arundell possessed, was a very antique coin, or medal, which he had found in an old vault in the church. This relic I etched on copper to illustrate a pamphlet read at the Antiquarian Society, by Mr. A. (a proof of the plate I have by me now). Mr. Arundell's exquisite taste for the fine arts, led him to collect a vast number of first rate works by the old masters, particularly one by Vandyke, of the Marquis of Stafford, which I copied in oil. Much of my time while engaged at Landulph rectory, was devoted to the many beautiful picturesque subjects in the vicinity, and my sketches were presented to Mr. Arundell, and Mr. Gilbert. This was about 1815.

On one of our rambles, while staying at an inn in Launceston, Mr. G. was informed by one of his travellers, that he had learnt of an old painting representing the Great Anthony Payne (a celebrated Giant of Cornwall,) being in the neighbourhood; Mr. G. took me with him to see it, and on the discovery of its having been in the Payne Family, and an undoubted original—it was however in a very dilapidated state, full of holes and thick with dirt,—Mr. G. consulted with me as to my ability to restore it for him. I undertook to do so, which occupied me afterwards full two months, and was engraved as a frontispiece to his work. (It is possible that this Painting may be now in the Mr. Parrot's family, Mr. Parrot the former partner of Mr. G., who kept a druggist's shop in Union Street, Plymouth, about 40 years since).

Blenheim Villa, New Road, Hammersmith,

February 25th, 1868.

My Dear Sir,

In acknowledging the receipt of your esteemed note of 23rd inst., I wish to correct any *impression* I had made upon *the certainty* of the name of the place in which Mr. Gilbert was born. I have, however, since had a conversation with Dr. Richards's widow, who resides at Islington, and who has kindly promised to assist me in "fishing up" a clue to some of the existing connexion which may be valuable as a source of information; my own expectations are mostly centred in Mr. Richards's brother, who was formerly editor of the Devonport Telegraph, and now resides at Plymouth. I shall have to find him out, and open a correspondence with him on the subject, as probably he may be acquainted with literary matters more intimately connected with Gilbert's History, as well as of the author himself, which you might like to know.

I can however now speak with *certainty* that Mr. Gilbert was born at Kenwyn, in Cornwall—but as I am not in possession of *facts* concerning his birth or education previous to my being known to him, I feel a reluctance in stating anything from *hearsay*. But it is not at all impossible that I may yet learn some good *authentic* particulars upon this point, of which I shall be happy to make you acquainted with as early as I can.

Mr. Gilbert was never married, or did he leave any children, his mind was from an early age almost exclusively directed in the pursuit of his favorite History. Perhaps it may lead to some farther account of his family connection to state

that he very frequently used to allude to what was his family crest, namely a Squirrel cracking a nut.

I beg to assure you that I shall have great pleasure if I can prove myself a useful assistant to promote the object of your publication.

I remain, Dear Sir,

Yours very truly &c.,

H. P. PARKER.

John Maclean Esq., F.S.A., &c., &c.

P.S.—I think Mr. Gilbert must have been about 70 years of age when he died. His circumstances at the time of his decease did not amount to absolute "*distress*" his business as chemist and druggist, together with the sincere friendship of his former acquaintances, always kept him free from actual indigence; and he was so much beloved by all who knew him, that all were glad of the opportunity to minister to his immediate pecuniary necessities, and none more so than your humble servant.

The following is the inscription on Mr. Gilbert's headstone in the churchyard of the Savoy:

IN MEMORY  
OF  
CHARLES S. GILBERT, ESQ  
OF KENWYN IN CORNWALL  
DEPARTED THIS 30<sup>th</sup> 1831  
Author of Gilbert's Historical Survey  
of the County of Cornwall.



XVIII—*The Starry Ray, (Raia radiata, Donovan.)*

By C. W. PEACH, F.L.S.

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Read May 27th, 1879.

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A SHORT time ago a friend of mine, a large fish merchant here,\* sent me two specimens of a species of ray he got from the deck of a trawl vessel which had come from England to try the fishing off the Scotch coast; not finding it profitable, they soon abandoned it. Knowing how much I feel interested in fishes and all queer things from the sea, he selected two small specimens (both females,) from the refuse, because they were pretty and rather different from any he had seen, and sent them to me; as soon as I saw them, I at once recognized them as fish I had long desired to see, and as specimens of the *Raia radiata*, of Donovan. They were taken off the Firth of Forth. Yarrell, in his second edition of the "British Fishes," vol. 2. p. 585, gives a very nice figure of a female example, from Berwick Bay, and says: "The only three examples I have received; one from Berwick bay, and two from the Firth of Forth." The latter were sent by Dr. Parnell, who had taken them there. This fish is no doubt a northern species. Couch in his "History of the Fishes of the British Islands," vol 1. p. 103, plate xxiii, gives a copy of Donovan's figure, and says that, "Mr. Yarrell's figure is from a dried skin, which I remember to have seen in that gentleman's possession, and it is the only one I have had the opportunity of inspecting." He gives no description, beyond mentioning the difference between the forms of the spines of the Thornback and those of the Starry Ray. "In those of the Thornback, the hooked spine arise from a round and solid base implanted in the skin, but in the present species (Starry Ray,) the base is formed of spreading rays." One of my specimens I have given to the Museum of Science and Arts here, they had but one before, and the other I beg you to accept of for your Museum at Truro, as a mark of the interest I still take in Cornish institutions.

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\* Edinburgh.

XIX.—*Notes on Cornish Ornithology, 1878-9, by E. H. BOND.*

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*Read May 27th, 1879.*

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IN the correction of the Cornish Avi-fauna which I submitted to the last spring meeting of your Society, I mentioned that the June number of the "Zoologist" would contain a note from Mr. John Gatcombe, of Stonehouse, a naturalist much interested in the Ornithology of Devon and Cornwall, confirming what I had reported on his authority, the capture of the *Little Crane* or *Gallinule* (*Orex minuta*), in Cornwall, in the parish of St Dominick, near Callington, a few weeks before. This notice, with an elaborate description of this small rail, duly appeared in the June number of the "Zoologist;" a fact so far interesting to your Society's records, as confirming the completion of the entire group of all the known British Gallinules as belonging to the avi-fauna of Cornwall. The entire arrangement of this family is now shewn in the case of Gallinules in my cabinet of British birds, completing the whole British group of this genus.

I have very little to add, of interest, of rare bird occurrences in the County since your last meeting. Nothing in fact of any rarity or interest came under my notice till last September, when I received from my friend Mr. Dorrien-Smith, of Tresco Abbey, Scilly, a very interesting present of a rare and beautiful British bird in an immature *Purple Heron* (*Ardea purpurea*) a species which very seldom occurs in the British Islands, but of which Cornwall can claim two specimens before the one now under notice, both in the finest state of adult plumage, and shewing all the dorsal and occipital plumes characteristic of the adult bird in full development. One of these I had the pleasure of reporting many years ago to your Society as having occurred in Killiow Valley, at or near the present ponds, within a couple of miles from your city, and which was sent to me by my late lamented friend Mr. William Daubuz; and who afterwards, when I had a second Cornish killed specimen, presented it to your Society, where I hope it still remains in the same state of good preservation as when I sent it. The second adult specimen which I have now in my case of Herons, was procured

from a wet marshy moor in the parish of St. Buryan between this place and the Land's End. No one on comparing the plumage of the adult with the immature bird would imagine they were specifically the same, for there is no resemblance whatever in the coloration and distribution of their respective plumages,—the young bird having no vestige of plumes and displaying a general russet tone of plumage throughout, wholly dissimilar to the rich tints of purple which adorn the adult bird—the top of the head in both old and young bird is similar in colour; this colour, which looks black at a short distance, exhibits on a closer inspection a rich plum-coloured purple, not unlike the tone of colour seen on plums and grapes with a powder'd bloom.

I received by the same packet from Scilly an adult specimen of the *Wood Sandpiper* (*Totanus Glareola*); nearly every specimen that I have procured before indicated by the yellow tips of the dorsal feathers, plumage of the bird of the year,—in this specimen the colour of the spots are pure white. Another bird of some interest and rarity occurred at Scilly this winter in the *Norfolk Plover* or *Thick Knee* (*Odicnemas crepitans*) in very good plumage—we get this bird occasionally in West Cornwall and the Lizard district, but only in the *winter* months as I have more than once stated. It appears to hold a line in its autumnal migration which just takes in the South of Cornwall and the Scilly Isles. I never knew this species to occur in Cornwall except in the winter months, its spring migration northward taking it just as much above the latitude of South Cornwall—thus the species although well known in Hampshire and spoken of by Gilbert White in his “Selborne” with its loud nocturnal wild whistle is never seen or heard in the summer months in Cornwall. We had an autumnal visit of several Hoopoes at the Land's End—we generally get these attractive birds in the spring months; these autumnal specimens appeared to be birds of the year from certain undeveloped characters in their plumage. Very soon after their appearance, towards the end of October, severe weather set in, which from a repetition and succession of hard frosts with frequent falls of snow has given us a seven months' winter, and which up to this time seems to show but small signs of abatement. One result of this hard winter has been to send down a large body of

various sorts of birds from the northern and eastern counties in search of less rigorous temperature as well as of food and sustenance. You no doubt have observed from time to time in severe weather the almost entire withdrawal of the Thrush tribe, even from the country so far west as Truro, to the Land's End district, where every pasture field during such weather seems crowded with Redwings, Thrushes, Blackbirds, Fieldfares, Starlings, Larks, &c. This great *Western movement* under such circumstances is wholly distinct from the great migratorial movement (*furor migratorius*) from north to south which takes place every autumn, and which arises from an entirely different impulse. Not only is West Cornwall visited on these occasions by birds seeking refuge and food, but the movement extends to the Scilly Islands; I have thought it would interest your members to have a note which I sent to the "Zoologist," read before your meeting and recorded in your Journal. It is as follows—

"*The past shooting season at the Scilly Islands.*—The late severe winter has given a fine season of sport on these Islands. The return of the number of Woodcocks and Snipes killed by the lord proprietor, Mr. Dorrien-Smith, may interest your readers. The following is about the summary of the bag, but I am led to believe that double the number of Snipes might have fallen to additional and fairly effective guns. Woodcocks 415. Snipes (full) 545. Do. Jack 73—the best day's Snipe shooting gave 53½ couple, and of Woodcocks, 42 birds. I need not refer to the Islands being crammed with all sorts of the Thrush tribe and our indigenous birds during the hard weather, it being always the case that in severe winters there is always more or less of an immigration southward and westward of birds in search of food and shelter, a movement wholly irrespective of the great autumnal migratorial movement."

Such has been the inclemency of our spring weather this season that, although out of doors every morning, I have failed to hear the sound of most of our spring migrants, including the Cuckoo, during the month of April. The exceptions are the Blackcap, Warbler, Willow Wren, and the Chiff Chaff. Scarcely any other note of our smaller birds that are spring visitors is heard. Whitethroats and Sedge Warblers, if arrived, are quite mute up to this time.

XX.—*Remarks on some Cornish Fishes, by* MATTHIAS DUNN.

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*Read May 27th, 1879.*

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THE Red Mullet spawns close in shore in July and August. The young are about two inches long, and from an eighth to a quarter of an ounce in weight late in October.

Plain Red Mullet. I never saw a specimen. In the long life of the late Mr. Couch it is quite possible he had seen them. Some fishes fluctuate very much in their visits to our coasts, this will be observed in my short experience of fishes.

Piper Gurnard; common at Mevagissey, there would be no remark made as to their scarcity on being offered for sale.

Little Gurnard. In the summer months there are very minute gurnards of about a half-inch long to be found basking in the sunshine close to the water's edge in our bays—they are so quick in their movements as to resemble a fly in the air. In the summer of 1867 Mr. Couch identified these as the young of the Little Gurnard—*Trigla Paciloptera*.

Black Bream or Old Wife; common from Polperro to Falmouth: have known them often taken by fishers from the shore.

Pogge have been caught off Pentewan in ground seines.

Mackarel; spawn in May and June; when first shed it floats on the water. I have taken it from the parent fish when alive. Young ones are about four inches long in August, and about a quarter of an ounce in weight, their rate of growth varies from summer to summer as they find food, or as some summers are more abundant in food than others. In the past August, September, and October, they increased in size at the rate of one inch in length and one ounce-and-a-half in weight per month.

Scrabbled Mackarel. Should hesitate to say these are accidental varieties, they are seldom if ever seen in winter or spring, but come with our summer visitors.

**Spanish Mackerel.** These have a much larger eye than the common Mackerel; the flesh—or rather the fish—is softer, and they more quickly decompose.

Tunny are never seen in the spring of the year, they always come with small pilchards, late in August, and continue with us through September and October.

Bonito the same.

Pelemid is rare now; never saw but two, their casts are in the South Kensington Museum. They probably might have been more plentiful in the past. Some of our old men speak of catching Mackerel of seven lbs. weight on plummet lines; no doubt they were Pelemonds. Nearly all the fishermen who saw my specimens called them Mackerel.

Fishermen here call all large fish which jump out of the water Albicores.

**Plain Bonito.** Mr. Couch says, in 1867, this name is a mistake, they are scabbled on the back like a mackerel, hence their scientific name should be *Bius*; one of these was landed here last week.

**Short-finned Tunny.** In the year 1865 young specimens were plentiful, several were caught at Mevagissey, Polperro, Gorran, and Portloe. Mr. Couch says one was caught at Polperro in 1868, and two at Penzance.

**Ausunum lineum.** About one month before the specimen taken at Falmouth, one of this kind was thrown on shore in a storm on a beach near the Deadman—this came into the hands of Mr. Couch.

**Opah.** A splendid fish. One caught at Mevagissey weighed 85 lbs.

**Boarfish.** Common here from Start to Lizard, these past five years they seem to be on the increase—thousands are yearly caught by Plymouth Trawlers off the Deadman headland, and thousands more are brought to land by our drift fishermen. In June and July in the past year I had over 150 alive in my tanks at one time.

**Silvery Hairtail.** Common in the winter months from 1865 to 1875; scarce before and since. Mr. Couch before his death had many specimens, I have seen his drawing of one specimen,

Red Band Fish. I have sent specimens to Mr. Couch caught here. John Tremayne, Esquire, M.P., caught a specimen on his travels in 1870.

Long-finned Grey Mullet\* are very plentiful here every winter, some hundreds have been sent to the London market this past month. When enclosed in a seine they jump much higher than ordinary Grey Mullet; when dead they handle like velvet and not rough like the common Grey. Mr. Couch was not pleased with his specimen plate in Vol. iv. of his "British Fishes."

Gar Fish. I have reasons to believe these fishes use their beak as a ram to knock out the eyes of their prey. In 1865, Mr. Couch records the fact of a Gar Fish's beak been found transfixing through a Mackerel's body. I have found several other specimens since then, the latest was found through the body of a Pilchard last month, it is now in the possession of Mr. F. Buckland.

The Skipper is common off our coast every summer. Last August, in a storm at midnight, one of these jumped over the stern into the fishing boat, Mary Ann, of Mevagissey. I have known a half-dozen do the like in past years, these are enemies to the Pilchard from undoubted evidence given by ten old fishermen. In the year 1825, Skippers and Pilchards were enclosed in Pilchard seines together, and before they could be taken into the boat thousands of the Pilchards had their eyes knocked out by the Skippers, and scores of Pilchards were transfixing through the body by the beak of the Skipper. The fishermen were first made aware of these fishes being on the coast by the noise the fishes were making in the night, the one attacking the other rushing away. This battle continued more or less on our coasts each summer from 1825 to 1834, the largest catch of Skippers was one hundred thousand.

The Pilchard does certainly spawn in two seasons of the year, December, May and June.† Young pilchards are first seen

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\* Grey Mullet spawn on our coasts two seasons of the year, in November and May. The young are first seen late in July on the surface of the sea; each has a white spot behind the dorsal fin; after a month this mark disappears.

† Pilchards spawn on the surface of the sea, on first being shed it actually floats like cork on the water. See note in *Land and Water*, May 6th, 1871.

in September, three or four inches long and about the 8th of an ounce in weight. Great quantities of these little ones are off our coasts now. I cannot subscribe to the statement that pilchards do not migrate.

Flemings, said to be the finest caught in England, are found every winter in Mevagissey Bay, we have a separate fishery for them from the 1st of December to March; about twenty five boats are on this fishery, prices vary from 5s. to 15s. per hundred for them. London is our principal market; I believe also a few boats pursue a constant fishery for herrings in Looe Bay. Fleming spawn sinks to the bottom of the sea. When shed the fish also voids with it a gluey material to enable the globules to stick to the sea bottom. They spawn here in February, the young are first seen in May, not two inches long.

Anchovys. Quite a common fish in Autumn, from Polperro to Falmouth. I have several in salt now.

Pontassou. In June, 1861, our bays were full of the young of this species. In 1871, if possible they were in greater quantities, some shoals covering acres of sea water, these leaping over each other in hungry haste to devour the young herrings which were plentiful in the sea; we look with interest to June, 1881.

Pollack, on the Whiting Pollack. These fishes have a transparent jelly-like covering about the twentieth part of an inch in thickness, which leaves them in summer and again envelopes their whole body in winter. The parent fish spawns in the early part of the year, the young is first seen in April, about an inch long.

Mackarel Midge are quite common through May and June, from one to twenty miles from land, and always on the surface of the sea. In stormy weather they are thrown on board boats and vessels with the spray, and in fine weather they are drawn into our fishing boats with the nets; when the sea is calm they may be seen by the score rippling on the surface.

Plaice. These spawn in the autumn and early winter, the young are first seen in April, close to land swimming on the surface of the sea, on their edge, with an eye on each side



In about a week after being first seen they may be found in pools near the shore about the size of a baby's finger nail.

**Common Soles.** These also spawn late in the year, and are first seen in April, and like the plaice swim on their edge on being first seen, and in a short time settle down on the sand close in shore.

**Sucking Fish (*E. Remora*.)** Mr. Couch in July, 1867, says it has been contradicted that one was taken in Wales attached to a Cod, and the one taken from a blue Shark at this date at Mevagissey, is the first known English specimen.

**Conger** varies in colour with the ground it inhabits. In 1876, a Conger of about twenty lbs. in weight, of a lead colour approaching to white, was brought in from the deep sea and placed in a large wicker basket close to land, in six weeks he was as black as he possibly could be.

**Launce.** The larger launces feed on the younger ones.

**The Morgay.** The water which drops from these when taken from the sea will turn a Cod or Pollack almost white, and will injure the sale of the above.

**Blue Shark.** These have white eye lops or eye brushes like land birds, when in pursuit of prey or excited, they continually cover and uncover their eyes with them, this gives the creature a most ferocious appearance. The time of their greatest activity is at night, when they may be seen stealing through our summer sea like a beast of prey; their bodies not even disturbing the phosphorescence which at that time of the year so fills the ocean. A most puzzling circumstance, and but for the flexible part of the dorsal fin and tip of tail, it would be impossible to detect their presence in the darkest night.

**Six-gilled Shark** have been caught here lately.

**Paralipis.** One of this genus was driven on shore alive by porpoises at Polkerris, near Par, June 2nd, 1869. I sent it to Mr. Couch who says it is the first known in England. Its length was about fourteen inches, depth one-and-a-half

inches, the sides of the fish was of a uniform silvery colour, it was covered with scales, but delicate; they came off on being handled.

Mr. Couch in writing to me on the 19th of October, 1869, says he purposed writing a new book, in which there would be at least eight fishes new to Britain described. The manuscript must be somewhere, as I believe the book was never published.

XXI.—*The history of the spurious casts of Flint Implements exhibited and sold in Brixham Cavern, by N. WHITLEY.*

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*Read 27th May, 1880.*

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THIS bone-cave in a limestone hill on the south of the town of Brixham, was discovered in 1858. It was explored by a committee of the Geological Society, aided by the gift of £200 from the Royal Society, derived from the Royal donation for the advancement of science, under a stipulation that the relics discovered should be deposited in the British Museum for the inspection of the public. The work of exploration was completed within one year, and the relics exhumed were sent to the rooms of the Geological Society at Somerset House. Some of the results were stated by Mr. Pengelly and Sir Charles Lyell at the following meetings of the British Association for the Advancement of Science; and at numerous public lectures both in England and Scotland; and it was affirmed that the evidence obtained from this Cavern was so strong and conclusive in support of the high antiquity of man, that it revolutionised the opinion of Western Europe on that subject. The report, however, of the Royal Society on the exploration, was not read until June, 1872; and was not published in the Philosophical Transactions until 1874; and during this long period of 14 years the relics from the Cavern were not deposited in the British Museum, and were not accessible to outsiders. In October 1871, I made a survey of the Cavern and of the country around, and on the 20th sent a copy of my plan of the cave to the Geological Society of London. Within and near the mouth of the cave there was a glass case in which many relics from the cave were exhibited, and among them were some casts of a very perfect flint flake "knife," and also a cast of what was said to be "flint axe." I made sketches of these in the note book which contained my survey of the Cavern. On June 12th and 13th, 1873, I further surveyed the country around the Cavern, and then prepared my first paper on the results, which was read at the Victoria Institute on February 16th, 1874.

On the following 2nd of October I again inspected the Cavern and found several of the plaster casts in the same glass case, when I purchased of the owner of the cave three of the casts of the flint flake knife and one of the flint axe; by comparing these casts with the descriptions of the flints given in the report of the Royal Society I was convinced that they were deceptions, and on the 21st of November, 1874, I wrote to the secretaries of the Royal Society, and forwarded to them a cast of the "knife" and of the flint "axe," and ventured to entreat the Council to put an end to this deception of the public, by depositing the real flints in the British Museum (a copy of which letter I append).<sup>\*</sup> On the following third of December I received a letter from Professor Huxley (one of the secretaries) in which he stated "that the casts had been laid before the Presidents and the Council," and added, "that the stipulation made when the exploration of Brixham Cavern was commenced, that the relics discovered should be deposited in the British Museum, had been

[COPY OF LETTER.]

Penarth, Truro, Nov. 21st., 1874.

<sup>\*</sup> Gentlemen,

BRIXHAM CAVERN.

I beg to be permitted through you to lay before the Council of the Royal Society a model of a "Flint Flake Knife," and of a "Stone Axe," shown and sold to those who visit the Cavern as correct representatives of the stone implements discovered during its exploration under the auspices of the Royal Society. The models were sold to me in the Cavern by the owner on the 2nd of October last, and I had seen them three years before. The Flake in particular was vouched for as being a model of one of the "knives" now deposited at the rooms of the Geological Society. A reference to the report on this Cavern in the transactions of the Royal Society will show that no Flake of such size and perfection is therein mentioned. The axe is of Neolithic form and is not mentioned in the report. It is therefore highly probable that these things are forgeries and the persons who now visit the Cavern are misled as to the evidence of its human occupation.

I beg also to state that I have found in the natural soil and subsoil without the Cavern, similar shattered flints to those described in the report as found within the Cave. Under these circumstances I venture to entreat the Royal Society to carry out the stipulation on which the exploration was undertaken 15 years ago, viz., that the relics discovered should be placed for inspection in the British Museum. The models are forwarded carriage paid by Railway.

I am, Gentlemen,

Your faithful servant,

NICHOLAS WHITLEY.

Hon. Sec. Royal Institution of Cornwall.

To the Secs. of the Royal Society, London.

carried into effect. The relics are in fact in charge of Mr. Franks, the Curator of the Christy Collection, to whom I am to refer you for any further information on the subject which you may desire." On the 10th of February following I inspected the flints in the Christy Museum, and neither the knife nor the axe represented by the casts was found amongst them. In confirmation of this discovery I should state, that my friend Mr. Callard, F.G.S., purchased a cast of the "knife" in the cavern so far back as October, 1871, and in reply to a letter from Mr. Pengelly of the 26th of July, 1875, Mr. Callard, two days after, forwarded the cast to Mr. Pengelly, who on the 9th of August following wrote in reply "you have been imposed on, the implement of which you have the casts is well known to me, and was never found in Brixham Cavern." Mr. Callard afterwards inspected the cavern, and on the 21st of August, 1875, called on Mr. Pengelly, who showed him the flint from which the cast was moulded. A few days after Mr. Callard wrote to Mr. Pengelly, stating "that Mr. Philp still maintains that the flint of which mine is the cast was found in the cave, and tells me that you lent him the flint in question." Thus the discovery of the spurious casts not only became known to the Royal Society, but was confirmed and pressed on the attention of Mr. Pengelly by Mr. Callard. On the following week the meeting of the British Association took place at Bristol; when Mr. Pengelly made known that the flint knife from which the cast was moulded, was not found in the cavern, but in the North of Ireland, and was lent by him to the owner of the cavern at his request, to have a cast of it taken on condition that he should inform those to whom he showed it that the original was not found in the cavern. Accepting Mr. Pengelly's explanation, it appears at the least indiscreet for him to have allowed the cast of so perfect a flint knife to be exhibited amidst other relics of the cavern, as an illustration of the very rough pieces of flint called implements found in the cavern. And from an antiquarian point of view it was utterly indefensible to put forward neolithic implements as representatives of Palæolithic tools. However, I am indebted to Mr. Pengelly (as I have before acknowledged) for making known by his paper—read at Teignmouth, July, 1874—the numerous mistakes and, I may add, deceptions, which have been published in reference to the relics from this cavern; but when Mr. Pengelly

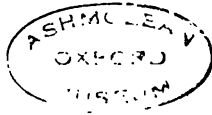
goes on further to state, "If a debt of gratitude be really due to any one in this matter, it is due to me, and to me alone, for it was I—a member of the Cavern Committee—and not Mr. Whitley or any one else, who discovered and made public the facts that spurious plaster casts were shown in the cavern." I must not only demur to, but absolutely deny the correctness of such a statement. Mr. Pengelly made nothing publicly known regarding these false casts anterior to the meeting of the British Association at Bristol in August, 1875, a year after I had forwarded the proof of the fraud to the council of the Royal Society; and as a Fellow of the Society, and a leading member of the committee of exploration, he was most probably communicated with in the matter, especially as he tells us that in January, 1875, he "saw them (the flints) in one of the vaults of the British Museum waiting their turn to be arranged for exhibition in the galleries open to the general public," (*Trans. of Devon Assoc.*; Vol. 8. p. 165), and not only so, but Mr. Callard pressed this fraud on his attention a week before the Bristol meeting of the British Association, and commented on Mr. Pengelly's statement there.

But further it is difficult to understand how Mr. Pengelly can claim the merit of having discovered "that spurious plaster casts were shown in the Cavern," when it was Mr. Pengelly himself who selected the flints from his private collection, and lent them to Mr. Philp, the owner of the cavern, for the very purpose of exhibition (*Trans. of Devon Assoc.*, Vol. 8. p. 152). On this point there was nothing for Mr. Pengelly to discover, he knew it all before, and for the long period of 14 years did not make it known. True, he might not have known that the casts were sold to visitors, but it is curious that this additional fact was discovered by strangers living far away, and not by Mr. Pengelly living within a few miles from the cavern. However, the priority of the discovery of the fraud is a minor consideration contrasted with the important fact, that for 14 years the only tangible evidence accessible to the public, was the spurious casts representing implements such as might have been—and most probably were—in use in the recognised neolithic stone age.

We now know that the 36 pieces exhumed from the cavern, and said to prove the existence and high antiquity of Palæolithic man, are many of them pieces of rubble flint no larger than the tip of a man's finger, and that the remainder are undefinable

pieces of fractured flint unlike any tools which man has, or could use with advantage, and that similar flint splinters may be picked by cart loads on the surface soil of our chalk hills.

Mr. COLLINS said no doubt a great deal of carelessness had existed in regard to these casts in allowing them to be sold as those found in the cavern; but the discovery of this error had not altered the position of affairs one iota; and, however much the carelessness was to be regretted, the facts of the case remained the same. Mr. Collins also pointed out that one of the flints shown in the photograph of the flint implements taken from Brixham Cavern, showed clear marks of human workmanship; and this view was endorsed by Dr. FOSTER.



**TABLE No. 1**

MONTHLY MEANS OF THE BAROMETER. Cistern 43 feet above mean sea level.																		
1880.	Month.	Mean pressure corrected to 32 deg. Fahr. at sea level.			Mean of monthly means.	Mean correction for diurnal range.	True mean of monthly means.	Mean force of vapour.	Mean pressure of dry air.	Corrected absolute maximum observed.	Corrected absolute minimum observed.	Day.	Extreme range for the month.	Mean diurnal range.	Greatest range from 9 a.m. to 9 p.m.	Day.	Greatest range in any consecutive 24 hours.	Between which days it occurred.
		9 a.m.	3 p.m.	9 p.m.														
	January	30.087	30.094	30.114	30.102	-.004	30.088	in. 0.307	29.891	in. 0.063	7	30.021	18	0.583	in. 0.040	19	33	3 & 4
	February	29.800	29.797	29.810	29.802	-.003	29.799	0.205	29.534	30.380	4	29.603	16	1.777	131	16	98	15 & 16
	March	30.080	30.068	30.078	30.075	-.007	30.068	0.288	29.770	30.408	8	29.373	31	1.085	0.050	7	53	3 & 4
	April	29.896	29.913	29.920	29.909	-.004	29.905	0.263	29.643	30.440	30	29.396	6	1.054	0.090	4	42	7 & 8
	May	30.121	30.123	30.113	30.119	-.003	30.116	0.310	29.806	30.517	29	29.703	3	0.914	0.078	28	41	27 & 28
	June	29.975	29.967	29.970	29.971	-.001	29.970	0.375	29.595	30.340	28	29.580	20	0.760	0.033	30	26	21 & 22
	July	29.941	29.956	29.961	29.953	-.002	29.951	0.423	29.538	30.286	5	29.451	26	0.835	0.061	25	49	25 & 26
	August	30.026	30.030	30.043	30.033	-.004	30.029	0.461	29.568	30.349	10	29.490	7	0.969	0.046	9	42	7 & 8
	Sept	30.007	30.011	30.024	30.014	-.004	30.010	0.436	29.574	30.475	29	29.131	14	1.344	0.061	13	70	13 & 14
	Oct.	29.888	29.883	29.886	29.886	-.006	29.880	0.285	29.595	30.408	14	29.958	23	1.450	0.158	23	83	25 & 26
	Nov	29.937	29.933	29.950	29.940	-.004	29.936	0.275	29.661	30.460	4	29.806	18	1.654	0.118	19	84	15 & 16
	Dec	30.356	30.356	30.366	30.346	-.003	30.343	0.285	30.053	30.603	7	30.021	18	0.582	0.040	19	32	19 & 20
	Means	30.010	30.011	30.016	30.012	-.004	30.009	0.320	29.689	30.394		29.376						

REMARKS.—The Barometer used is a Standard, made by Barrow, and compared with the Standard Barometer at the Royal Observatory, Greenwich, by Mr. Glaisher. The corrections for Index Error (+0.008) Capillarity, (+0.013), height above sea (43 feet), and temperature, have been applied.



MONTHLY MEANS OF THE THERMOMETER.																											
1880.	Month.	MASON'S HYGROMETER.						SELF REGISTERING.						ABSOLUTE.													
		9 a.m.		3 p.m.		9 p.m.		Mean of Dry Bulb.	Mean correction for diurnal range.	True mean of Dry Bulb.	Mean of Wet Bulb.	Mean correction for diurnal range.	Mean temp. of evaporation.	Wet Therm. below dry.	Mean dew point.	Dew point below Dry Therm.	Mean of all the Maxima.	Mean of all the Minima.	Approximate mean temp.	Correction for the month.	Adopted mean temp.	Daily mean range.	Maximum.	Day.	Minimum.	Day.	Range.
	January	38.0	37.5	43.0	40.5	38.9	37.4	40.3	0.4	39.9	38.5	0.3	38.2	1.7	35.4	4.5	44.8	34.9	39.8	0.1	39.7	9.9	55	1	22	23	33
	February	44.6	43.3	50.0	47.1	45.4	44.3	46.7	0.7	46.0	44.9	0.5	44.4	1.6	41.7	4.3	52.0	39.1	45.5	0.1	45.4	12.9	55	19	23	25	27
	March	47.2	46.0	51.7	48.3	45.7	44.4	48.2	1.0	47.2	46.2	0.6	45.6	1.6	44.9	2.3	53.9	42.2	48.0	0.2	47.8	11.7	59	27	32	23	27
	April	49.6	46.4	53.2	48.3	46.6	44.8	49.8	1.6	48.2	46.5	1.3	45.2	3.0	41.7	6.5	55.4	42.2	48.8	0.1	48.7	13.2	61	19	31	30	30
	May	56.0	50.4	60.3	52.8	52.0	49.5	56.0	2.3	53.7	50.9	1.4	49.5	4.2	46.1	7.6	63.5	44.7	54.1	0.8	53.3	18.8	75	15	31	1	44
	June	59.0	54.9	60.8	56.2	54.7	53.0	58.2	2.9	55.3	54.7	1.7	53.0	2.3	51.1	4.2	64.4	49.8	57.1	0.3	56.8	14.6	71	29	36	10	35
	July	63.0	58.4	65.7	59.3	58.2	56.4	62.3	2.1	60.2	58.0	1.2	56.8	3.4	54.4	5.8	69.3	53.3	61.3	0.3	61.0	16.0	77	16	46	16	31
	August	65.0	60.4	70.7	63.4	61.4	59.2	65.7	2.0	63.7	61.0	1.2	59.8	3.9	56.7	7.0	73.8	56.4	65.1	0.3	64.8	17.4	82	11	44	24	38
	Sept	61.0	57.6	64.6	59.3	58.0	56.1	61.2	1.7	59.5	57.7	0.9	56.8	3.7	55.2	4.3	67.3	54.0	60.6	0.2	60.4	13.3	79	4	44	29	35
	Oct	47.3	45.0	53.5	49.4	47.0	45.2	49.3	0.8	48.5	46.5	0.6	45.9	2.6	43.8	4.7	56.1	41.7	48.9	0.4	48.5	14.4	69	1	25	25	44
	Nov	46.5	44.7	50.0	46.7	45.7	43.8	47.4	0.6	46.8	45.1	0.5	44.6	2.2	42.8	4.0	52.1	41.0	46.6	0.1	46.5	11.2	53	14	28	20	30
	Dec	47.5	45.8	49.4	47.0	47.3	45.8	48.1	0.2	47.9	46.0	0.3	45.7		43.8	4.1	52.2	43.2	48.2	0.0	48.2	9.0	56	1	29	26	27
	Means	52.1	49.2	56.1	51.5	50.1	48.3	52.7	1.4	51.3	49.7	0.9	48.8	2.7	46.4	4.9	58.7	45.2	53.0	0.2	51.8		66				

The Thermometers are placed on the roof of the Royal Institution in a wooden shed, through which the air passes freely. The Standard Wet and Dry Bulbs are by Negretti and Zambra, and have been corrected by Mr Glaisher.

TABLE No. 3.

1880.	Month.	WINDS.																							
		N.			N.E.			E.			S.W.			S.			S.E.			W.			N.W.		
		h	d	e	h	d	e	h	d	e	h	d	e	h	d	e	h	d	e	h	d	e	h	d	e
	January	8	8	11	5	17	7	4	2	1	0	2	2	4	2	1	3	1	3	3	1	1	1	1	4
	February	0	1	1	4	4	1	4	6	4	8	8	11	7	6	5	7	6	5	2	3	4	3	1	2
	March	11	13	10	7	8	7	4	3	3	3	3	2	4	2	3	0	1	3	0	0	0	2	0	1
	April	2	2	1	3	3	2	1	3	1	3	3	7	7	4	3	2	2	5	5	2	4	3	10	6
	May	9	6	7	3	5	1	4	5	2	2	2	3	3	2	2	2	2	5	4	8	9	4	1	2
	June	2	2	2	4	3	3	5	4	3	3	4	4	4	7	3	1	4	7	9	7	2	0	0	0
	July	0	0	0	3	0	0	3	4	5	8	8	8	7	10	10	8	7	7	1	2	1	1	0	0
	August	9	5	5	4	8	3	1	7	6	4	2	2	1	2	0	3	4	7	4	2	3	5	1	5
	Sept.	1	1	1	3	5	4	6	3	5	7	4	4	5	8	7	5	7	2	2	2	1	0	0	0
	Oct.	5	7	5	3	1	1	0	4	2	3	1	3	3	4	2	2	3	3	5	3	6	10	8	9
	Nov.	1	2	1	3	1	1	0	0	0	11	9	9	3	8	6	3	3	5	3	2	3	6	5	5
	Dec.	0	0	0	1	0	0	0	0	0	15	14	14	4	6	4	8	11	7	0	1	3	1	1	1
	Total	48	47	44	43	55	30	32	41	32	67	60	69	51	60	52	39	48	58	34	36	41	50	26	36
	Means	46.3			43.0			35.0			65.3			54.3			43.3			37.0			37.3		
		2.0			2.5			1.6			2.0			2.5			2.0			2.5			2.0		

The force of the Wind is estimated on a scale from 0 to 6, from calm to violent storm.

TABLE 4.

1890.		WEATHER.																				
Month.	AVERAGE CLOUDINESS.				RAINFALL.						Mean weight of vapour in a cubic foot of air.	Mean humidity of atmosphere.	Mean additional weight required for saturation of the air.	Mean elastic force in in.	Mean weight in grains of a cubic foot of air.	Amount of water in a vertical column of air in in.	SUN.			Dry.	Wet.	REMARKS.
	Rainfall in inches.			Greatest fall in 24 hours, Truro.	No. of days in which rain fell.	Penarth.		Truro.	Shine.	Gleam.							Cloud.					
	9 a.m.	3 p.m.	9 p.m.			Mean.	In.											Depth.				
January	7.5	7.4	7.0	7.3	0.85	0.93	6	0.53	16	84	0.207	537.8	2.7	23	5	34	85	8	Frost 11, 15, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29. Fog 27, 28.			
Feb. ....	7.1	7.1	7.1	7.1	4.08	3.80	24	0.96	15	86	0.265	531.0	3.6	29	3	26	70	17	Frost 1, 17, 24, 25. Fog 1. Hail 13 Gale 2, 9, 12, 13, 16. Remarkable Rain 15.			
March ...	7.3	7.0	6.4	6.9	2.82	2.99	17	1.01	25	93	0.298	530.1	4.5	30	3	29	80	13	Frost 23, 24, 25, 29, 30. Hail 1. Gale 1, 2, 3, 12, 19. Remarkable Rain 21, 22, 23, 24, 25, 26. Faint weather all the month.			
April .....	6.6	6.8	5.3	6.2	2.56	2.58	14	0.56	1	79	0.263	530.0	3.8	22	1	37	83	7	Hail 4, 5, 6. Frost 23, 24, 25. Gale 11.			
May .....	5.4	5.5	5.0	5.3	1.35	10.5	5	0.83	26	74	0.310	522.5	5.6	47	6	9	90	3	Remarkable Rain 20.			
June .....	7.6	7.5	6.7	7.3	2.23	2.31	18	0.36	13	87	0.375	522.1	5.7	31	2	27	77	13	Remarkable Rain 2.			
July' .....	6.8	6.4	5.8	6.3	3.44	3.57	16	1.46	25	82	0.423	513.7	5.8	43	2	17	83	10	Remarkable Rain 25.			
August ...	7.1	6.1	5.2	6.1	0.19	0.25	4	0.06	6	77	0.461	511.7	6.4	39	2	21	84	9	Fine weather all the month.			
Sept. ...	8.5	7.3	5.9	7.2	2.65	3.18	16	0.44	17	88	0.496	517.8	5.0	23	1	36	78	12	Gale 14, 15, 16. Fog 20, 29.			
Oct. ....	6.9	7.7	6.9	7.2	9.23	9.62	16	3.00	4	86	0.285	528.8	3.9	24	6	32	74	19	Gale 4, 7, 8. Frost 25, 26, 27. Hail 20. Remarkable Rain 4, 25, 26.			
Nov. ....	6.8	6.8	5.5	6.4	4.04	4.29	20	0.72	15	86	0.275	529.9	3.7	28	2	30	76	14	Frost 2, 5, 9, 13, 20, 21, 22. Snow 12. Gale 12. Remarkable Rain 12.			
Dec. ....	8.3	8.6	8.0	8.3	4.65	5.45	22	1.00	19	86	0.285	528.8	3.9	9	4	49	70	23	Frost 24, 25. Remarkable Rain 19, 20.			
Means ...	7.2	7.0	6.8	6.7	38.09	40.02	178	8.6	0.7	84	0.323	525.5	4.5	29.0	3.0	29.0	79.0	12.0				

Cloudiness is estimated by dividing the sky into ten parts, and noting how many of these are observed. The rain gauge at Truro is placed on the roof of the Royal Institution, at about 40 feet from the coast and about 10 feet above the sea. Gleam is recorded when the sun's disk is visible through a film of cloud. The rain gauge at Penarth, near Truro, is 100 feet above the mean level of the sea.

# JOURNAL

OF THE

## ROYAL INSTITUTION OF CORNWALL.

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No. XXIII.

JANUARY.

1881.

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### SPRING MEETING AT TRURO,

*June 22nd, 1880.*

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#### THE PRESIDENT'S ADDRESS.

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IT is no modesty for a speaker to open with a disclaimer of what no one would attribute to him. It is no apology for accepting some positions to be conscious of insufficiency. I will not, therefore, lament my inability to touch, however lightly, the whole scientific and literary history of the year, or to trace with the instinct and the habit of a true historic miner even one precious vein of research to its fountain of darkness. I will only cast myself on the soothing assurance of your committee that some former Presidents have done their part to satisfaction with addresses very short and with nothing in them; and as it pleased them to honour my position among you with a valued request that I would take my turn in this chair, I felt it more respectful to them to accept than to evade the rota.

Happy is the President whose first duty is not a sorrowful one. Mine is a very sorrowful one. One name I only name. I feel that it would be presumptuous in death to draw the veil of that strange retirement in which Sir Richard Vyvyan chose to shroud his life. His contemporaries knew, and some of the greatest of them have recorded, the extraordinary promise of his early political life. His few friends attest the constancy and severity of his studies, and the wonderful power of the music with which

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he filled his solitary leisure. To his juniors he was a mysterious name only, and he belonged to you as one of your oldest members. It is a strange and dignified shadow.

The last annual address of the President congratulated you on possessing that laborious, accurate, careful, concise description of Opie's very numerous, very scattered works, with that masterly, graphic memoir of the artist. He congratulated you on the re-established health which had enabled Mr. Rogers to complete his arduous task. The year had not run out when Mr. Rogers was no more; and he has been, even in this short space, followed to the grave by the sweetest of sons, my own dear pupil; one who was like his father above all in this, that no labour daunted him, and no suffering shortened his temper or obscured for one instant his consideration for others. It is near twenty years since I first had the honour of Mr. Roger's acquaintance, and his welcome to me here as a new enlisted Cornishman was the brightest of many bright welcomes. As a Chairman for eleven years of Quarter Sessions, as a Member of Parliament for six years, he filled his life with public interests. As honorary treasurer of the Arundel Society he was active in one of the most important movements in the Revival of Art in England. Since then he has been (I am told) one of your best Presidents, and was with you on an expedition which none will forget. Constant suffering, to which many would have made a final surrender, which drove him to Algeria, or confined him to his room, served only to extend the horizon of his observations, or deepen his opportunities of research. And I am much mistaken if, from the quiet of his sick room, he did not exercise a stronger and more wholesome influence on important affairs than most men command at the centres of business. His wide and minute learning (it has been said that you never asked him a question on any subject without receiving a satisfactory answer) enabled him by comparisons to generalise into striking history what would in some hands have been trivial. For instance, his brief remark in one of your own papers that, in widely distant parts of this country the four most important hoards of gold coins and ornaments discovered had been all buried in the reign of King Alfred, and that this gives an idea of what his overrun and battling country was like, is fraught with this kind of suggestiveness. What an

intricate paper was the very last he prepared for you—to give to Henry Bone's "native town," as he said, "a record of the most celebrated of British enamellists." A marvellous bit of work, which I doubt not is as accurate as it is elaborate, and which grew up out of a morning call. And so he worked. Everything to his full mind was suggestive. See his papers in your Journal. Now it is the disinterment of an ashpit which suffices to prove that Romans settled and worked for many years on his own old manor of Carminow; now the demolition of an accepted genealogy, now of a literary fiction repeated from pen to pen, and the substitution of more important facts. Now it is a British mirror, now a handful of weapons made when reindeer ran wild in France, now the identification of some knightly effigy. Now it is the Sacred Fir of Mexico bearing cones in England for the first time in his own sweet "Silva" (more varied than Evelyn's) at Penrose, which within roar of the Atlantic, hangs over the swelling lake, whose strange bar he alone had the ancestral right to pierce. He liked to picture it as Excalibur's fabled resting place. And I shall ever love to picture him, as I have seen him, after successively working up each historic detail in my loved Lincoln Minster, sitting alone wrapt in his cloak in the midst of the vast nave, endeavouring to take in and impress upon himself the sublimity of the whole. And I shall like still more to picture him as I saw him last, though full of suffering even then, with closed eyes, realising to himself the Truro Cathedral of the future, commenting on every feature, point by point, of Mr. Pearson's glorious plan (so completely had he mastered it), and even then (with that practical energy which mingled in all his conceptions) entreating (yes entreating) that it might be built from a quarry worthy of it. His is not an honoured rest only: it is a holy one.

If personal enthusiasm for difficult and elevating pursuits, if minute mastery of their detail, if sweetness of disposition, if manly influence, if genial love for others and the rich return of others' love, if religious feeling of no ordinary depth, if all the religious habits of devoted sons of the Church, ever made men alike, John Jope Rogers and Edward Hearle Rodd would have been alike. But it pleased God to contrast their gifts by setting the one in the most delicate frame that ever battled with labour,

and the other in the most robust and splendid organization that ever enjoyed life. The one for years was almost a stranger to the services which he loved, the other taught his Sunday school class at the age of seventy, the last Sunday that he lived, just as vigorously as he had done for about half a century. He had the most perfect and minute knowledge of every wing that flies in Cornwall, and every note that "trills." His grand collections are inherited by his family. His contributions are numerous to the Zoologist and to the Penzance Society, which he helped to found, but for forty years he rarely failed to send to you an exact account of all that the world of birds had been doing in their favorite Cornwall year by year. The precision of their anatomist was in him marvellously united with the devotion of a poet. Aristophenus himself did not revel amid hoopoes and cuckoos, snipe and kittiwakes, more than this naturalist, who edited for you the closest possible "Statistical Summary of Birds included in the Cornish Fauna." But when he comes to talk of these "statistically summarised" beings, they are his darlings. The eagle's red brown is "unsullied," and the woodwren's note is "a perfect musical shake." The "flight of the golden orioles" hither in 1870, and the "blaze of their plumage," enchant him. He raves at the horrible powder and shot which, "whether the needs of science are satisfied or not, are directed towards every visitor of rarity and beauty." He pleads for our "elegant" birds of prey which "the economy of creation, in its true balance," requires should not be "treated with violence and injustice," and as year by year his accurate observation assures him that starlings, and that Dartford warblers, and other birds, once unknown here, are from unknown causes coming westward more and more, he positively exults in the thought that *we* shall by-and-bye have "nightingales in song from Bosvigo to Tremorvah." Peace be with the holy, manly memories of men like these. Religion and science, all social honour, all domestic affection, keep their graves green, and may we be worthy of having known them.

And now I have three several words to say; unconnected, except by their interest for you, and then I have done. A gentle Protest, a Suggestion, and an Augury involving a duty. 1. A gentle protest against a new habit introduced among you by

which I have been myself misled. I now venture very diffidently to question the propriety of prefixing the title of Saint to many names of parishes where it appears to be a novelty. The true "Naming of Places" has never been an unimportant matter. The new habit seems to arise most where the name had been thought a local designation, and has now been recognised at last as a personal one. But so far as I am able to learn, the Celtic hermit preachers, or missionaries, were not spoken of with this prefix of Saint. It is apparently, if not a more modern at least a more Roman usage. If it is asked, 'why then have some of our parishes been always so styled, as St. Ives, or St. Neot, or St. German's,' I think that on investigation it might turn out that all such Saints were of foreign introduction. St. German from France, as against the old Celtic church; St. Neot from the English; St. Ives from the Romanists, having confounded our *Ia*, or Ives, with their own *Ive*, or *Ivo*, who is venerated elsewhere. St. Just is a similar confusion; they adopted him because they recognised his name. So St. Clement, St. Juliot, St. Erme, are Roman, and belong to the periods perhaps which superseded Meriadoc by S. Martin, and brought into our towns S. Mary, S. Mary Magdalene, S. Stephen, and S. Thomas. So also S. Ive (by its pronunciation) and S. Blazey are French, and if the guess is true, it is useful also in discriminating the age and country of S. Austell. These I mention as instances in which the prefix of 'Saint' in Cornwall is at least some centuries old, and explainable in this way. But while David at Davidstow remains unsainted, though one of the greatest, and while Paul has never been confounded with the Apostle of the Gentiles, but has been preserved without prefix as an Apostle of Brittany, it seems (if I may dare to say so) a pity that a fashion should arise in our own discriminating days, which so freshly dubs Piran or Petroc and Madron among scores of others; which even *saints* S. Towednack, S. Perranzabuloe, and most needlessly of all S. Sancreed. I dare say cases of old nomenclature may be mentioned which I cannot explain; most of them seem, however, to yield to a simple solvent, and if I am in error I shall be better pleased to be corrected than to continue so. But I do venture to ask in this place, which has been designated "the mainspring of the historic literature" of the county, that our antiquaries will not countenance the ingrafting of even the most deserved and beautiful of all titles



upon names which have been perpetuated in all their sacredness without it—a syncrasis of distinct traditions—or that, if it is a real revival of prefixes which have gradually disappeared, they will meet my humble request for more light on the reason. All I venture to say is, that I think the extermination could not have been so universal, and that if some places had it and lost it, we should know which they were, and not import it to any where it is exotic.

2. The *suggestion* I venture to make is that the society may countenance a little effort which I wish to make to obtain a more accurate chronicling of the details of the whole of our Cornish churches from S. Levan to Morwenstow. We want a Sir John Maclean in every deanery to do a Sir John Maclean's work. But I am speaking of a much more humble scheme, which a little combination might rapidly effect. The *Camden Society* long since published a schedule which was as good as a new pair of eyes to most observers; a list naming every possible detail which could occur in a church, so that an entry under each would enable you to describe a church as accurately as you would a plant. I have applied to the Rev. B. Webb, the residuary legatee of that society, for leave to reproduce the schedule, and he has most courteously granted it. Distributed to all clergy or local antiquaries who will take the pains to fill it up for the churches within their reach, it ought in a few months to put us in possession of a record which has no existence at present for any county; a minute detail of every peculiarity of every church in Cornwall. This would be one step gained. But my ultimate aim is not peculiarity. I desire generalisation. It seems to me that there must be history of some remarkable kind underlying the aspect of our churches. I have visited a very large number of them. Why are so many of them so very, so almost exactly, alike? or is my eye deceived as to the truth of the resemblance? Have they some common origin? or are there discrepancies in their measurements, or in their plans, sufficient to shew that they are independent varieties upon some merely generally conceived type? or are such discrepancies only variations? Is there a uniformity of proportions under the variations, which shews that the variations are no argument against a common origin? If they have any common origin, what was it? A school of archi-

fects? the workshop of a monastery? the canons of a cathedral? or a guild? or a company? or one man? If I enter a restored church, a glance tells me which of two or three offices in London prepared the plans. Was there anything like this in old times? Again, why do I find in different parts of the county Norman fonts exactly alike? Perpendicular fonts exactly alike? Fonts which have no resemblance to any extant fonts; fonts, the stone of which comes from no one knows where? People compare the carving on our own south aisle commonly with the carving over the outside of Launceston church. To my eye they are conceived and executed in a perfectly different spirit. Our pure and lovely tower of Probus—how came it to be built in a style extinct in the rest of England a century or more? Why is the date on the capital at Morwenstow a century later than I should have put it? Who made the screens which have been shaped so much alike? Who carved the seat ends so exactly alike, and with the same emblems? Above all, what was the spirit which destroyed Early English and Decorated churches, which must most of them have been in good repair to replace them with thin low arches, barbarous mouldings, at immense cost? What spirit excluded chancel arches, made our east ends all level, with two or three fine windows in a row? made all our chancels constructive only, yet by this simple plan produced so fine a choral arrangement? placed all the altars quite low, almost, sometimes, quite on a level with the nave? And here I pause to ask—Is there any sufficient reason why we and our architects should be spoiling these interesting features as fast as we can, and trying to make them like the Devonshire churches or Lincolnshire churches, which our architects have got books about, and which we have admired without reflection, and imitate without intelligence? And then, again, what a scene Cornwall must have presented with almost all its parish churches in building, or being extensively altered all at once? Whence came all the quarriers, all the masons? whence all the revenues that were being spent at the same moment? what cause stimulated the expenditure? What great outburst of prosperity was there at that time in mining or in fishery, sea transport, or in agriculture? And did the same lucrative period first create or only restore those dignified old manor houses whose fragments stud the now lonely parishes in every direction, before their occupants left their old honour to

decay in the sweetest home scenes and on the grandest coasts of England, to become nobodies in London? In all this there is a wonderful field for archæological, and social, and ecclesiastical researches to combine to give us an answer—so far, as I know, never yet attempted, but yet, I should say, capable of being given. The first step is to procure accurate information upon all the *facts*, which we must use in shooting out our speculations, and framing our hypotheses, before we can by a true induction ascertain anything real. And toward this, the proposed schedules and their comparison must, I think, be the first step.

Lastly, an *augury*. Your honoured late President told you plainly that with you rests to a great extent certain prospects for Truro. He told you the young City ought to be an “educational centre.” I have never exchanged a word with him on the subject. But he completely expressed my convictions, and those of other observers—some of them (I wish to say) as prompt as they are generous. But not to speak of any with which I have not the honour of being personally connected—the Chancellor’s School of Theology which is begun, the High School for Girls which is begun, show by their immediate prosperity how well adapted the place is for the purpose. An energetic master has shewn you the same fact by his success with the Grammar School. The Cathedral is sure to be (as Mr. Borlase told you) a motive force towards the same end, and other practical questions must soon arise. I hope this Institution will throw all the weight of its influence—1st, into strengthening itself by largely increasing its own subscribers; 2nd, by being ready to afford, as it now does, scientific (and, perhaps, literary) instruction to groups from the different institutions and to advanced classes; 3rd, by throwing its individual and corporate influence out from itself into every advanced literary culture. We must not forget two things which Mr. Borlase said last year. “Mainspring of historic literature” he said; and he spoke also of the strong, deliberate, *religious* tone of all work which as yet has emanated hence. In all we do may we vindicate for science and for history that truthful exactness of research and statement without which science is no science. In all we do may we preserve sound sense and moderation. We must preserve these traditions. I will not now speak of the opening prosperity which such a shaping of events would have

in store. Rather I would dwell on that "Local Patriotism," on which I have heard Dr. Barham speak so nobly. I would appeal to higher enthusiasm, in whose train lower results for good never fail to grow even unsought, unbidden. Be free, be liberal, be generous, and men "will give good measure, pressed and trodden, and running over" in return, without your calculating on it. Let us make

"This our *City* a little Academe.

Still and contemplative in living art;"

and very soon you will find the busy and the practical develope themselves like a material body round the essence spiritual. And the architecture of your Cathedral, if you fling your hearts into it, and the science and the literature which you pursue, if you pursue it as nobly enamoured of "that angel knowledge" (as Shakspeare calls her); all, all if it is indeed "*living art*" will live itself into solid greatness. What is true of righteousness is true of all that God has given for the consolation and the elevation of man out of his depression and his low-thoughtedness. "Seek ye first the kingdom of God," "seek the regions in which, the law by which He reigns," and "all these things," all that man really needs, "shall be added unto you."

XXII.—*The Lanisley Letters*.—By THOS. CORNISH.

THIS paper is composed of extracts from a series of letters written by the stewards of the Manor of Lanisley, in Gulval, near Penzance, to their absentee-principals, the family of Onslow, of Guilford, in the course of the 18th century. I am enabled to reproduce them for this Institution by the kindness of the Messrs. Bolitho, who purchased the Manor of the Onslows.

The first two are from John Pellowe and Thomas Pellowe (father and son), and are somewhat introductory to all the rest, which are from George Borlase, the son of John Borlase, of Castle Horneck, and younger brother of Dr. Borlase, of St. Just and Ludgvan, the well-known historian.

The letters tell no connected story, but are rather "Notes on their Times," made by men who knew the facts of the matters about which they wrote, had no motive for doing other than record them correctly, and who had (and this is especially true of Mr. Borlase) a very large field for observation, and ample means for verifying the observations which they made.

These extracts tell us of times when vicars of parishes (or perhaps I should say a vicar of a parish) expected a gratuity of 5s. for conducting the riotous proceedings known as "beating the bounds" of a manor; and soon afterwards desired the appointment of gamekeeper of the manor. Next we come to letters showing the contemporary effects in West Cornwall of the Rebellion of 1745. And then we find perfectly trustworthy evidence of what a privateer might have done in Mount's Bay, left defenceless in 1756, and how, that nothing but want of steam-power (fortunately not then invented), prevented the destruction of Penzance by a Privateer.

But the principal interest of the "Letters" concentrates around the account they give of the smuggling and wrecking in Mount's Bay, in the middle of the 18th century.

It is sad enough to note that they bear testimony to the actual breaking up and plunder of wrecked ships, and to the actual murder of wrecked sailors, for the sake of plunder; but it is a

relief to find that so severe a critic as Mr. Borlase makes no charge that the Mount's Bay men were ever guilty of the charge traditionally made against them of wrecking ships deliberately by the exhibition of false lights. And it is cheering that the last letter of the "extracts" (21st February, 1760), marks an approach towards that which we now recognise as the proper method of treating the remains of the unfortunate victims of the stormy sea.

There is one little matter outside the real interest of the letters to which I should like to call attention. In Thomas Pellowe's letter of 19th Dec., 1741, he "heartily thanks the Right Honble Mr. Speaker, and your good self for ordering me and my friends the votes." And this form occurs frequently in the letters which have no other interest, and therefore are not published. Recollecting that these letters were written at a time when any report of the proceedings in Parliament was a breach of the privileges of the House, we here get a glimpse of the method by which Members of Parliament contrived to give their friends outside the House a hint of that which was going on within it. If they could not give a report of the debates, they could at least give a copy of the "votes" to any one, and these "votes" recorded all the resolutions, all the amendments, and all the divisions, with names. And this gave a very fair indication of what was going on in the House.

27<sup>th</sup> Decr., 1724.

John Pellowe }  
to  
Arthur Onslow }

I do agree that the Tythes of the Furze sold out of Noon Downing must be paid, you have an Acct. in every year of wt. hath been sold.

I presume he\* will use your Tenants as he doth ye, rest, make them pay the utmost. You are pleased to call him a poor man, but I suppose him to be very rich and hath lately married a brisk wife, who I presume hath been the occasion of raising the Tythes,

Mr. Borlase is a young Lawyer to whom they pretend ye. Tithes are set.

\* Penbellick, then Vicar of Gulval.

19<sup>th</sup> Decr., 1741.

Thos. Pellowe }  
to  
Col. Onslow. }

Mr. Pennick the present Vicar of Gulval was with me enquiring after the 5s. pr. annm. for viewing the Bounds of the Mannour I told him it was no due, but he hopes yr. Honr. will order it him as a Gratuity as you were pleased to do to his predecessors. I told him I would inform yr. Honr. about it, & believd, you

would not be against it, of which please in your next a Line.

I heartily thank the right honble. Mr. Speaker & yr. good self for ordering me & my friends the votes.

12<sup>th</sup> January, 1750.

51.

George Borlase

to

Lieut. Genl. Onalow.

Mr. Penneck has been with me times out of number for a deputacon as game keeper, and as you can appoint but one and the [thing is quite out of my way (who must apply myself diligently to the Law, & have some time to sleep) I wish you wd. execute the enclos'd and send me, that I may get it enrolled at the Sessions to make him easy.

21<sup>st</sup> Novr., 1748.

George Borlase

to

Lieut. Genl. Onalow.

I humbly acknowledge the honor you did me the 15<sup>th</sup> and wish the poor men well who are disbanded. Upon the breaking out of the Rebellion Ld. Fal-mouth sent me a commission to raise an independent Company of Volunteers for the defence of the County, which I did. It consisted of 115 private men & non commissioned officers, and I had 2 lieutenants & 2 ensigns, in all Co. officers, nons & private men 120.

A privateer mand. with Irish and Scotch was very soon stranded near the Mount, and the disaffected got a great many of her arms but as soon as I knew it I got the Doctor\* my brother as justice of the peace, and search'd for the Arms and seiz'd 91 musketts and Bayonetts 33 swords, 23 Braas pieces & 10 wall pieces wth 62 pair of pistols which wth 2 dozn of Musketts & bayonetts belonging to the Town armd. my Co. His Majesty upon application by his Grace the Duke of Newcastle orderd the Board of Ordnance to purchase these Arms for the use of the Company which was accordingly don. I wd. therefore begg your advice whether these arms may be got to be left wth. the men or must they be returned into the Kings Stores.

The men never had any pay And if they cd. be kept twould keep up the martial spirit of the people and be a great encouragement for men to imitate their generous resolutions in time to come, but if not I am bound to return what has not been broken & spent in the service, for in firing severall of 'em flew in pieces.

\* Dr. Wm. Borlase of Ludgvan.

7<sup>th</sup> December, 1756.

George Borlase

to

Lieut. Genl. Onalow.

We have had an alarm here by a French privateer of 22-9 pounders and 250 men endeavouring for 3 days together to land 200 men but the wind being against them they could not get in.

Very providentially the "Tartar" commanded by Captain Lockart took her; and, upon his examination, the captain of the privateer declared as above.

The town is quite defenceless without arms without ammunition, without troops without ship of force, so that had the wind favrd. the privateer she would

have stripp'd the town first and probably sett fire to itt afterwards, and might very easily have done itt without the least hazard, as there is a great deal of tyn lying dead, their plunder upon that and the other trade could not be less worth than 50,000£—fifty thousand pounds.

The people here are lamenting their case as quite deserted, and left as sheep appointed to be slain.

I did offer my Lord Barrington last winter to take the command of the same men that served under me in the time of the last rebellion for defence of the Town and Coast, if he wd. order them arms, and send me a Commission, and I then sent my Lord my former Commission, but his Lordship never honored me with any answer to itt, wch. I nevr. again have menconed but for this recent occasion, and in compassion to these poor defenceless people for whom I shall be always ready to lye on the turf.

My compliments. wait on yor. whole house and I am with respect & . & .

30<sup>th</sup> Decr., 1756.

George Borlase

to

Lient. Genl. Onslow.

Trade is certainly at a very low ebb here. I have heard nothing from either the warr or admiralty office since you were so good as communicate my letter to them, but Admiral Boscawen writ one to the Corporacon intimating our fears to be groundless, that a privateer cd. gett little or nothing here and that this sloop of 14 guns wd. be sufficient to prevent any descent.

This was an answer to a letter the Mayor and Aldermen wrote him before I wrote you.

I think the letter has given little satisfaction for they differ from the admiral in opinion. They know here is more to be got by an enemy than the Admiral seems to know and they say when I menconed 50,000£ I spoke with wth. in compass. They also think the other sloop ood. not stand 2 Broadships agt 22-6 prs. if she shd. happen to be here.

1st Febr'y, 1753.

George Borlase

to

Lient. Genl. Onslow.

The late storms have brot severall Vessells ashore & some dead wrecks, in the former case great barbarity's have been comitted, which a few soldiers wd. have prevented And considering the Coasts here swarm wth smugglers from the Lands-end to the Lizard by which an imense sum goes yearly to France, I wonder they were order'd off wth. out being replac'd by others, as they are in those cases of great use.

Sr I beg leave to pr'sent you my humble thanks for the continuance of the votes of yor. House. And wth. pleasure observe leave is given to bring in a Bill for enforcing the Laws against persons who shall steal or detain shipwreck'd goods &c. A forfeiture of every man's wages due to him from any tyn or copper mine who shd. leave his work to go a wrecking And a clause for reading the Act in every Church and Chapple 4 times a yea. A large penalty upon neglect of providing the Act and reading itt wd. I apprehend greatly awe those brutes & have a very good effect



5th March, 1753.

George Borlase

to

Lieut. Genl. Onslow

}

As to the soldiers mencon'd in both yours, Unless the rout is as usual subjected to the discretion of the Magistrates and Neighbouring Justices how to dispose of 'em and billett 'em out this Town cannot quarter them. I mentioned them as necessary for the publick and not so much to indulge my own inclinacion because I like 'em But there is all the reason in the world for part of the detachment to be at Helstone because just on that neighbourhood lye the smugglers and wreckers more than about us, tho there are too many in all parts of this country. Howevr. wt. shift soevr. is made I am for having 'em.

I have often been an eye witness of the barbaritys used at wrecks and saved some ships myself with other help and think your printed Bill very defective.

I am wth great respect &c. &c.

P.S. A diligent smack in this bay wd. be very usefull to take the smugglers.

15 March, 1753.

George Borlase

to

Lieut. Genl. Onslow.

As to the soldiers I am sorry smuggling and wrecking are increased in those parts to such a degree as to render them necessary.

The riches of the land and sea is in full gallop to France and the countenance given to the smugglers by those whose business it is to restrain those pernicious practices hath brot. 'm so bold and daring that nobody can venture to come near them wth safety whilst they are at their work.

As to the sending a smack you rightly observe it is the business of the Custom House Officers to represent the necessity & want of it to the commissioners But they are as languid in that as my nrs. are abt. the soldiers altho' our All in a manner is plainly at stake for want of 'em.

As to the Wreck Bill I apprehend the adding some preventive clauses wd. make it an effectual remedy against that practice of wrecking. My situation in life hath oblig'd me sometimes to be a spectator of things in it, wch. shock humanity and which the Legislature intend some punishments for but some things I fear this Bill will not reach.

The people who make it their business to attend these wrecks are generally Tynners and as soon as they observe a ship on the Coast they first arm themselves wth sharp axes and hatchetts and leave their tyn works to follow those ships. Sometimes the ship is not wrack'd but wr. tis or not the mines suffer greatly not only by the loss of their labour wch may be abt. £100 per diem if they are 2000 in quest of the ship but where the water is quick the mine is entirely drowned, and they seldom go in a less number than 2000.

Now tis hardly to be imagin'd how farr the taking this infamous practice in its very budd and laying the loss of all wages due and some further penalty on every labouring tynner who shd. leave his Tynwork in order to go to wreck would contribute to keep them home and break the neck of it.

The forfeitures would be certain loss but the gain uncertain by going supposing no punishm<sup>t</sup>. attended their plundering &c.

Next I apprehend no person shd. be allow'd to attend a wreck arm'd with axe or the like unless lawfully required. They'll cut a large trading vessell to pieces in one tide and cut down everybody that offers to oppose them Therefore there shd. be some provision agt. this.

Next I humbly apprehend the Bill does not sufficiently provide agt. the monstrous barbarity practiced by those savages upon the poor sufferers. I have seen many a poor man, half dead, cast ashore and crawling out of the reach of the waves fallen upon and in a manner stripp'd naked by those Villians, and if afterwards he has saved his chest or any more cloath's they have been taken from him. Inhuman and barbarous as this is, and altho' a Highwayman is a Christian to such I think whoever shd. *forcibly* take any goods out of the possession of such shipwreck'd sailor by force shd. suffer as Highwaymen.

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15th Decr., 1750.

George Borlase  
to

Lieut. Genl. Onslow.

I am sorry to tell you that notwithstanding the late act there is as much occasion for soldiers here as evr. last Wednesday night A Dutchman was stranded near Helstone every man saved and the ship whole, burthen 250 tons, laden with claret in 24 hours time the Tinnerns clear'd all And a few mos. before they murder'd a poor man just by Helstone, who came in aid of a Custom House Officer to seize some brandy.

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21st February, 1760.

Lieut. Genl. Richard Onslow.  
to

George Borlase.

I have received yours with an account of a dead body being thrown up and left by the waves on my Manor of Lanisley. You certainly did very right to bury it at my expense.

I have very tragical accounts from Plymouth of the late storm.

I wish much health and felicity to you and your House.

I am Sir, Your faithful and obliged humble Servant,

RD. ONSLOW.

XXIII.—*On some Antiquities, &c., in the parish of Crantock and neighbourhood, by W. E. MICHELL, F.R.A.S.*

ABOUT one mile from Newquay, by the side of the Gannel, in the parish of Crantock, there are some singular excavations in the rocks, which so far appear to have escaped the notice of all our county historians and antiquarians, with the exception of Mr. Robert Hunt, F.R.S., who in his "*Romances and Drolls of the West of England*,"\* relates an interesting legend of their origin. The holes are excavated in a rock of hard slate, which rises from the Gannel at an angle generally of about 45°, but at some parts it is still more abrupt. There are several groups of holes; in the finest—which is just above the little quay, known as Fern Pit—a sort of semicircular recess appears to have been cut in the sloping rock, as if by some boring machine, or gigantic "centre bit," the holes are consequently deeper on the higher or outer side, and vary from 9 inches to 2 feet. On the lower side the depth is from 1 in. to 6 in. They are all very nearly circular, with a diameter varying from 15 in. to 18 in.

I will not at present hazard an opinion on the purpose for which these excavations were made, but that they are artificial, and have been executed at the expense of much labour and care, cannot, I think, be questioned.

The district, especially that portion of it lying between the Gannel estuary and the shores of Perran Bay, which has been so much devastated by blown sand, contains many objects of interest to the tourist. Crantock Church, from the peculiarity of the material (sandstone†) used in its construction, its architecture, and its historical associations;‡ the adjacent well of St. Caran-

\* First series, p. 221.

† Consolidated blown sand.

‡ I understand that among the archives in the Chapter House at Exeter, there are a number of ancient Latin documents, which formerly belonged to the Collegiate Church of Crantock. A good translation of these would probably throw much light on the ecclesiastical history of this once celebrated place.

tocus,\* which, alas, was restored injudiciously a few years ago; the cliff castle at Kelsey Head,† the inscribed stone which has been built into the tower of Cubert Church,‡ the frowning cliffs pierced by romantic caverns (of which the one containing the Holy well is the most celebrated, but by no means the most striking; the little-known caverns at Porth Joke, or Polly Joke, far exceeding it in grandeur); its wilderness of sandhills, which will remind the traveller of parts of Egypt, whose monotony is varied by their changing aspect, and the many singular plants, with which they abound, and where may still be seen illustrations of that curious law of nature, by which the tiniest stream of water, if constantly running, is more potent to resist the encroachment of the whirling simoom of sand than the mightiest embankment or wall of stone;—all these are deserving of much more notice than can be given in such a paper as this.

The long "lost Church of St. Piran" is, however, the great *sic* site of interest of the neighbourhood: unfortunately I cannot say *sight*, for its condition, accurately designated by Murray in his "Handbook for Devon and Cornwall"|| as "deplorable," is now still more dilapidated. Its rude walls are nearly level with the adjacent waste of sands and rushes, the altar of St. Piran lies prostrate on the ground, and it is difficult to trace even the entrance to this hallowed little shrine, which should ever be dear to all Christians.

I have often thought that the careful restoration of this most interesting little structure to its exact original condition (so far as it could be done), is a matter meriting the earnest consideration of our Society, and although our museum would suffer by the removal of the quaintly carved stone heads which were presented by my late grandfather, I feel sure that all our members would rejoice to see them in the position they originally occupied, and I am glad of having the opportunity of referring to this subject at a time when the chair of the Royal Institution of Cornwall is occupied by the Lord Bishop of the diocese.

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\* Legend in Blight's "Crosses, &c., of East Cornwall," p. 81.

† Described by Mr. S. R. Pattison, 31st Report (1849) of the Royal Institution of Cornwall.

‡ *Archæologia Cornubiensis*, vol. IX. 3rd series, p. 239.

|| 3rd Edit., 1856, p. 155.

XXIV.—On *Polyzoa*, from Cornwall, one being new to Britain, by  
C. W. PEACH, A.L.S., &c.

IN addition to the *Polyzoa* recorded in your transactions of the year 1876, page 265, as got by me off the Deadman, in June, 1869; I have the pleasure of adding another new one from the same locality, obtained at the same time, but not then satisfactorily recognised. It is now figured and described in "The British *Polyzoa*" of Hincks, published by Van Voorst, in March last, at page 178, pl. XXIV, figs. 5, 6, and named "*Steganoporella Smittii*, Hincks, *Membranipora Andevagensis*, Crag *Polyzoa*, 35, pl. II, figs. 5, 9, Busk. Habitat, on the tube of an Annelid from deep water. Locality, off the Cornish coast, incrusting a *Serpula*. For this fine addition to our fauna we are indebted to Mr. Peach, who has obtained it on two occasions from the Cornish coast. There can be no doubt as to the identity of the British specimen, which I have examined with the Crag fossil."

He then more fully describes it, and remarks that "the ovicell is of unusual size, and exhibits a curious peculiarity in the horny lid which closes the large arched aperture. The lid falls like a trap-door, and when down covers a considerable portion of the front of the cell." This peculiarity I had noticed and sketched in my diary of August, 1841, at the time I found the first, but after a lapse of so many years, it had slipped my memory, until finding the one in 1869. The colour of the first was "dark red," that of the last one had faded from my not being able to examine it soon after I got it; I thought at first it was *S. Roziersi*, of Adouin, also of the Crag, had it been so, it would have been new to our list. The *Polyzoa* I described as *Eschara verrucosa* in your Journal III, 1868-70, and figured in Vol. IV, is now figured and named in Hincks's new work, as *Diporula verrucosa*, Peach, page 220, Pl. XXI, figs. 1, 2. It has since been found in the Bay of Naples, by Mr. Waters. It is, however, at present the only specimen got in the British seas.

I hoped to have sent for this meeting the altered additions to Couch's list of "Cornish Zoophytes." I only got Hincks's new work late in March last; he kindly sent me an advanced copy as an affectionate present, from himself, and Mr. Van Voorst, the publisher, and in it I find such great changes in names, Genera, &c., &c., that I have to go to school again to learn anew, and shall have to re-write and re-arrange the greater part of that I had prepared for you. However, the new work is so excellent and so fully illustrated with beautiful plates, that although rather stiff work for me at 80, I hope it will be "a work and labour of love," and by your next meeting will be ready for it.

I think it right to say, that I should not have troubled you with this trifle, had I not felt desirous of showing your young naturalists, that there are still grand prizes to be got in the Cornish seas and coasts, if they will look for them.

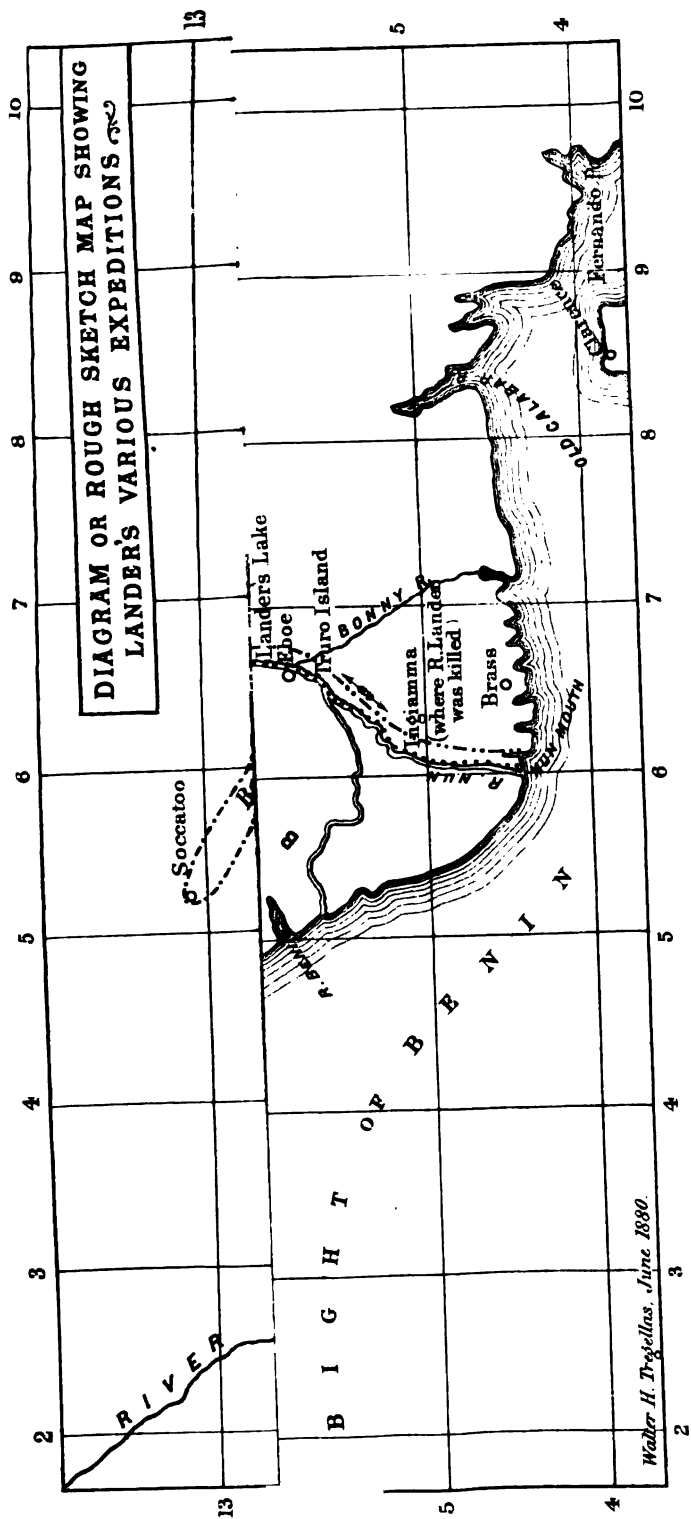
XXV.—*Notes on Richard and John Lander*, BY WALTER H.  
TREGELLAS, Corresponding Member.

THE interest which was felt in the portrait of Henry Bone, R.A., which I had the pleasure of presenting to the Royal Institution of Cornwall last November, induces me now to offer for its acceptance the portraits of two other Truro worthies, which, though the engravings possess no special merit as works of art, may at least serve as reminders of the energy, skill, and determination possessed by two Truro men—half a century ago.\* I am just old enough to remember the commencement, on 16th June, 1835, of the erection of the column designed by P. Sambell, junr., to the memory of Richard Lander, which stands at the top of Lemon Street, and (owing to bad workmanship) of the fall of a considerable portion of it on the 21st May, 1836. Amongst other reminiscences I may perhaps also mention that my father has told me that, on the occasion of laying the foundation stone of the column, he was one of those who formed the procession, and that he and the late Mr. Humphry Williams then led by the hand Richard Lander's child. On that occasion, as on a more recent one of higher importance, the Masonic ceremony was followed by a religious service, when the Rev. H. Grylls preached a sermon in St. Mary's church. Probably most of the information which I have got together from various sources as to the Landers will be familiar to many present; but to others, some at least of the facts may be new: nor can I hope that I have succeeded in bringing together in the following few remarks *all* that would be interesting in connection with this subject.

Although generally spoken of as the Brothers Lander, it should be borne in mind that to Richard, the elder brother, the world is mainly indebted for the discovery of the course of the lower portion of "the lordly Niger" (as Longfellow calls the river)

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\* There is a portrait of Richard Lander in the possession of the Geographical Society. It was engraved by C. Turner, A.R.A., but I have not yet succeeded in getting a copy.



#### References.

- The dotted line ----- shows R. Lander's first Expedition with Clapperton.  
 " ..... " R. Lander's wanderings during this expedition whilst alone.  
 " ..... " R. & J. Lander's expedition in 1830, when the course of the Niger was discovered by them.  
 " ..... " R. Lander's route on his third and last expedition with Melis & Laird & Oldfield.





shewn on the accompanying map. On it I have also indicated Lander's various wanderings. John, the younger brother, had considerable powers of observation and some poetic taste, and was by trade a printer. He accompanied Richard simply from affectionate motives, (and certainly without promise of any pecuniary reward,) on the *second* of his three expeditions to Africa, from which the brothers returned safely: but John will appear no further (except incidentally) in the remarks which I have to offer. He was born in 1807, and died in 1839 in consequence of illness contracted during his one voyage to Africa.

*Richard Lemon Lander*, the heroic but unfortunate traveller, whose name will ever be associated with the splendid discovery of the course and termination of that mysterious and fatal river, which some of the ancients confounded with the Nile, and which the Moors of Northern Africa still call "the Nile of the Negroes," was the fourth of six children, and was born at his father's house the "Dolphin Inn," Truro (then called "The Fighting Cocks,") on the 8th February, 1804, the day on which Colonel Lemon was elected M.P. for our city. Hence his second name; and hence also a certain appropriateness in the site which was chosen for his statue. In the midst of his unfeigned humility in his account of his parents, he nevertheless boasts, that as his father's name began with a Lan and his mother's maiden name (Penrose) with a Pen, no one could deny his claim to being a right *Cornishman*. His grandfather, a noted wrestler, lived near the Land's End. Of Lander's early life in Truro I can learn little further than that he went to old Pascoe's school in Coomb's Lane, and was one of those few favorites of his master, who was thought worthy to receive one of the then newly-coined 1s. 6d. pieces. Richard seems to have been a merry, bright-eyed lad, somewhat below the usual height,\* but was always of a roving adventurous spirit, and, when only eleven years old, accompanied a merchant to the West Indies, whence, after a residence there of three years, and having been attacked by fever in St. Domingo, he returned to England in 1818, and lived as a servant in various wealthy families, with some of whom he visited the continent of Europe.

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\*On account of his short stature he was generally called by the natives in Africa "Nasarah Curramee," or Little Christian.

In 1823 he went with Major Colebrook\* to the Cape of Good Hope, and returned to England in the following year. In 1825 when Captain Clapperton and Major Denham returned from their travels in the interior of Africa, Lander, charmed as he says by the very sound of the word "Africa," and impelled by his inborn love of adventure, offered to accompany the former officer in a second expedition to that continent, notwithstanding the efforts of all his friends to dissuade him. Amongst these may be mentioned Mr. George Croker Fox, who offered Lander, by way of a counter temptation, a more lucrative post in South America. However, Lander's proposal was gladly accepted by Clapperton, and the adventurous youngster remained with his employer up to the hour of the Captain's death at Soccatoo, in the interior, in April, 1827.

He then made his homeward-way, alone, by land to Badagry on the coast, and arrived at Portsmouth with Clapperton's papers in April, 1828, much debilitated by fevers contracted during his long sojourn in a pestiferous climate.

In the December of the following year Richard Lander published a most entertaining account of his travels, dating the first part of the introduction to the book "Truro, Oct. 29th, 1829." (To this work is prefixed a portrait of Richard Lander in his eastern travelling costume.)

Now comes his most important voyage of discovery. Having undertaken, under the auspices of the Government, a second expedition to West Africa, not only with a view to commerce, but also in the hope of doing something which should lead to the suppression of the slave trade and of offering up human sacrifices; he embarked with his brother John in the merchant vessel "Alert" at Portsmouth, on the 8th January, 1830. He says the party went out "with the fixed determination to risk everything, even life itself towards the final accomplishment of their object \* \* \* Confidence in ourselves and in the natives will be our best panoply, and an English testament our best fetish." The Colonial Secretary granted an allowance of £100 a year to Mrs. Richard Lander during her husband's absence, and the traveller was himself to receive a gratuity of

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\* Major Colebrook was one of the Royal Commissioners of inquiry into the state of the British Colonies.

£100 on his return to England. The little expedition arrived at Cape Coast Castle on the 22nd February, 1830, and was conveyed thence on board H.M.'s Brig "Clinker" to Accra, where they landed on the 22nd March. On the 17th June, after a toilsome and dangerous journey overland, they reached Boussa on the West bank of the Niger, the place where it will be remembered Mungo Park met with a similar fate to that which was ultimately to befall Lander also. Thence they ascended the river to Yaoorie, a distance of about 100 miles; and this place, the extreme point of the expedition, they reached on the 27th June. On the 2nd August they returned to Boussa, where they embarked in canoes on the Niger in order to descend the stream—led by an acute instinct to consider that such a method must at last solve the mighty problem—though of course in utter uncertainty as to whether the stream might lead them.

As they proceeded difficulties and dangers increased. At Kirree they were plundered and cruelly illtreated, and at Eboe they were made prisoners by the Negro King, who demanded a large sum for their ransom, which, after long delay was procured. At length they reached the mouth of the Nun branch of the Niger; and on the 1st December, 1830, they were put on shore at Fernando Po: and ultimately, after first visiting Rio Janiero, they reached Portsmouth on the 9th June, 1831. So triumphant a result naturally excited the public interest; and it is stated that Murray, the eminent publisher, offered the Landers 1000 guineas for their papers; the offer was accepted, and the task of blending the brothers' two journals into one, and of constructing a map of their route, having been performed by Lieut. Beecher, R.N., the work, in 3 volumes, was published in 1832 as No. 28 of the Family Library, and has been translated into French, German, Dutch, and Swedish. For his valuable discoveries Richard Lander received from the Royal Geographical Society its first annual premium of 50 guineas, presented by the King.

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Commerce with the rich interior of Africa at last seemed practicable; and accordingly, with this view, early in 1832, several Liverpool merchants formed a Company, and arranged a trading expedition up the Niger, which was placed under the direction of

Richard Lander. This expedition consisted of two iron steam vessels, the Quorra ("Shining River") of 145 tons, and the Alburka ("Blessing") measuring only 55. They were accompanied as far as the Gulf of Guinea by a brig laden with coals for the steamers, and a variety of articles for presents or barter. The little squadron sailed from Milford Haven on 25th July, 1832, and reached Cape Coast Castle on 7th Oct. After innumerable mishaps, and fearful prostrations by illnesses caused by the unhealthy climate, but having succeeded in tracing the Niger (this time *upwards*) for a considerable portion of its course, Lander returned for a short time to Fernando Po for further supplies of Cowries,\* &c., leaving the steamers in charge of Surgeon Oldfield.

Having obtained what he required he started on his return voyage, which has been described as follows :—

Early in 1834 Lander left Fernando Po in the "Craven" cutter, with four hundred pounds worth of goods, to rejoin the Alburka. On arriving at the Nun mouth of the Niger he quitted the "Craven," and with his companions began ascending the river in two canoes of different sizes. They were all in excellent spirits. With them were two or three negro musicians, who, when the labours of the day were over, cheered their countrymen with their instruments, to the sound of which they danced and sang in company, while the few Englishmen belonging to the party amused themselves with angling on the banks of the stream; thus, stemming a strong current by day, and resting from their toil at night, Lander and his little band totally unapprehensive of danger, and unprepared to overcome or meet it, proceeded slowly up the stream. At some distance from its mouth they met King Jacket, 'a relation of King Boy, one of the heartless and sullen chiefs who rule over a large tract of marshy country on the banks of the Brass River. This personage was hailed by our travellers, and a present of tobacco and rum was offered him: he accepted it with a murmur of dissatisfaction, and his eyes sparkled with malignity as he said in his own language—"White man will never reach Eboe this time." This sentence was immediately interpreted to Lander by a native of the country, a boy, who afterwards bled to death from a wound in the knee; but Lander made light of the matter and attributed King Jacket's prophecy (for so it proved to be) to the petulance and malice of

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\* Cowries are small shells, the medium of exchange with the natives.

his disposition. Soon, however, he discovered his error ; but too late to evade the danger which threatened him. On ascending as far inland as sixty or seventy miles, the Englishman approached an island near Ingiamma, and the progress of the larger canoe was effectually obstructed by the shallowness of the stream. Amongst the trees and underwood which grew on this island, and on both banks of the river in its vicinity, large ambuscades of the natives had previously been formed, and shortly after the principal canoe had grounded, its unfortunate crew, busily occupied in endeavouring to heave it into deeper water, were saluted with irregular but heavy and continued discharges of musketry. So great was Lander's confidence in the sincerity and good will of the natives that he could not at first believe that the destructive fire by which he was literally surrounded was anything more than a mode of salutation they had adopted in honor of his arrival. But the Kroomen who had leaped into the boat, and who fell wounded by his side, convinced him of his mistake, and plainly discovered to him the fearful nature of the peril into which he had fallen so unexpectedly, as well as the difficulty he would experience in extricating himself from it. But, encouraging his comrades with his voice and gestures, the traveller prepared to defend himself to the last ; and a loud and simultaneous shout from his little party assured him that they shared his feelings, and would follow his example. Meanwhile, several of the savages having come out from their concealment, were brought down by the shots of the English :—but Lander, whilst stooping to pick up a cartridge from the bottom of the canoe, was struck near the hip by a musket ball. The shock made him stagger ; but he did not fall, and he continued cheering on his men. Soon, however, finding his ammunition expended, himself seriously wounded, the courage of his Kroomen beginning to droop, and the firing of his assailants instead of diminishing become more general, he resolved to attempt getting into the smaller canoe, afloat at a short distance, as the only remaining chance of preserving a single life. For this purpose, abandoning their property, the survivors threw themselves into the stream, and with much difficulty (for the strength of the current was enormous) most of them succeeded in accomplishing their object. No sooner was this observed by the natives in ambush than they started up and rushed out with wild and hideous yells ; canoes that had been

hidden behind the luxuriant foliage which overhung the river were, in an instant, pushed out into the middle of the current, and pursued the fugitives with surprising velocity; while numbers of people, with savage antics and furious gesticulations, ran and danced along the beach, uttering loud and startling cries. The Kroomen maintained on this occasion the good reputation which their countrymen have deservedly acquired: the lives of the whole party depended on these men's energy and skill, and they impelled the slender bark through the water with unrivalled swiftness. The pursuit was kept up for four hours; and poor Lander, with only wet ammunition, and with no defensive weapons whatever, was exposed to the straggling fire, as well as the insulting mockery of his pursuers. The fugitives, however, gained on their pursuers, and when they found the chase discontinued altogether, Lander stood up, *for the last time*, in the canoe, and being seconded by his remaining associates, he waved his hat and gave a last cheer in sight of his adversaries. He then became sick and faint from loss of blood, and sank back exhausted in the arms of those who were nearest to him. Rallying shortly afterwards, the nature of his wound was communicated to him by Mr. Moore, a young surgeon from England, who had accompanied him up the river, viz., that the ball could not be extracted; it had worked its way into the left thigh, and Lander felt convinced that his career would soon be terminated. When the state of excitement to which his feelings had been wrought gave place to the languor which generally succeeds powerful excitement of any kind, the invalid's wound pained him exceedingly, and for several hours afterwards he endured, though with calmness, the most intense sufferings. From that time he could neither sit up, nor turn on his couch: and while he was proceeding down the river in a manner so melancholy, and so very different from the mode in which he was ascending it only the day before, he could not help indulging in mournful reflections; he talked much of his wife, his child, his friends, his distant home, and his blighted expectations. It was a period of darkness, distress, and sorrow to him; but his natural cheerfulness soon regained its ascendancy over his mind, and freely forgiving all his enemies, he resigned himself into the hands of his Maker. At length, having succeeded in escaping down the stream, Lander reached Fernando Po on the 27th of January. After his arrival he was doing so

well, that, on the very day previous to his death, which occurred on the 6th of February, 1834, he took food with appetite, and no doubt was entertained of his recovery. But on that day mortification of the wound set in, and all hope was abandoned. So rapid was his prostration, that he died soon after midnight, having given such directions respecting his affairs as the shortness of the fatal warning permitted. While on his sick bed, every needful and possible aid was afforded him. In the airiest room of Colonel Nicholl's residence, receiving the unremitting attention of that humane and gallant officer (the Governor of Fernando Po), with the best medical assistance, and the most soothing services, his pains were alleviated and his spirits were cheered. He was conscious of his approaching dissolution, talked with calmness to those around him, and anticipated the termination of his career with composure and with hope. His body was laid in the grave at the Clarence Cemetery amid the vivid regrets of the whole population, who accompanied the funeral.

An account of this voyage, which Lander had promised should be his *last*—though he did not anticipate its *fatal* termination—was published by Messrs. Laird and Oldfield, the only two surviving officers of the expedition, in 1835, though I have been obliged to obtain the foregoing account of the attack at Ingiamma, and the death of Richard Lander, from other sources.

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The subject of these notes seems to have been in every sense the life and soul of the expedition, and the French writer Lanoye tartly pointed out, that (at the time of his writing) poor Lander's grave in the cemetery of Fernando Po was undistinguished by any monument, nor do I know whether or not this omission has even yet been rectified. "A solitary palm tree" says Baikie,\* "marks the spot where this heroic traveller and most intrepid pioneer of civilization fell,"—but the village itself has, I believe, been moved about a quarter of a mile further up the river.

The Royal Geographical Society, however, has not been unmindful of Lander's claim to a place in the front rank of discoverers, and has placed in the Chapel Royal, Savoy, a

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\* Baikie's Niger, 1854.



stained glass memorial window, with the following inscription:—

"In memory of Richard Lemon Lander, the discoverer of the source of the Niger, and the first Gold Medallist of the Royal Geographical Society. He was born at Truro, in 1804, and died in Island of Fernando Po in 1834, from wounds inflicted by the natives. This window is inserted by her Majesty's permission by some of his relations and friends, and by some of the Fellows of the Royal Geographical Society."

His native place has not forgotten his fame, as the Doric column surmounted by his statue at the top of Lemon Street testifies. The plate on the foundation stone bore this inscription:—"To honour the enterprise and sufferings of the brothers Richard and John Lander, natives of this town, and to commemorate the early fate of Richard, who perished on the Quorra, *Ætat* 30." And his name has been given to two places on the Niger, which I have marked on the chart. That he did not forget his Cornish home is clear from his having named an Island on the river "*Truro Island*," and one of the high hills on its banks, "*Cornwall Mountain*."

A writer in the *Annual Biography and Obituary* for 1834 says of him that "Richard Lander was of short stature, but he possessed great muscular strength, and a constitution of iron. No stranger could help being 'struck (as Sir Joseph Banks was with Ledyard) with the breadth of his chest, the openness of his countenance, and the restlessness of his eye.' He was gifted in an eminent degree with that passive courage which is so requisite a qualification in an African traveller. His manners were mild, unobtrusive, and highly pleasing, which, joined to his cheerful temper, and ingenuous handsome countenance, rendered him a favorite with every one that knew him, by most of whom he was beloved in the fullest sense of that word."

So greatly was Richard Lander beloved by the untutored Africans, that at various places in the interior where he had remained some time, at Katunga, Boussa, Yaorie, and other places, numbers of the inhabitants ran out of their huts to embrace him on his leaving their towns, and with hands uplifted, and eyes filled with tears, they blessed him in the name of their god.

The "*Literary Gazette*" for 3rd May, 1834, had the following observations on Lander's death:—"Thus has another sacrifice to African discovery been made: a man whose character was of the highest human stamp. Calm and resolute, steady and fearless,

bold and adventurous, never did there exist a more fit instrument for the undertaking of such exploits as those which have shed a lustre over his humble name. We cannot express the sorrow with which the sad calamity has filled us—it is a deep *private* affliction, and a lasting *national* regret.”

A pension of £70 a year was granted by the Government to Lander's widow, and a donation of £50 to his daughter; a sum of eighty guineas which had been collected in Truro (with a view to presenting the Landers with a piece of plate) was diverted towards the cost of erecting the Lander column.

I do not know that I can conclude these imperfect remarks better than by quoting the following touching letter—I believe the last he ever wrote—as an illustration of the amiable, unselfish character of the subject of this brief memoir:—

To Surgeon Oldfield,  
Aburka Steamer,  
River Niger.

River Nun,  
Jan. 22, 1834.

Dear Sir,

Having an opportunity of writing to you by King Boy (who will give it to King Obie to forward to you) I will avail myself of it. I was coming up to you with a cargo of cowries and dry goods worth £450, when I was attacked from all quarters by the natives of Hyammah, off the 4th Island from Sunday Island (eighty-four miles from the mouth of the Nun). The shot were very numerous both from the island and shore, Mrs. Brown and child were taken prisoners, whom I was bringing up to her husband, as well as Robert the boy. I have advanced King Boy money to go and purchase them; and the vessel will call here immediately, as I am going to Fernando Po to get *the people's* wounds attended to.

We had 3 men shot dead: Thomson, second mate of the cutter, one Krooman, and one Cape Coastman. I am wounded, but I hope not dangerously, the ball having entered close to the “bottom of the spine,” and struck the thigh bone: it is not extracted yet. Thos. Oxford is wounded in the groin, two Kroomen wounded dangerously and one slightly. I am sorry to say I lost all my papers and everything belonging to me, the boat and one canoe; having escaped in one of the canoes barely with a coat to our backs, they chasing us in their war canoes; and all our cartridges being wet we could not keep them off. They attacked us at 3 p.m. on the 20th January, and left us at 8 at night. We pulled all night and reached the cutter on the 21st. We are now under weigh for Fernando Po.

I remain, Your most affectionate Friend,

R. L. LANDER.

XXVI.—*Rural Notes, Parish of Kea.*—by T. A. CRAGOE,  
F.R.G.S.

[ABSTRACT.]

SEPTEMBER 1st, 1879.—The oyster fishery on these shores has greatly fallen away during the last quarter of a century, and the stories told by old fishermen relating to the once rich beds below Woodbury, seem now almost fabulous.

Some two years since, a landslip on the shore line, close to our cottage, revealed a vein of oyster shells, retreating into the land and traversing the cliff horizontally about half way up, which would be some 15 feet vertically above high water mark. It occurred to me at the time whether, at some remote date, this might not have been the mean level of the river bed, and however wild the thought may at first seem, it was afterwards somewhat sustained by a further discovery of apparently the same stratum in a landslip on the shore further down.

December 10th.—This past summer has been the wettest perhaps within living memory. Do two or more ungenial seasons generally follow each other? Witness the two dreadful springs of 1770 and 1771, as recorded by Gilbert White, and the two wet summers of 1817 and 1818.

In Cornwall this has been a most extraordinary season for nuts. We never knew such an abundance, and never remember wheat so shrivelled in ear; and yet there is an ancient saying that nuts and wheat go together. Many are the traditions relating to the common hazel nut, and so far back as the days of Virgil the promise of a fruitful nut crop was thought to herald a bountiful wheat-harvest.

January 12th, 1880.—This Christmas the ivy berries have been very imperfectly formed; not the full round clusters of glossy beads, with which dusted in flour, the rustics were wont to welcome in old Father Christmas. Having never noticed this defect at Christmas-tide before, we impute it wholly to the unprecedented wet and cold summer.

The north roof of our old thatched barn has been covered with

a perfect forest of Cup or Chalice Moss, *Lichen Pyxidatus*, Lin.; some of the cups goblet-shaped, and others more nearly resembling the deeper wine glass, but all unusually large, and plentifully besprinkled with their specific pale lead-grey powder.

This luxuriant crop of moss is undoubtedly due to the wet summer.

June 1st.—This spring has been noted for the decay of garden trees,—cherry, pear, apple, &c. Indeed, many showed tokens of incipient decay so early as last summer, when we thought them unfavourably affected by the ungenial season.

Our grass fields have been very backward this spring, lacking warm, moist weather, yet the different grasses are now in vigorous bloom, and the present week will perhaps afford the best opportunity for marking their varieties. It seems strange that two staple British grasses should be somewhat rare in Cornwall. Seven years since I procured from London, seeds of Sheep's Fescue, *Festuca Ovina*, and laid down to permanent pasture an upland meadow, and there to-day the Sheep's Fescue is in full bloom,—it has even reached an adjoining field, but I verily believe it can be found nowhere else in the Parish of Kea. I enclose a specimen for the table, accompanied by a few spikes of Foxtail, *Alopecurus Pratensis*, which I came upon in a field near the ancient village of Trevelmond, in April last. It is the first of the kind I ever saw in the county, and the bald culms and soft silky spikes will accord with the "*glabrum cum pilis longiusculis in spica*" of Ray. It might be interesting to know whether any of our members who have traversed from sea to sea, and penetrated the last parish in "The Rocky Land of Strangers," returning upon their tracks, may have found these two varieties of the great grass family in more profusion than has fallen to my experience.

XXVII.—*Tokens of Cornwall*—PART III.—BY R. N. WORTH,  
Corresponding Member.

IN 1874 I had the pleasure of laying before the Royal Institution of Cornwall a list of tokens belonging to this County, giving, so far as the 17th century tokens were concerned, a total of 90, which I regarded as certain, and 8 as probable Cornish coins; while Mr. Boyne assigned to Cornwall 41 only. In that list were included the descriptions of 29, which up to that date had been unpublished. In 1876 I was enabled to add to my former list 6 other tokens before unnoted. I have now to complete the century by describing 4 more.

One of these, which is in my own possession, is of great interest from the rarity of its form. Instead of being round it is heart shaped, the only instance of the occurrence of that form at present known for the West of England. It is a half-penny issued by George Whitford of Liskeard, who, I find by Mr. Allen's history of that town, was in 1660 imprisoned for preferring to spend the prayer time of Sunday, January 13, at the house of Thomas Mounce, the Quaker.

Another of the four is remarkable as giving us an earlier date by four years than that of any previously known dated Cornish token.

Stratton and Padstow, too, were not before recorded as having issued tokens.

LISKEARD.

97. O. GEORGE. WHITFORD IN \*—\* HIS \* HALF PENY. G.W.\*  
R. LISKEARD \* IN CORNEWAL \*—Arms, a chevron between three woolcombs (? detrited) in shield.

This is the largest 17th century token belonging to the county, and is heart shaped. There is likewise a variety of 23 Benjamin Chapman, with a "rose" in place of the Mercers' Arms.

PADSTOW.

98. O. PETER SWYMMER—1668.  
R. IN PADSTOWE —P.G.S.

STRATTON.

99. O. JOHN \* \* CANN—The Mercers' Arms.  
R. OF STRATON 1652—I.C.

TRURO.

100. O. HENRY BYRGAS—a blazing star.  
R. IN. TREWBOW. 1657—H.A.B.

The last three are farthings.

XXVIII.—*The Lanhadron Inscribed Stone*.—(By REV. W. IAGO, B.A., Westheath, Bodmin, Member of the Council of the Royal Institution of Cornwall, and an Hon. Sec. for Cornwall of the Society of Antiquaries, London.)

IN Cornwall, although many ancient sepulchral stone pillars, some altar-slabs, cross-shafts, fonts, and a church foundation-stone bearing inscriptions have, at various times, been discovered, no ancient *inscribed*\* horizontal *Base* of a cross has hitherto been known to exist in the county.

Inscribed stones of such a form are very rare. Only one is shewn by Professor Hübner, in his "*Inscriptiones Britanniae Christianae*," as occurring in the British Isles—and that is at Friars' Carse in Scotland.

One, however, in Cornwall has at last been identified. It is by the roadside on Nunnery Hill, Lanhadron, in the parish of St. Ewe. Until now it has neither been figured nor described. This is not surprising considering its awkward and nearly inaccessible position—for it is almost entirely hidden from view.

The Lanhadron landowner is Mr. John Tremayne, of Heligan. He has long known that there was an inscription on the stone, for local tradition asserted it—although none of the letters were in sight. My thanks are due to him for information concerning it, and also to Mr. Gillard (to whom he referred me) for the following copy of the words which the people in the neighbourhood *erroneously* believe to be cut upon the stone:—

LINE ON A CROSS AT NUNNERY HILL.

"I am no stick, but I'm a stone;  
They that pass by, let me alone.  
I am a mark from town to town;  
They are to blame, who pull me down."

---

\* It has been asked whether the Penzance Market Cross was not formerly on an Inscribed Base, but it does not appear to have been—for Blight, when he states that it was removed from the centre of the Market-place to another site, in 1829, adds—"Near the base of the reverse side the following inscription was then found:—"Hic procumbunt corpora piorum." From this account the legend would seem to be cut on the shaft of the cross and not on the base. With regard to the words themselves it is interesting to note that they are very similar to an inscription on marble in the Church of St. Allyre, mentioned in Dr. Petrie and Miss Stokes's work on *Christian Inscriptions in Ireland* (Vol. 2, p. 148):—"Hic requiescunt corpora sanctorum, quorum nomina Deus scit."

Mr. Gillard adds that the late Mr. Thomas Stephens, quoting these lines, wrote as follows, in July, 1873, to Mr. Roberts:—

“The towns alluded to were thought to be St. Austell and Mevagissey. Before the cross was thrown down, at all funerals from that part of the parish, the corpse was rested there, having first been carried round it.”

With regard to the throwing down of the cross and the imbedding of the base in the earth, the following is Mr. Stephens's account:—

“A farmer then living at Bosue was said to be accused of committing the outrageous act, during one night, under the impression that a large sum of money was concealed under it, but I don't think that any reliable information was ever obtained who really did it. It was thought that nothing was found. Before my remembrance part of the pillar had been taken away, and also the cross that stood on the top of it.”

One can hardly suppose that anything like the foregoing four lines of modern rhyme were ever cut upon it. It is of course possible that in late times they may have been placed on what remained of the cross-shaft, with the object perhaps of checking its further demolition, but it is far more likely that no such words were ever there. They seem to be purely traditional, and probably were composed by some one merely to account for existing letters which at the time could not be read.

I will now proceed to describe the stone and what is upon it. My attention was first called to it by Mr. John Currie, of the Ordnance Survey, and the Rev. J. W. Murray. Subsequently (on the 29th of April, 1879) Mr. Currie took me to see it. It lies on the brow of Nunnery Hill, sheltered by a hedge and almost wholly buried in the ground. Being contiguous to the road and only its front edge being visible, the stone does not show its true form, and might easily be mistaken for a curb, step, or recumbent gate post. Before the land was enclosed by hedges the base with cross rising from it must have been conspicuous for some distance around.

Previous to my arrival Mr. Currie had very kindly cleared away the earth from the upper part of the stone, so as to facilitate my examination of it. With him I descended into the pit so formed, and, with his assistance, took rubbings of the inscrip-







tion. The stone slopes backward steeply into the ground, and is lowest at one corner:—the excavation made under it by the treasure-seeker having caused it to sink in that direction.

It is a heavy base, apparently of granite, without any remains now of cross-shaft. The form of it was intended to be a square. In the centre is cut a mortise which is oblong, and extends in depth about half-way through the thickness of the stone. Surrounding this mortise or socket continuous double lines are cut on the top of the stone, following its form and being nearly parallel with the sides. Between these lines is the inscription.

Most of the letters are much abraded, but a few of them are quite legible, and these are sufficient to indicate beyond doubt the language, style, and period to which they belong. The word "Crucem" is quite clear. It is written in these characters upon the stone —

C Y V C E M

After a careful examination of the legend and a comparison of the several sketches and rubbings, which I made on the spot, I think the words are the following:—

ALSUE CURAVIT H' CRUCEM P' ANIMA SUA.

Some portions are almost entirely obliterated—consequently it is very difficult to read the inscription. The letters are rather more than 3 inches in height. The characters are those which were in use during the Anglo-Saxon period. They are of course of Roman origin. No runes are mixed with them in this instance, the language adopted for the inscription being Latin and not Anglo-Saxon.

The lettering and wording resemble in several particulars some parts of the inscriptions on the following, viz.:—The Camborne altar-slab (" + Leuiut jussit hec altare pro anima sua.") The Tintagel Cross brought from Trevillet, which I deciphered for Sir John Maclean's "Trigg Minor" ("Matheus, Marcus, Lucas, Joh:—" Ælnat + fecit ha'c crucem p' anima su'.") The St. Cleer other-half stone ("Doniert rogavit pro anima") and the Lanherne\* cross brought from Roseworthy in Gwinear.

\* Having succeeded in reading its inscription, I hope to figure it and describe its peculiarity in a future number of the Royal Institution Journal.



The Lanhadron base is smoothly cut and somewhat polished by wear. As will be seen by the Plate (in which I have drawn it to scale) the inscription seems to commence upon the longest margin—where the lines are made to follow an accidental sloping off or rounding of one corner of the stone—next to the road. The base is about 4 feet square, but the dimensions of the sides vary. (The front edge measures 4 feet 5 inches, the back about 4 feet and the other sides about 3 feet 10 inches.) The thickness in front is about 1 foot 7 inches. The mortise, too, is irregular, but is about 1 foot 6 inches long, rather more than 1 foot wide, and 9 or 10 inches deep.

After our examination of the stone it became necessary to replace the earth upon it before nightfall, in consequence of its being beside the public road, therefore to arrive at a final verification of the legend (which would be desirable) a further exhumation would be requisite. Comparing the inscription with others, it seems to belong to the period ranging from the 8th to the 10th century. It was wrought apparently about a thousand years ago.

It is satisfactory to be able to add that Mr. Tremayne and Mr. Gillard have both offered to do all in their power to preserve the stone and its inscription from injury, even if it should be deemed advisable to place it in a better position. Henceforth this ponderous cross-base must be reckoned amongst the genuine ancient Inscribed Stones of Cornwall.

#### APPENDIX.

It is hazardous to meddle with derivations, yet the subject is tempting. Concerning the personal name *ALSUE*, if that be the correct reading, we may note that *ALSI* is a name which occurs in connection with Cornwall in Domesday Book, and the late Rev. Dr. Bannister conjectured that it was equivalent to the Anglo-Saxon *ÆLSIG* or *ÆLSIGE*—a name of frequent occurrence in the Bodmin Manumission proceedings in the 10th century.

Further, we may observe that there are farm places named Bosue, Polsue, and Lavalsœ (variously spelled) near the Lanhadron stone: and Dr. Bannister conjectured with regard to Lavalsœ or Lavalsea that it derived its name from some one who had originally enclosed it. If in *Lavalsœ* we have the personal

name *Alsue* compounded, with the prefix *Lan*, "the sacred enclosure," as Bannister suggests, a clue may be afforded to the place of residence of the founder of this ancient cross. Mr. Currie further informs me that the site of the Nunnery was on this very land of Levalsa.

Alsue, Alsi, *Ælsige*, should also be compared with *Ælself* and *Ælnat*—the names of the founders of the Inscribed Stones formerly at Castlegoff and Trevillet, and also with the name commencing with *Al* (given as *Alroron* by the late Rev. Dr. Borlase) on the stone at St. Blazey Gate, Biscovey.

**XXIX.**—*Ancient Paper Water-marks found in Bodmin Church Building Accounts and other Old Documents.*—By REV. W. IAGO, B.A., Bodmin (Hon. Sec. for Cornwall of the Society of Antiquaries, London.)

**I**N 1469-72, Bodmin Church was re-built. The accounts of the receipts and expenditure were written at the time upon the leaves (since detached) of a "Paper Book" still in existence.

Whilst revising a copy of the somewhat decayed entries (for publication by the Camden Society under the editorship of the late Rev. J. J. Wilkinson), I observed that some of the original sheets contained distinct *Papermarks*. No one else having described them, I here proceed to do so and to figure them :—making at the outset some general remarks upon the subject of such symbols.

Important proofs have sometimes depended upon what have at first seemed mere trifles. Slight indications overlooked by many have revealed much to the careful observer. Concealed evidence has fortunately lain in the very texture of certain things and this evidence when elicited has often astonished and has at times convicted those who have had its testimony all the while before their eyes—whilst they have been as it were blind to its significance, through carelessness or inability to appreciate it. Water-marks in paper are objects of this class. Forgery has more than once been detected by their means, and they have enabled the antiquary to judge of the ages of undated manuscripts. They have checked the imitation of old documents and the tampering with new ones.

In determining disputes concerning the authenticity and genuineness of writings, these signs when *unaccompanied* by a date are especially useful, provided the marks can be identified by experts as having been employed only at particular times and under certain conditions, for the absence of visible date tends to throw the dishonest person off his guard, and then the mere device or pattern in the paper, which he may have regarded as of no consequence, becomes a trap and betrays his fraud.

It is scarcely necessary to explain that the colorless or transparent marks in paper, called Water-marks, are really Wire-marks produced in the manufacture. A wire design in conjunction with a sieve of straight or woven wires is so arranged that when the paper-pulp is brought in contact with it, to drain and consolidate into a sheet of paper, the wire device produces its own likeness by simple impression, for the pulp if level on the upper surface, must lie less thickly where each tracing of wire is than it does between the wires. Thus a transparency is observable in those parts of the paper which have rested on the wires, and the design is indelibly produced.

Different paper-marks have been adopted at different times according to circumstances. The student of history therefore finds in them confirmatory indications of national changes as well as peculiarities illustrating a variety of other matters.

The history of the invention of paper, its formation from papyrus and other substances, and its being brought into common use, need not be here described, and brief must be the reference to the great impetus which was given to its manufacture by the introduction of printing.

One of the *oldest* paper-marks is formed in single line of wire and represents a circle with a cross rising from it. It was in use as early as 1301. This emblem of christianity planted on the earth is called the orb and cross, or the mound of christian sovereignty, and a similar device—more expanded—is one of the *latest* paper-marks, for it now occurs on the English Post Office 2½d. stamp.

Postage-stamps, bank notes, and cheques afford proof that much attention is bestowed on marking monetary paper in the present day. Each Penny Postage Stamp is water-marked with a crown. Across every three of the Half-penny Stamps the word "half-penny" in small current hand may be observed; and even the blank margins of sheets of stamps display distinctive words wrought in the substance of the paper. In order to carry the principle yet further and make a mark which shall be still more conspicuous and unalterable, complete perforation before use is now frequently adopted for ballot-papers, stamps, and cheques, expressing date, ownership, or value.

But to return to the old paper water-marks. In the *Archæologia* (Vol. XII, p. 114.) *Saturday Magazine* (Vol. 1, p. 83),

Book of Days (Vol. 1 p. 532), and other works, we see figures of several of them, and we are told that the papers anciently made in the low countries shew a variety of such devices—many of them being the badges of noble families whose tenants fabricated the paper.

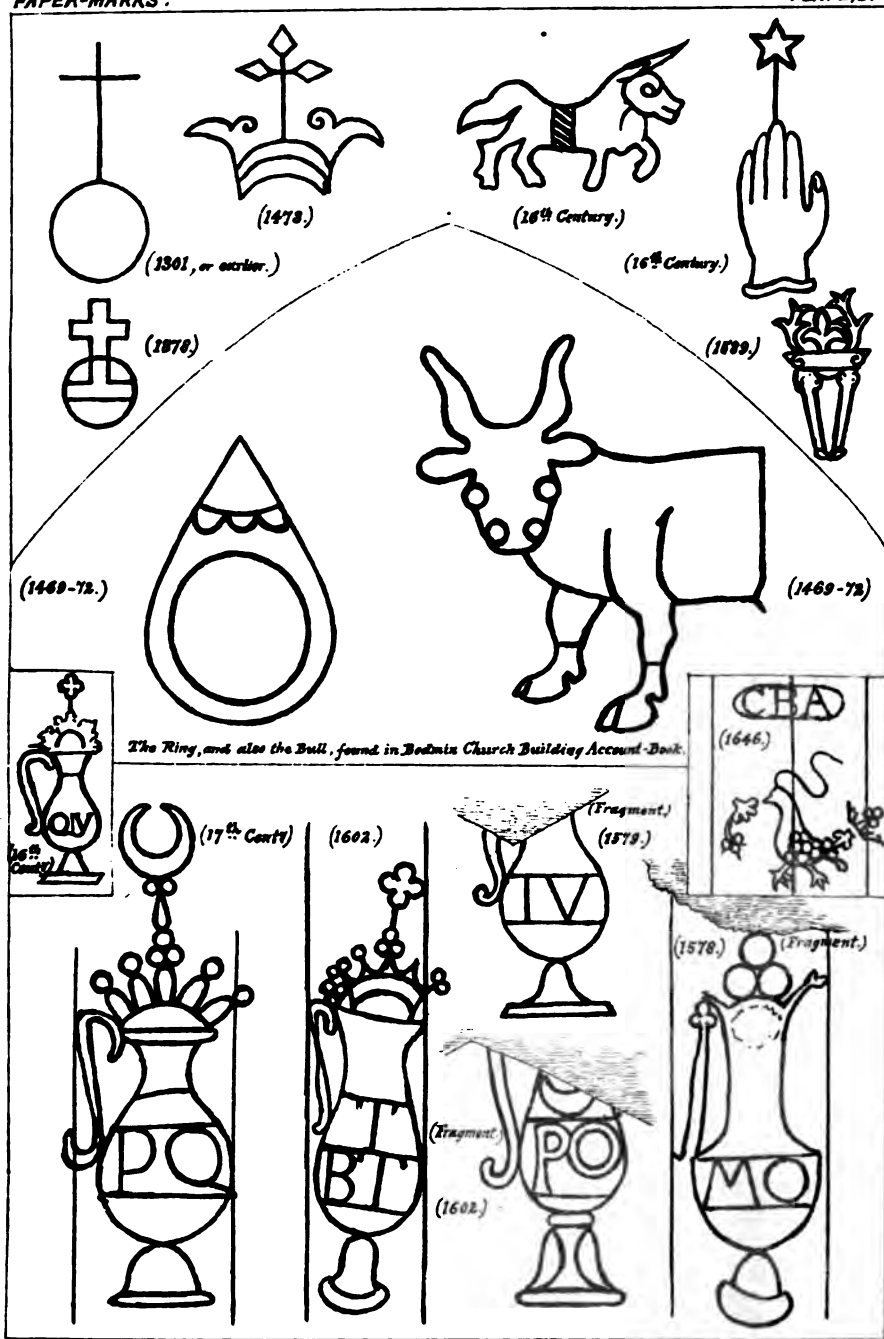
In 1349 the letter P stood for Duke Philip. Afterwards P or Y appeared, and these conjoined represented the initials of Philip the Good, Duke of Burgundy, and Ysabel his wife, daughter of the King of Portugal. They were married in 1429. For 116 years the letter P remained in use as a national paper-mark, but other symbols of the House of Burgundy also appeared, particularly the single fleur-de-lys, the unicorn, the anchor, and the bull's head—the bull being typical of power. All these were regarded as badges of the family.

The excellence of the Dutch paper has never been surpassed. The late Rev. S. Denne, F.S.A., has stated that the ox-head, sometimes surmounted by a star, is found in the paper on which Faust printed some of his ancient books. "It was," he added, a favourite paper-mark, and perhaps as ancient as any of the "Caput Bovis" embellishments which were much in request."

Again, we read that the marks on the paper used by Caxton and other early printers (engraved by Ames in his *Typographical Antiquities*) consisted of the ox-head and star, the P, the Shears, the Hand and Star, &c.

The semi-decayed book at Bodmin, containing the Church Building Account for 1469—72 (time of Edward IV), which (as I have stated) was the cause of my writing this paper, was used by the scribe a few years before printing was introduced into England, and it contains the following Paper-marks, viz. :—"a couped demi-bull statant guardant," and "a finger-ring set with a pointed gem." The marks occur in the centre of pages which measure  $12\frac{1}{4}$  by about  $8\frac{1}{2}$  inches. The marks are not all from the same mould, as they vary slightly. The Bull I found on three leaves of the book, the Ring on five, six other leaves were without device. I forwarded tracings of the Bull and Ring to friends at the Public Record Office and British Museum, but those to whom I wrote could give no further information bearing upon them.

The paper was brought from abroad. All the oldest paper used in England was foreign, for it is stated that paper was not manu-



W. LAGO S.A.

## Marks in Hand-paper, Tdt-paper, &amp;c.

[Of the above, the first Orb is from an Engraving in Book of Days, I. 533. The Orb beneath it is now used by the Post Office. The Crown is from an Engraving in Archaeologia XII. Plate XV. All the other Figures are at Bodmin. The Ring, the Bull, and 17th Cent. Plagon, are of the original sizes. The other Figures are reduced.]





factured in this country till the reign of Henry VIII, when John Tate set up a mill at Hertford, using as his mark, a wheel or double circle enclosing a star.

Here may be mentioned the well-known fact that almost every term connected with paper and books is a tradition of what they were at first rather than a description of what they are now. In the words folio, leaf, paper, bible, library, we trace derivatives which commemorate some of the various substances employed in early ages for the reception of written characters. In the word volume we are reminded of the old method of rolling up a scroll of manuscript, or "roll of a book." So, too, in the various names applied to papers of certain sizes or qualities we have references to the distinctive water marks the makers originally allotted to them. Hand-paper was so called from the mark of a hand being in it. Pot-paper was named from its water-mark being a flagon. Foolscap-paper was so styled because sheets of that size were adorned with a jester's head in cap and bells. Post-paper which was suitable for letters bore a post-horn or bugle as its device. And whilst these names have continued to be used the devices and other matters which gave rise to them have long ago been varied or quite changed. Till a comparatively late period the professed fool was a member of most of the noble households. His dress differed but slightly in the old foolscap paper-marks, but in modern times foolscap paper has usually been marked with a Cap of Liberty elevated on a pole held by a seated figure of Britannia or by a Lion rampant.

In my search for paper-marks I have examined all the principal ancient papers preserved in Bodmin :—the Archives of the Corporation, and the oldest documents in the Probate Court of the Archdeaconry ; they having been made accessible to me through the courtesy of those who have them in charge. I found a great number of devices, but the majority of them agreed so well in style with the very similar ones of corresponding age engraved in the books I have mentioned, that it is unnecessary to figure many of them now.

On an undated fragment (concerning "pryestes" and "old wr'tinges delyvered to the prior," &c.) appears, as a mark, a hand or glove surmounted by a mullet or star of five points. This kind of device was long in use—commencing in the 14th century or earlier.

On another fragment (which describes one of the Priors as "a grete mideler with blake and whyte tynne") is a clumsy figure of a girded unicorn. Devices like these were used in the 16th century.

An ancient list, without date (giving the names of the members of the glovers' guild of St. Petrock) is marked with an initialled flagon. Pot-paper was Dutch, and was extensively used from the 14th century to later times.

Most of the old wills in the Probate Court are also marked with a flagon or pot. The oldest dated sheet of paper which bears a distinct device, remaining among them, appears to be that of the Will of John Beall, of Lanteglos by Fowey, written in 1578 (July 20). In this instance the paper-maker's initials on the flagon are M. O.

Another document in the collection, written in 1579 (June 10) and attached to a still older Will,—that of "Richard Wearen of Gullvall," 1578 (March 15), has on the flagon V. I.

If read from the other side of the paper—the flagons being reversed—these two sets of initials would appear as O.M. and I.V.

In the Will-papers of "Agnis Joselyn of Kellington" widow, dated 1602 (Feb. 13) the flagons are marked P.O. and {  $\frac{T}{A}$ .

I found many other flagons with different letters, and a great number of other devices, such as a bird (probably intended for a dove with olive-branch) a bunch of grapes, a crowned shield charged with a bear passant on a bend. This last was used in 1682.\*

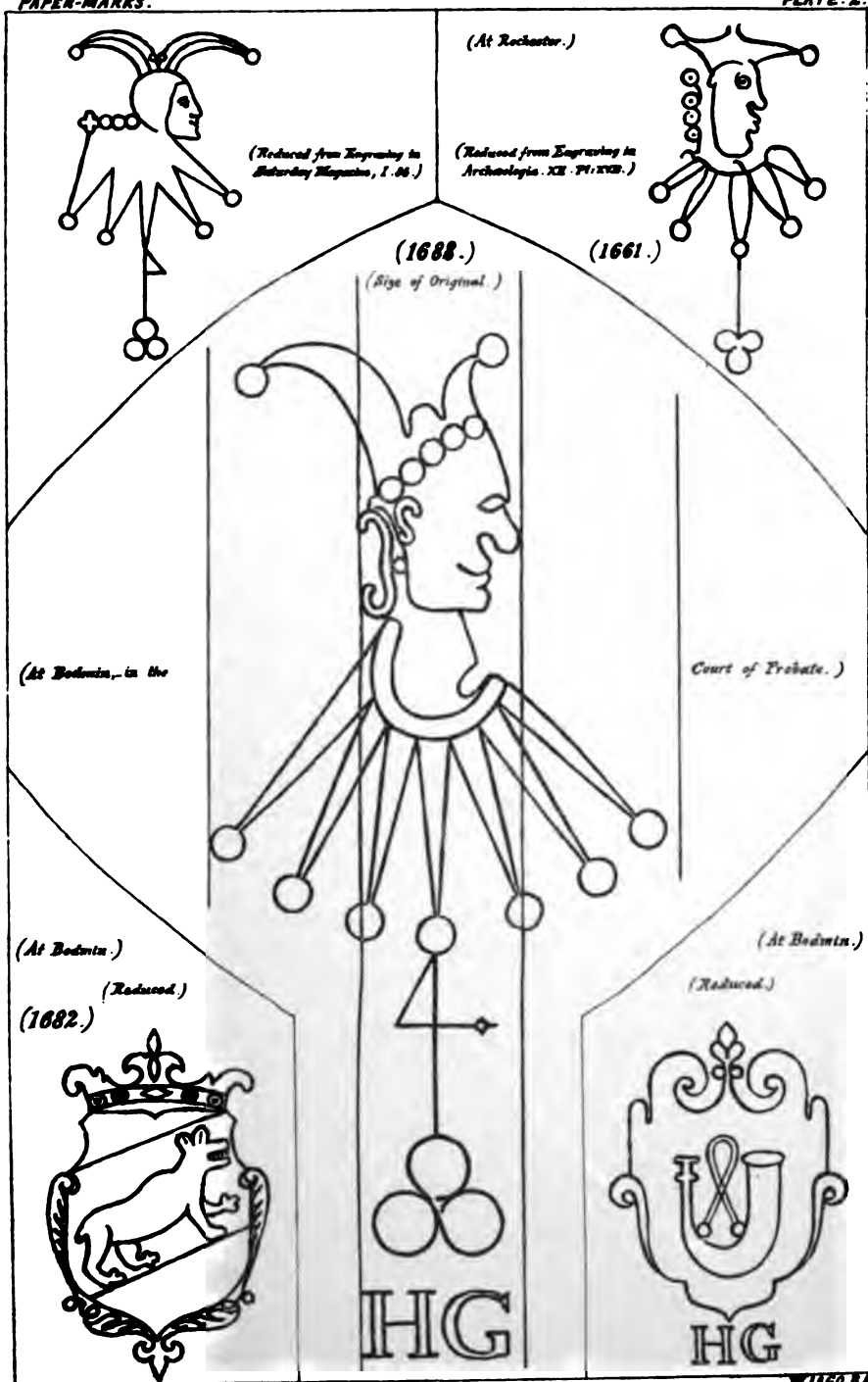
On a piece of foolscap, written upon in 1688, I found a good example of the mark of the jester's head, as generally in use in the 17th century—a copy of this I annex, with some others for comparison.

Thus then, does the fabric of paper support or deny the allegations made by its written contents shewing whether it be

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\* The figure of the Flagon surmounted by a crescent, which appears in the Plate, occurs on a paper the date of which is lost. It contains these words:—

"Mr. Richard Tregose being in an assembly of 2 or 3 hundred p'sons at the least, with a loud voyce, to the disgrace and gt. hinderance of my Ministry, affirmed yt. I taught false doctrin; and being demanded in what, he answered yt. god by his omnipotency could not doe all things." It is endorsed:—"Mr. Sy[. . . .] Instructions against Mr. Tregose."





probable or not, that the writing was executed at the time it claims to have been ; thus too, may approximate dates be ascertained when the record of them has been omitted or lost : and the method adopted for arriving at the true information contained in the water-mark's tell-tale testimony concerning documents is that which may often be applied with advantage in judging many a deed of another kind. It consists in the simple process of "holding it up to the light."

These remarks concerning the papers of olden time, lead one also to reflect on the changes which have been effected in other writing materials :—the stylus, the wax, the calamus or reed, the carefully compounded inks, and the other instruments employed—not forgetting the drying sand. Many manuscripts of comparatively very recent date retain the glittering particles of prepared sand which were scattered on the writing, when it was wet, to dry it. Some of the grains still adhere to the letters, and the wooden dredge or sand-sprinkler (resembling a pepper-caster) with perforated top of saucer-like form, for throwing out and receiving back the loose sand, serves to keep in mind the usage of the time when superfluous ink was not removed by the application of an absorbing pad.

The sand-box presented with these observations to the Museum at Truro, was used with other "stationery" in a Government Military Office some years ago, answering the purpose of blotting paper.

XXX.—*Recent Mineralogical Analyses from the Laboratory of the Royal Institution of Cornwall*, by J. H. COLLINS, F.G.S.

DURING the past four years I have made a good many analyses of minerals and mineral products in this laboratory, and I think it may be interesting to the members generally to have before them, in a compendious form, the results of those investigations which especially relate to Cornish products.\*

The analyses to be here recorded, forty-two in all, of which only sixteen have as yet been anywhere published, may be classed as follows.

*New Minerals*—(4 analyses.)

*Mineral Analyses*—(10.)

*Rock Analyses*—(18.)

*Miscellaneous Analyses and Observations*—(4 analyses.)

The above investigations were of course made on substances specially chosen as homogeneous, and as free from foreign matter as possible.

To these I have added a selection from a large number of commercial analyses,—specially chosen on account of their local interest.

*Commercial Analyses*—(6.)

#### NEW MINERALS.

The new Cornish minerals now known as Henwoodite, Enysite, Duporthite, and Penwithite, are all somewhat rare, and only of scientific interest. They were first quantitatively analysed and defined in this laboratory. As they have already been fully described in the *Mineralogical Magazine*,† I will merely give their chemical composition and chief physical properties here.

**HENWOODITE.**—A beautiful blue mineral much resembling turquoise, which occurs in small globular masses, on an impure

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\* In making these analyses, it is right to state that I have in some cases been assisted by my son, H. F. Collins.

† Henwoodite, vol. I, p. 11; Enysite, *ibid* p. 14; Duporthite, *ibid* p. 226; Penwithite, *ibid* vol. III, p. 89.

phosphate and oxide of iron, at West Phoenix Mine, near Liskeard. My first specimen came from Capt. Simmonds, of Liskeard, but it was so small that I was unwilling to use any of it for analysis. Sometime after, Dr. Le Neve Foster made a partial qualitative analysis of it before the blowpipe, and I then set to work to make a complete analysis, the result of which is given below in column *b*.

Its composition is as follows:—

	<i>a</i>	<i>b</i>	<i>c</i>
Water ... ..	19.50	17.10	18.71
Oxide of Copper ... ..	7.00	7.10	7.77
Alumina ... ..	not det.	18.24	19.96
Phosphoric Acid ... ..	48.20	48.94	53.56
Lime ... ..	—	0.54	—
Silica ... ..	—	1.37	—
Peroxide of Iron ... ..	—	2.74	—
Loss ... ..	—	3.97	—
		100.00	100.00
Specific Gravity .. ..	2.67		

*a* is an incomplete analysis, *b* a complete analysis, and *c* the same analysis after eliminating the lime, silica and peroxide of iron, which I have shewn (*loc. cit.*) to be mere impurities. The formula  $2\text{Al}_2\text{O}_3 + 2(\frac{1}{2}\text{CuO} \cdot \text{H}_2\text{O})_2 + \text{P}_2\text{O}_5 + 5\text{H}_2\text{O}$  agrees very well with these corrected results. The mineral is named after our late President, Wm. Jory Henwood, F.R.S.

ENYSITE.—This is a pretty bluish-green mineral, of somewhat recent origin, which occurs in one of the caves beneath the old Quay at St. Agnes, in crusts from  $\frac{1}{32}$ nd to  $\frac{1}{4}$  an inch in thickness. It was first given to me by Dr. Le Neve Foster, who made a partial qualitative analysis of it before the blowpipe. The complete analysis is as follows:—

Moisture ... ..	14.04	...	...	—
Water lost at 150° C. ... ..	18.21	...	...	—
Do. lost at red heat ... ..	7.17	...	...	—
				39.42
Sulphuric Acid ... ..	...	...	...	8.12
Silica ... ..	...	...	...	3.40
Alumina ... ..	...	...	...	29.85
Peroxide of Iron ... ..	...	...	...	trace
Oxide of Copper ... ..	...	...	...	16.91
Lime ... ..	...	...	...	1.35
Carbonic Acid ... ..	...	...	...	1.05
Chlorine ... ..	...	...	...	trace
Soda ... ..	...	...	...	trace
				100.10
Specific gravity ... ..	...	...	...	1.59



Omitting the carbonate of lime, and regarding the silica (which is in a soluble condition) as replacing alumina, this corresponds pretty well with the formula  $\text{CuSO}_4 + \text{CuH}_2\text{O}_2 + 3\text{Al}_2\text{H}_2\text{O}_3 + 12\text{H}_2\text{O}$ . It is named after my good old friend, our late member, Mr. John Samuel Enys.

**DUPORTHITE.**—This is a greenish to brownish-gray fibrous mineral, which occurs in veins in the serpentinous rock at Duporth. It had been taken for asbestos, but the following analysis shews that it has little relation to that substance.

I append an analysis of typical asbestos from the Tyrol for comparison (by Scheerer.)

	Duporthite.			Asbestos.		
Silica ... ..	...	...	49.21	...	...	57.50
Alumina ... ..	...	...	27.26	...	...	—
Ferrous Oxide ... ..	...	...	6.20	...	...	3.88
Magnesia ... ..	...	...	11.14	...	...	23.09
Lime ... ..	...	...	.39	...	...	13.42
Soda ... ..	...	...	.49	...	...	—
Water ... ..	...	...	3.90	...	...	2.36
Do. hygroscopic ... ..	...	...	.68	...	...	—
			99.27			100.25

Regarding half, the more obstinately retained half, of the water as basic, it agrees tolerably well with the formula  $3(\text{Al}_2\text{O}_3, \text{SiO}_2) + 5(\frac{1}{2}\text{Mg}, \frac{1}{2}\text{Fe}, \frac{1}{2}\text{H})\text{O}, \text{SiO}_2$ .

**PENWITHITE.**—This is a dark amber to reddish-brown vitreous and transparent mineral, having a highly conchoidal fracture, and very brittle.

Its composition I found to be as follows :—

Specific Gravity ... ..	...	...	...	...	...	2.49
Water ... ..	...	...	...	...	...	21.80
Silica ... ..	...	...	...	...	...	36.40
Manganous Oxide ... ..	...	...	...	...	...	37.62
Manganic anhydride ... ..	...	...	...	...	...	trace
Ferrous Oxide ... ..	...	...	...	...	...	2.52
Uranous Oxide ... ..	...	...	...	...	...	.30
Copper ... ..	...	...	...	...	...	trace.
						98.64

Reckoning the iron and uranium as replacing the manganese, this agrees very fairly with the following formula :— $\text{MnSiO}_3 + 2\text{H}_2\text{O}$ .

It occurs at Wheal Owles, St. Just-in-Penwith, hence the name Penwithite.

## MINERAL ANALYSES.

Of these I have 10 to report, most of them belonging to Cornish or Devonshire minerals, which had not previously been analysed, although foreign specimens had been so examined.

GRAMENITE FROM SMALLACOMBE, IN DEVON.—This is a grass-green, clay-like mineral, which formerly occurred in considerable quantity, with nodules and irregular bands of brown iron ore, at Smallacombe, near Haytor.

Its composition is as follows:—

Water (hygroscopic) ... ..	11.58	...	...	...
„ evolved at 150° C. ... ..	7.22	...	...	...
„ „ by ignition ... ..	6.61	...	...	...
		...	...	25.41
Silica ... ..		...	...	39.70
Peroxide of iron ... ..		...	...	21.94
Alumina ... ..		...	...	10.92
Lime... ..		...	...	.14
Alkalies and loss ... ..		...	...	1.89
				100.00

These numbers I have shewn\* to agree fairly well with the formula  $3(\text{Fe}_2\text{H}_2\text{O}_6, 3\text{SiO}_2) + 2(\text{Al}_2\text{H}_2\text{O}_6, 3\text{SiO}_2) + 15\text{H}_2\text{O}$  and with the general formula  $\text{R}_2\text{H}_2\text{O}_6, 3\text{SiO}_2$ , and  $3\text{H}_2\text{O}$ .

MONTMORILLONITE.—The only Cornish specimen of this mineral which I have ever seen was brought to me from Great Retallack Mine, in Perranzabuloe.

Its composition is as follows:—

Silica ... ..	47.9
Peroxide of iron ... ..	1.2
Alumina ... ..	27.1
Water ... ..	23.0
Potash and loss ... ..	.8
	100.0

This agrees very closely with the formula  $\text{Al}_2\text{H}_2\text{O}_6, 3\text{SiO}_2 + 3\text{H}_2\text{O}$ , which is the same as the general formula of Gramenite, and all the other members of the Chloropal Group.†

CHRISTOPHITE.—This is a very dark brownish-black variety of highly ferriferous, and slightly stanniferous blende. It was

\* Mineralogical Magazine, vol. 1, p. 69.

† See remarks on Gramenite, and the Chloropal Group of Minerals, *Min. Mag.* 1, 67.

brought to me by Mr. Alfred Davies, formerly of St. Agnes, and although it had not then been analysed, it had already received two new names. However, its analysis soon shewed that it was really the mineral known as Christophite; from its occurrence at the St Cristophe Mine, near Johann-Georgenstadt. Hitherto it had not been known to occur in Cornwall.

Its composition is as follows :—

Zinc	...	...	...	...	...	37.6
Iron	...	...	...	...	...	26.2
Tin	...	...	...	...	...	1.4
Sulphur	...	...	...	...	...	34.7
						99.9

I have since found that a great deal of the blende of North and West Cornwall should be referred to Christophite, although it is not always stanniferous.

The next seven mineral analyses have not yet been published in any way.

GILBERTITE.—This is a pretty greenish-yellow micaceous mineral, often mistaken for talc, which is almost invariably associated with Cassiterite wherever this latter occurs in granite. Two of my specimens were obtained by myself, at Stenna Gwynn, near St. Stephens; the third, from St. Just, was given to me by Dr. C. Le Neve Foster.

The analyses are as follows :—

	1	2	3
Silica ... ..	45.10	44.90	48.12
Alumina ... ..	36.00	35.80	34.90
Ferrous Oxide ...	1.10	.70	.65
Manganous Oxide ...	trace	trace	trace
Lime ... ..	1.50	1.60	.31
Magnesia ... ..	.90	.50	.22
Potash with a little soda	11.40	10.40	9.71
Lithium ... ..	trace	trace	trace
Fluorine ... ..	.54	.72	1.42
Water ... ..	3.70	4.21	3.21
	100.24	98.83	98.54

ASBESTUS FROM THE LIZARD DISTRICT.—This specimen, which I received from Dr. Jago, is brownish in colour, pinkish when powdered, has a silky lustre, is compact, and takes a fine polish. It is nevertheless fibrous in structure. The thin fibres are

fusible before the blowpipe to a dark globule. Specific gravity 2.82. It is believed to have been obtained near Cadgwith.

Water—lost at 120° C.	...	...	...	...	1.38
„ „ by ignition	...	...	...	...	2.10
Silica	...	...	...	...	53.25
Alumina	...	...	...	...	6.61
Ferric Oxide	...	...	...	...	6.00
Lime	...	...	...	...	.10
Magnesia	...	...	...	...	20.89
Potash	...	...	...	...	8.24
Soda	...	...	...	...	trace
					98.57

WHITE MINERAL FROM THE LIZARD DISTRICT.—This is a white mineral occurring in fissures of the serpentine rocks of the Lizard district. I had it from Mr. Alfred Davies, a member of the Miners' Association. It has a glistening appearance somewhat like talc, is flaky in structure, but in some places exhibits a structure somewhat like *Eozoon Canadense*; lustre pearly, infusible, but exfoliates before the blowpipe, gives off a little water in the matrass. Sp. gr.=2.42. It yields:—

Water, lost at 120° C	...	...	...	...	1.36
„ on ignition	...	...	...	...	2.03
Silica	...	...	...	...	58.30
Alumina and Iron Oxide	...	...	...	...	2.39
Lime	...	...	...	...	none
Magnesia	...	...	...	...	20.92
Potash	...	...	...	...	13.24
					98.24

This is a very remarkable substance, and I hope to be able to obtain more of it hereafter for further investigation.

WHITE MINERAL FROM TINTAGEL.—This was given me by the Rev. Canon Rogers, in 1877. It occurred in fissures of the slate rocks, and had a soapy feel. The composition was as follows:—

Water, in Dessicator	...	...	...	1.6	} 3.8
„ at 120° C.	...	...	...	2.2	
Carbonic Acid	...	...	...	...	8.1
Silica	...	...	...	...	37.8
Alumina	...	...	...	...	33.5
Lime	...	...	...	...	11.9
Ferrous Oxide	...	...	...	...	1.5
Soda	...	...	...	...	.5
					97.1

This appeared to be homogeneous, but the analysis shews it to be a mixture.

**ASBESTUS FROM CLICKER TOR.**—This was whitish in appearance, and fibrous; the mineral occurred in fissures of the serpentinous rock of Clicker Tor, near Menheniot, the fibres parallel to the fissure. It was given me by the Rev. Canon Rogers. The following is the analysis :—

Water	...	...	...	...	...	3.82
Silica...	...	...	...	...	...	53.49
Peroxide of Iron	...	...	...	...	...	5.80
Alumina	...	...	...	...	...	5.83
Magnesia	...	...	...	...	...	16.39
Lime	...	...	...	...	...	14.43
						<hr/> 99.75

This mineral is evidently a lime-magnesia asbestos. It had been regarded as a Chrysotile.

#### ROCK ANALYSES.

Of these I have 19 to report, most of which are hitherto unpublished.

**SERPENTINE, PORTHALLA.**—This is a dark greyish-green rock with a somewhat granular appearance; its analysis is as follows:

Water	...	...	...	...	...	12.83
Silica	...	...	...	...	...	38.60
Magnesia	...	...	...	...	...	33.63
Alumina	...	...	...	...	...	.10
Ferric Proto-peroxide	...	...	...	...	...	11.55
Nickel	...	...	...	...	...	trace
Alkalies and loss	...	...	...	...	...	3.31
						<hr/> 100.00

This analysis shews that it is a true serpentine, only somewhat highly charged with magnetic iron-ore, of which a great deal is visible under the microscope, when viewed in thin sections. It readily takes a good polish.

**SERPENTINE, GERRANS BAY.**—This is a very dark rock of extremely similar appearance to the last; it had the following composition :—

Water	...	...	...	...	...	12.39
Silica	...	...	...	...	...	36.05
Ferric Oxide and Alumina	...	...	...	...	...	9.95
Lime	...	...	...	...	...	trace
Magnesia	...	...	...	...	...	33.79
Potash	...	...	...	...	...	4.21
Soda	...	...	...	...	...	.68
						<hr/> 97.07

SERPENTINOUS ROCK, DUPORTH.—This rock has been fully described in the *Mineralogical Magazine*.\* I here give its analysis. Specific gravity 2·64.

Water	...	...	...	...	...	8·65
Silica	...	...	...	...	...	37·09
Titanic Acid	...	...	...	...	...	trace
Phosphoric Acid	...	...	...	...	...	·21
Alumina	...	...	...	...	...	19·90
Ferric Oxide	...	...	...	...	...	15·54
Ferrous Oxide	...	...	...	...	...	2·02
Manganous Oxide	...	...	...	...	...	trace
Lime	...	...	...	...	...	trace
Magnesia	...	...	...	...	...	15·90
Potash	..	...	...	...	...	trace
Soda	...	...	...	...	...	trace

99·31

In the paper referred to I give reasons for regarding it as an altered diorite.

SUPPOSED SERPENTINE FROM ST. CLEER.—This rock is traversed by beautiful veins of pearly-white asbestos. Its analysis shews that it cannot be regarded as a serpentine on account of its low percentage of magnesia, but it certainly represents a serpentinous change in an hornblendic rock.

Silica	...	...	...	...	...	45·22
Alumina and Ferric Oxide	...	...	...	...	...	30·09
Lime	...	...	...	...	...	8·00
Magnesia	...	...	...	...	...	10·19
Potash	...	...	...	...	...	1·12
Water	...	...	...	...	...	5·20

99·82

ST. VEEP (SUPPOSED) SERPENTINE.—This is still less to be regarded as a serpentine than the last, magnesia being almost entirely absent, as the following analysis shews. It is in fact merely a highly ferruginous and much consolidated clay or lithomarge.

Moisture	...	...	...	...	...	11·76
Silica	...	...	...	...	...	33·30
Alumina	...	...	...	...	...	14·61
Ferrous Oxide	...	...	...	...	...	30·81
Ferric Oxide	...	...	...	...	...	6·93
Magnesia	...	...	...	...	...	1·89
Lime	...	...	...	...	...	trace

99·30

\* Vol. 1, p. 222.

The rock has much the appearance of a serpentine when polished, and has been described as such.\*

**POLYPHANT STONE**—I am not aware that this interesting serpentinous rock had ever been analysed until I undertook its analysis some little time since. Its composition is as follows:—

		a.	b.	c.
Water given off in dessicator	94			
" " by ignition	12.22	13.16	13.25	14.54
Silica ... ..		36.90	34.75	
Alumina ... ..		11.80	12.42	
Ferrous Oxide ... ..		3.56	3.50	
Ferric Oxide ... ..		12.00	9.10	
Lime ... ..		2.80	4.12	
Magnesia ... ..		15.03	18.58	
Potash ... ..		3.64	3.62	
Soda ... ..		trace	trace	
		28.89	99.34	

It may certainly be called a serpentinous rock, but it is very different to a true serpentine. I have not yet seen the quarry, but the general appearance of the rock is that of a consolidated volcanic ash, in which a certain amount of serpentinous change has taken place. It has been largely used in the ancient Churches of Cornwall, especially in the eastern part of the County, for fonts, tombs, enrichments, &c.

**CATACLEUSE STONE**.—This is a dark doleritic rock from near Padstow, much used in the churches of North Cornwall for fonts, tombs, window dressings, &c. It is often mistaken for Polyphant stone, but is a good deal harder. Its composition is as follows:

Silica ... ..	45.96
Alumina ... ..	15.02
Ferrous Oxide ... ..	6.33
Ferric Oxide ... ..	8.03
Lime ... ..	6.37
Magnesia ... ..	18.44
Moisture ... ..	.22
	100.37

A second specimen yielded 45.24 p.c. of silica. This rock may be said to be serpentinous, but certainly not serpentine. The last five rocks appear to have undergone a serpentinous change to a certain extent. I believe Prior Vivian's tomb, in Bodmin Church, is composed of this stone.

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\* *Trans. Roy. Geol. Soc. Corn.*, vol. vii.

**HORNBLENDIC ROCK, ST. MEWAN.**—This has been described in the *Mineralogical Magazine*.\* It is the rock which I regard as having been changed into a serpentinous rock at Duporth. My analysis is as follows :—

Specific gravity	...	...	...	...	...	2.86
Water	...	...	...	...	...	.80
Silica	...	...	...	...	...	50.24
Titanic Acid	...	...	...	...	...	trace
Phosphoric Acid	...	...	...	...	...	.20
Alumina	...	...	...	...	...	19.19
Ferric Oxide	}	...	...	...	...	15.30
Ferrous Oxide						
Manganous Oxide	...	...	...	...	...	trace
Sulphur	...	...	...	...	...	trace
Lime	...	...	...	...	...	5.02
Magnesia	...	...	...	...	...	.93
Potash	}	...	...	...	...	7.21
Soda						
						98.89

**STRIPED ROCK, PORTHALLA.**—This rock consists of alternate bands of dark-green hornblende and creamy-white felspar. It is now largely used in repairing the roads of this district, being extremely hard and tough.

Moisture in dessicator	...	...	...	...	.48	}	3.88
„ by ignition	...	...	...	...	3.40		
Silica	...	...	...	...	...	45.43	
Alumina	...	...	...	...	...	19.93	
Ferrous Oxide	...	...	...	...	...	3.98	
Ferric Oxide	...	...	...	...	...	5.66	
Lime	...	...	...	...	...	11.98	
Magnesia	...	...	...	...	...	10.34	
						101.20	

The following is an analysis of the hornblende after careful separation :—

Water in dessicator	...	...	...	...	.51	}	3.71
„ by ignition	...	...	...	...	3.20		
Silica	...	...	...	...	...	44.01	
Alumina	...	...	...	...	...	11.95	
Ferrous Oxide	...	...	...	...	...	2.84	
Ferric Oxide	...	...	...	...	...	8.58	
Lime	...	...	...	...	...	10.51	
Magnesia	...	...	...	...	...	16.15	
Alkalies and loss	...	...	...	...	...	2.25	
						100.00	

\* Vol. I, p. 222.



This is very near the composition of many Pargasites, except that the proportion of peroxide of iron exceeds that of the protoxide.

SCHIST CONTAINING FISH-REMAINS, LANTIVET BAY.—These schists are supposed to be of Lower Devonian age. In the specimen chosen for analysis there were only traces of organic remains visible. There was no effervescence with HCl. The analytical results were as follows:—

Insoluble (Silica and Silicates) ... ..	81.65
Lime ... ..	1.55
Magnesia ... ..	1.12
Phosphoric Acid (P <sup>2</sup> Os) ... ..	1.20
Carbonic Acid ... ..	trace
Ferrous (with a little Ferric) Oxide ... ..	11.12
Alumina (soluble in HCl.) ... ..	2.48
Moisture ... ..	.62
	<hr/>
	99.74

SILICEOUS SCHIST, WITH CORALLINE MARKINGS, FROM LOWER NEWHAM.—Believed to be of Lower Silurian age.

	a	b
Silica ... ..	66.81	69.68
Ferric Oxide and Alumina... ..	27.21	23.28
Magnesia ... ..	.75	1.17
Lime... ..	.08	.15
Phosphoric Acid ... ..	trace	—
Moisture ... ..	5.62	6.11
	<hr/>	<hr/>
	100.47	100.59

Although this rock is full of coral-markings (Favosites?) and must once have been part of a coral reef, *i.e.* a limestone, yet it will be remarked that only .15 p.c. of lime is present, so great has been the change in the chemical composition of the rock since its first formation.

GRAY QUARTZITE FROM GERRANS BAY.—This well-known Quartzite is of Lower Silurian age, and contains casts of brachiopoda and other fossils of that period. Its analysis is as follows:—

Silica ... ..	91.925 p.c.
Alumina ... ..	7.65
Ferric Oxide ... ..	.30
Lime ... ..	.12
Magnesia ... ..	trace
	<hr/>
	99.995

**LIMESTONE FROM GERRANS BAY.**—This is a very dark-coloured rock, occurring in narrow bands in the dark slate of Gerrans Bay. It contains microscopic organisms in abundance.

Silica	...	...	...	...	...	6.67
Alumina and Ferric Oxide	...	...	...	...	...	2.55
Magnesia	...	...	...	...	...	1.71
Lime	...	...	...	...	...	43.45
Phosphoric Acid	...	...	...	...	...	traces
Carbonic Acid	...	...	...	...	...	39.42
Moisture	...	...	...	...	...	5.69
						99.49

**ELVAN—(fine-grained) from Newham Quarry.\***

Water (hygroscopic)	...	...	...	...	...	.24
„ combined	...	...	...	...	...	2.04
Silica	...	...	...	...	...	72.88
Alumina	...	...	...	...	...	14.47
Ferric Oxide	...	...	...	...	...	2.45
Manganous Oxide	...	...	...	...	...	.82
Lime	...	...	...	...	...	.10
Magnesia	...	...	...	...	...	trace
Potash }	...	...	...	...	...	7.15
Soda }	...	...	...	...	...	
Lithia }	...	...	...	...	...	trace
Fluorine }	...	...	...	...	...	
						100.15

This is a remarkably fine-grained elvan, shewing almost no porphyritic characters. It is in fact a felsite.

**ELVAN—(fine-grained), from Foxhole, in St. Stephens.†** This rock is very like the last.

The following is its composition :—

Specific Gravity	...	...	...	...	...	2.45
Water (hygroscopic)	...	...	.29	...	...	3.98
„ combined	...	...	3.39	...	...	
Silica	...	...	...	...	...	72.43
Alumina	...	...	...	...	...	18.08
Ferric Oxide	...	...	...	...	...	2.20
Lime	...	...	...	...	...	trace
Magnesia	...	...	...	...	...	trace
Manganous Oxide	...	...	...	...	...	trace
Potash and Soda	...	...	...	...	...	4.12
Lithia and Fluorine	...	...	...	...	...	traces
						100.81

\* See *Trans. Roy. Geol. Soc., Corn.*, IX, p. 227.

† *Ibid.* p. 227.

## MICA TRAP.—Trelissick Creek.\*

Specific Gravity ... ..	2.72
Water (hygroscopic) ... ..	.61
" combined ... ..	6.32
Silica ... ..	48.01
Alumina ... ..	19.20
Ferric Oxide ... ..	4.82
Manganous Oxide ... ..	trace
Lime ... ..	4.30
Magnesia ... ..	5.80
Potash and Soda... ..	10.12
Lithia and Fluorine ... ..	trace
	99.18

This is a highly micaceous rock, containing nodules of a peculiar glassy quartz. It is fully described under the name *Trelissickite*, which I think now had better be dropped, in the paper referred to.

## MISCELLANEOUS ANALYSES.

TIN CRYSTALS FROM "HARD-HEAD."—These have been fully described in the *Mineralogical Magazine*† by my friend Dr. C. O. Trechmann, who undertook their crystallographic investigation. I have placed a specimen in the Museum.

The analysis is as follows:—

Specific Gravity ... ..	6.5
Tin ... ..	98.7
Iron ... ..	1.1
Sulphur, Iron, Cobalt, and Arsenic ... ..	trace
	99.8

STANNIFEROUS DEER'S HORN.—This is described in the *Mineralogical Magazine*.‡ I give the analysis (partial) of a recent deer's horn for comparison.

	Stanniferous Deer's Horn.	Recent Fallow Deer.
Calcium Phosphate ... ..	80.04	38.0
" Carbonate ... ..	2.24	
" Fluoride ... ..	.50	
Silica ... ..	.22	
Ferric Disulphide ... ..	1.60	—
Ferric Oxide ... ..	.62	—
Stannic Oxide ... ..	2.60	—
Organic matter and loss ... ..	12.12	62.0
	100.00	100.00
Specific Gravity ... ..	2.7	1.26

\* Trans. Roy. Geol. Soc., Cornwall, ix, 227.

† Vol. III, p. 186.

‡ Vol IV, p. 116.

IRON CRYSTALS.—Some remarkable crystals of Metallic Iron were given me some time since by my friend, Mr. Amos Beardsley, F.G.S. The crystals are fully described in the *Mineralogical Magazine*.\*

The following is the analysis:—

Iron	...	...	...	...	...	93.50
Carbon	...	...	...	...	...	3.11
Silicon	...	...	...	...	...	1.35
Titanium	...	...	...	...	...	.76
Tin	...	...	...	...	...	.14
Manganese	...	...	...	...	...	trace
Phosphorus	...	...	...	...	...	.15
Loss (partly Carbon)	...	...	...	...	...	.99
						100.06
Specific Gravity	...	...	...	...	...	6.667

ARTIFICIAL EMERALD.—Some time since a good deal of stir was made about the artificial gems prepared by Messrs. Fremy and Feil. A fragment of an artificial emerald, supposed to have come from the manufactory of these gentlemen, was sent to me for analysis. The result is given below in column *a*, and in column *b* I give the analysis of a true emerald, from Muso, analysed by Schlieper, which will be seen to differ greatly from the artificial stone.

	<i>a</i>		<i>b</i>	
Silica	...	35.70	...	69.51
Alumina	...	—	...	14.49
Berylla	...	9.54	...	15.41
Lime	...	41.66	...	1.64
Iron, Chromium, and Lead,	...	trace	...	—
Alkalies and loss	...	3.10	...	—
				101.05

#### SELECTED COMMERCIAL ANALYSES.

Of these I only give six, selected either on account of the remarkable character of the material, or else because of their local interest.

BLÉNDE ORE, DUCHY PERU.—The analyses given below were fair samples of *cargoes* as sold.

\* Vol. II, p. 223.

		<i>Coarse.</i>		<i>Medium.</i>		<i>Fine.</i>
Insoluble	...	2.00	...	8.27	...	5.88
Zinc	...	42.40	...	41.67	...	39.80
Iron	...	18.00	...	15.85	...	17.84
Alumina	...	.80	...	.32	...	trace
Lead	...	.56	...	.77	...	.94
Copper...	...	1.72	...	1.16	...	1.10
Sulphur	...	33.70	...	31.26	...	33.49
Lime, Magnesia, loss	...	.82	...	.70	...	.95
		<u>100.00</u>		<u>100.00</u>		<u>100.00</u>
Silver...	...	{ 3½ ozs. per ton.	...	{ 4 ozs. per ton.	...	{ 3 ozs. } Gold per ton. } traces.

This ore is evidently a ferriferous blende, of the kind known as Christophite.

SPATHOSE IRON ORES.—The Duchy Peru sample was a fair average from a pile of many hundreds of tons. That from the Mount mine was a stone of perhaps 14 lbs. weight.

		<i>DUCHY PERU.</i>		<i>MOUNT.</i>	
		<i>Raw.</i>	<i>Calcined</i>	<i>Raw.</i>	
Ferrous Oxide	...	48.00	proto-per ox. 75.20	...	49.00
Oxide of Manganese	...	6.80	...	9.92	5.57
Lime	...	.63	...	.93	2.74
Magnesia	...	2.32	...	3.40	2.47
Sulphur	...	.43	...	.30	.20
Phosphoric Acid	...	.10	...	.15	trace
Carbonic Acid	...	36.60	...	4.20	38.44
Insoluble	...	3.60	...	5.47	2.00
Moisture and loss	...	1.52	...	.43	—
		<u>100.00</u>		<u>100.00</u>	<u>100.42</u>

I have made a very large number of analyses of other commercial products, and especially of China Clay, but I reserve the account of these for a future paper.

## THE AUTUMN EXCURSION.

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The Annual Excursion took place on Thursday, August 6th. The members assembled at the rooms of the Institution, Truro, whence a start was made at 9.30 a.m.

The first halt was made at Tresillian Bridge, the spot where Lord Hopton, the general of the Royal Army, surrendered to Sir Thomas Fairfax, the commander of the Parliamentary forces ; here is placed in front of the little Mission Chapel a wayside cross of the usual Cornish type recently found at Trehane.

From Tresillian to Probus is a pleasant drive of two miles. The Church, dedicated to St. Probus and Grace, is a plain structure, but is renowned for its exquisitely proportioned tower of late perpendicular work. The architectural features of the church were explained by the vicar, the Rev. Prebendary Barnes : it consists of chancel, nave, north chancel aisle, north aisle, south aisle, north and south porches and tower. The original altar slab with its five crosses, is inserted in the woodwork of " God's Board." The piscina of catacluse stone is of 10th century Norman workmanship, and was found in the tower with the shaft detached during the restoration. In the north wall of the chancel, is a small recess, which was uncovered at the same time ; two skulls, supposed to be those of the patron saints, were discovered in it ; they have been re-interred in a small vault beneath the altar. The base of the rood screen bears the curious, punning inscription, " Jesus hear us thy people and send us grace and good for ever." This was removed in 1723 from the old rood screen to the front of the gallery and restored again by the present vicar.

In the south or golden aisle is a brass of John Wolveden and his wife, 1514, the last male heir of that ancient family on whose

decease the estates were brought by the heiress to the Tregians of St. Ewe.

Golden, the ancient seat of the Wolvedens and Tregians was next visited. Considerable fragments of the old house still remain, but the chief interest centred in the curious, secret hiding places, concealed by a clump of evergreens on the lawn. A descent of a few steps leads to a vaulted, circular chamber, mainly underground, about 6 feet in diameter, lit by a small, deeply recessed hidden window, and with a nitch for food opposite the hinges of the door, by which the cell was closed, still remaining.

Another singular circular building is close to it, connected by some ancient masonry and brickwork. This is known as "the oven," and a passage to the air above or chimney still exists. An amusing tradition, extant, states this to be the spot where Protestants were roasted, and another states that an underground passage exists between "the dungeon" and Probus Church.

The historical interest attaching to the mansion lies in the story of the persecution of Francis Tregian, who was accused of being a recusant, and hiding a Romish priest, Cuthbert Mayne. The latter was tried and executed at Launceston, in 1577, and the former lost his estates and suffered a long term of imprisonment in the Fleet prison.

On the lawn of the old mansion, short papers were read from Mr. Walter H. Tregellas and the Rev. W. Iago, giving an account of these proceedings, and after examining the numerous other fragments of the fine old mansion house and its surroundings, and partaking of the hospitality of Mr. Woolcock, a move was made to Wolveden Entrenchment, a formidable earthwork, overlooking the Fal, fully described by Mr. H. McLauchlan, in the reports of the Institution for 1848.

The members on leaving Wolveden, proceeded by Golden Mill, —where a curious bowl, suggested to have been for use as a mortar, attracted much attention,—to Haleboat rock; here tradition states the tide once flowed, and Norden writing in 1584, says that rings of iron still existed in the rock to which he supposed boats had been tied. A strict search revealed not the slightest trace of any ring, or hole in which one could have been inserted, and from the depth at which rock is found in the valley, and the height of

the spot above high water mark, it is almost certain that the tide never flowed here in historic times.

Creed Church, which was next visited, is situated in a charming nook, and possesses several features of interest. It consists of chancel, nave, south aisle, north transept, tower and porch. In the north transept is a Norman piscina, inserted under a trefoil arch of later date, and a curious old alms box with three locks. The porch, vaulted in stone, is adorned with some well carved heads from a former building, and probably from the same spot came the small square tablet built in the south wall, bearing the symbols of the Virgin Mary, a pot and lily, and the letter M.

A hilly drive of two miles brought the party to Cuby Church, an uninteresting building, having been rebuilt in 1828. The Norman portal of the south porch and the Norman font, however, are very interesting, this latter is a representation of the symbolism of the text "*super leonem et basiliscum ambulabis; et conculcabis leonem et draconem.*" In the west wall of the church the "Nonnita stone" attracted much attention this inscribed stone records that 'Nonnita, Ercilius, and Vincatus, the three children of a Romanised Briton, Ercilius, were buried here, it is described at length by Dr. Barham, in a paper published in the *Journal of the Institution* for 1866.

Lunch awaited the party at the Oddfellow's Hall, which had been tastefully decorated for the occasion, after which having partaken of the hospitality of the vicar, the Rev. J. Reid, and inspected the site of the once formidable castle of the Pomeroyes, a start was made for St. Michael Penkivel, which was reached after a drive through some of the most varied and picturesque scenery in the west of Cornwall. The church was inspected, and is a most interesting building, consisting of chancel, nave, north and south transepts, with western tower, and south porch. The foundation stone in the chancel, the brasses and sites of the four altars, and other objects of interest were inspected. The church is described in the *Journal of the Institution* for 1864. The vicar, the Rev. A. Tomlinson, not only acted as guide over the church, but had hospitably provided refreshments at the vicarage. A picturesque drive, displaying charming combinations of woodland and water scenery, brought the party to St. Clement, where the "Isnioc stone" and the Church were inspected, and tea and coffee



hospitably provided by the vicar, the Rev. A. P. Moor, done justice to, after which a short drive through the deepening twilight brought the party to Truro again.

The thanks of the Institution are specially due to those ladies and gentlemen, who, by their courteous hospitality, did so much to render the excursion, which was favoured with a fine summer day, a success.

## INTRODUCTION.

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FOLLOWING the Catalogue of "non-metallic" Minerals, I have prepared this of the "metallic" portion of the collection, which includes many very fine specimens.

Attention may especially be drawn to the specimens of Cornish *Gold*, and especially to the fine specimen No. 1025, which heads the metallic series. *Silver* is but moderately well represented, especially as regards the productions of Cornwall.

In the *Copper* group there are very fine specimens of Native Copper from Cornwall, as well as from Lake Superior—of Cuprite, of the blue and green carbonates (Malachite and Chessylite), and of Liroconite and the other natural arseniates. Here, too, will be seen some good specimens of the rare Domeykite (Condurrite), and of the various sulphur compounds—Chalcocite, Erubescite, Chalcopyrite, Fahlerz, and Tennantite.

The *Tin* series contains a very rich assemblage of characteristic specimens—not only from Cornwall, but also from Saxony, Bohemia, Brittany, Galicia, Finland, Queensland, Victoria, New South Wales, and Tasmania. The various forms of wood-tin are very richly represented. Here, too, will be found the somewhat rare compound Stannite or Tin Pyrites.

In the *Lead* group the feathery bundles of Cerussite from Pentire Glaze, the green and yellow phosphates and arseniates, Pyromorphite and Mimetite, and the deep orange-coloured Crocoisite will be especially noticed, as well as the rare minerals Wulfenite and Vanadinite. The collection is also fairly rich in characteristic forms of Galena, and in beautiful examples of Bournonite. Then, follow fair representatives of the *Antimony*, *Bismuth*, *Arsenic*, and *Tellurium* groups; and these are succeeded by the *Iron* group, where the magnificent red hematites from Cumberland, and Göthites and Limonites (wood iron) from Restormel, will be sure

to attract attention. These are succeeded by many varieties of Chalybite, Pyrites, &c., by fair specimens of the arseniates, Pharmacosiderite and Scorodite, and by the phosphates, Vivianite, Ludlamite, Childrenite, &c.

In the *Nickel* and *Cobalt* group most of the leading species are here present, including the beautiful hair-like Millerite.

In the *Manganese* group very fine specimens of Manganite will be observed, also the new minerals Ludwigite and Penwithite.

The *Zinc* group is fairly well represented ; here we may especially mention the fine Calamines from Laurium recently presented by Mr. A. P. Vivian, M.P.

The *Uranium* group is beautiful from the presence of many lovely specimens of Torbernite. Here, too, is the new and rare mineral Uranocircite.

Large flakes of Molybdenite will be seen in the next group ; and very large and brilliant crystals and masses of Wolfram, together with unusually fine crystals in the next succeeding (*Tungsten*) group.

The *Titanium* group comes last, and contains some good specimens of rare, if not beautiful minerals.

J. H. COLLINS.

Jan., 1881.

CATALOGUE  
OF THE  
MINERALS  
IN THE MUSEUM  
OF THE  
ROYAL INSTITUTION OF CORNWALL.  
*DIVISION II.—METALLIC.*  
**Class I.—NOBLE METALS.**

Catalogue Number.	<i>GOLD GROUP.</i>
1025	GOLD.—Large piece with embedded fragments of Quartz. <i>Loc.</i> , Carnon stream works.
1026	Do. Three small irregular fragments. <i>Loc.</i> , Carnon stream works.
1027	Do. Minute grains in stream tin. <i>Loc.</i> , Carnon stream works.
1028	Do. Small grains, bright yellow colour. <i>Loc.</i> , Baldonas, Sutherlandshire. <i>Obs.</i> , presented by Mr. W. J. Henwood.
1029	Do. A round lump of gold, smelted. <i>Loc.</i> , River Jumna sands. <i>Obs.</i> , presented by Mr. W. Dawe.
1030	Do. Foliated gold in Quartz. <i>Loc.</i> , California.
1031	Do. Yellow foliated mass in Tin ore. <i>Loc.</i> , Brazil. <i>Obs.</i> , presented by Lieut. Z. Andrew, R.N.
1032	Do. Foliated gold in Quartz. <i>Loc.</i> , Louisa Creek, Bathurst. <i>Obs.</i> , presented by the Rev. R. L. King.

Catalogue Number.	<i>PLATINUM GROUP.</i>
	<i>GOLD—continued.</i>
1033	Yellow specks in mica slate. <i>Loc.</i> , Central America.
1034	Do. Crystalline flakes in Quartz. <i>Loc.</i> , Australia. <i>Obs.</i> , presented by Mr. R. Tweedy.
1035	Do. Yellow specks with Quartz and Chalcopyrite. <i>Loc.</i> , Dolgelly, Merioneth. <i>Obs.</i> , presented by Capt. Robert Northey.
1036	Do. Foliated particles on Quartz. <i>Loc.</i> , Schemnitz.
1037	Do. Minute specks in dark red rock, 4 pieces. <i>Loc.</i> , Chili. <i>Obs.</i> , presented by Mr. Robert Tweedy.
1794	PETZITE—Small Crystals on granite. <i>Loc.</i> , Ham Mine, Colorado.
1369	Do. Disseminated through silver ore. <i>Loc.</i> , Colorado. <i>Obs.</i> , presented by Mr. Rd. Pearce.
1289	SYLVANITE.—Brilliant flakes in Quartz. <i>Loc.</i> , Colorado. <i>Obs.</i> , presented by Mr. R. Pearce.
	<i>PLATINUM GROUP.</i>
1038	PLATINUM.—Small grains in fine sand. <i>Loc.</i> , South America.
1039	Do. Large nugget. <i>Loc.</i> , Nischne Tajilsk, Ural.
	<i>SILVER GROUP.</i>
1040	SILVER.—Capillary and compact, in small cavities in gozzan. <i>Loc.</i> , Fowey Consols. <i>Obs.</i> , presented by Mr. J. T. Treffry.
1041	Do. Wiry masses in limestone rock. <i>Loc.</i> , Chili. <i>Obs.</i> , presented by Mr. R. Tweedy.

Catalogue Number.	<i>SILVER GROUP—Continued.</i>	
1042	SILVER—Capillary tarnished, on Quartz. <i>Loc.</i> , Huel Brothers.	
1044	Do. Capillary and massive, disseminated through Galena. <i>Obs.</i> , presented by Mrs. Chilcott.	
1046	Do. Foliated, in Quartz, with Chalcopyrite. <i>Loc.</i> , Mexico. <i>Obs.</i> , presented by Mrs. Chilcott.	
1047	Do. Capillary, in Quartz, with Chalcopyrite. <i>Loc.</i> , Mexico. <i>Obs.</i> , presented by Mr. John Chester.	
1048	Do. Capillary, in Quartz, with Pyrrargyrite. <i>Loc.</i> , Mexico. <i>Obs.</i> , presented by Mr. John Chester.	
1049	Do. Capillary, tarnished, with Smaltite. <i>Loc.</i> , Huel Herland.	
1050	Do. Small particles in Copper ore.	
1051	Do. Foliated masses in limestone. <i>Loc.</i> , Chili. <i>Obs.</i> , presented by Mr. R. Tweedy.	
1052	Do. Small capillary patches in a vein of Smaltite. <i>Loc.</i> , Huel Herland.	
1053	Do. Beautiful brilliant crystals. <i>Loc.</i> , Chili. <i>Obs.</i> , presented by Mr. R. Tweedy.	
1054	Do. White particles in Calcite. <i>Loc.</i> , Chili. <i>Obs.</i> , presented by Mr. R. Tweedy.	
1055	Do. White mass, in Calcite. <i>Loc.</i> , Lake Superior Mines.	
1056	Do. Massive, with Smaltite and Erythrite.	
1057	Do. Capillary mass. <i>Loc.</i> , Mexico. <i>Obs.</i> , presented by Mr. John Chester.	
1058	Do. Capillary, with Carbonate of Lime. <i>Loc.</i> , Columbia. <i>Obs.</i> , presented by Capt. Thomas Richards.	

Catalogue Number.	<i>SILVER GROUP—Continued.</i>
	<i>SILVER—continued.</i>
1059	Small specks in argentiferous galena, with Pyrites <i>Loc.</i> , Mexico. <i>Obs.</i> , presented by Mr. R. Tweedy.
1060	Do. Capillary, on Copper ore, with Argentite. <i>Obs.</i> , presented by Mrs. Chilcott.
1061	CHLORARGYRITE.—Small crystals on Quartz, with Malachite and Chrysocolla.
1062	Do. Small crystals in gozzan.
1063	Do. With oxide of iron. <i>Loc.</i> , Chili.
1064	Do. Large crystals, with Malachite and Jasper.
1065	Do. Small crystals in gozzan. <i>Loc.</i> , North Dolcoath Mine. <i>Obs.</i> , presented by Mr. Rd. Pearce.
1066	Do. ( <i>Buttermilchers</i> ).—Compact mass.
1067	Do. Yellow mass on Silver ore.
1068	Do. Whitish coating on a silicious rock.
1069	Do. Yellowish earthy mass.
1870	ARGENTITE.—Bright grey mass in Quartz. <i>Loc.</i> , Chili. <i>Obs.</i> , presented by Mr. R. Pearce.
1075	Do. Foliated, in manganiferous gozzan. <i>Loc.</i> , Chili. <i>Obs.</i> , presented by Mr. R. Tweedy.
1076	Do. In Calcite. <i>Loc.</i> , Chili.
1746	STEPHANITE, with Argentite. <i>Loc.</i> , Marienberg.
1799	NAGYAGITE. <i>Loc.</i> , Nagyag.
1071	PYRARGYRITE.—Large brilliant crystals with curved surfaces, and massive. <i>Loc.</i> , Hartz.
1072	Do. Large crystals on Quartz. <i>Loc.</i> , Andreasberg.

Catalogue Number.	<i>MERCURY GROUP.</i>
	<i>PYRRARGYRITE—continued</i>
1074	Massive, in Calcite. <i>Loc.</i> , Chili. <i>Obs.</i> , presented by Mr. R. Tweedy.
1795	PROUSTITE, with Pyrrargyrite. <i>Loc.</i> , Joachimsthal.
1748	NAUMANNITE. <i>Loc.</i> , Tilkerode.
1073	FREISLEBENITE.—Small crystals, with Pyrrargyrite.
1077	Do. Massive, with Pyrrargyrite. <i>Loc.</i> , Retampagos Mine, Hiendelaensina. <i>Obs.</i> , presented by Mr. W. W. Smyth. Average produce 10,000 oz. of silver per ton.)
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	<i>MERCURY GROUP.</i>
1078	MERCURY ( <i>Native Quicksilver.</i> )—Small globules in shale, with foliated Cinnabar. <i>Loc.</i> , India.
1079	CINNABAR.—Dark red, tarnished, with Quartz.
1080	Do. Dark red, with Quartz.
1081	Do. Dark-red, crystalline. <i>Loc.</i> , California. <i>Obs.</i> , presented by Mrs. Tweedy.
1082	Do. Dark-red, crystalline. <i>Loc.</i> , California. <i>Obs.</i> , presented by Mrs. Tweedy.
1083	Do. Fine crystal on massive. <i>Loc.</i> , Almaden.
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	<b>Class II—ORDINARY HEAVY METALS.</b>
	<i>COPPER GROUP.</i>
1084	COPPER.—Large piece, somewhat dendritic. <i>Loc.</i> , Lizard district.
1085	Do. Large mass, small crystals with Quartz & Cuprite.



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*COPPER GROUP—Continued.*

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	<i>COPPER—continued.</i>	
1086		Foliated, with Specular Iron and Barytes. <i>Loc.</i> , Ale and Cakes.
1087	Do.	Large plate, somewhat dendritic, with Quartz. <i>Loc.</i> , Huel Virgin.
1088	Do.	Small crystals matted together in a mass.
1089	Do.	Mass of small bright crystals.
1090	Do.	Small crystals, with Quartz and Cuprite.
1091	Do.	Thin plate, somewhat dendritic. <i>Loc.</i> , St. Just.
1092	Do.	Large dark-coloured mass. <i>Loc.</i> , Condurrow Mine.
1093	Do.	Large solid mass. <i>Loc.</i> , Lake Superior Mines. <i>Obs.</i> , presented by Mr. Uren.
1094	Do.	Tarnished mass of large imperfect crystals, with Native Silver. <i>Loc.</i> , Lake Superior Mines. <i>Obs.</i> , presented by Mr. W. M. Tweedy.
1095	Do.	Bright red crystals.
1096	Do.	Large mass of a dull appearance. <i>Loc.</i> , Botallack Mine. <i>Obs.</i> , presented by Mr. R. Pearce.
1097	Do.	Beautiful branching macles in limestone.
1098	Do.	Large imperfect crystals.
1099	Do.	Mass of small crystals. <i>Loc.</i> , Huel Buller.
1100	Do.	Large mass of imperfect crystals, with Quartz and Calcite. <i>Loc.</i> , Lake Superior Mines.
1150	Do.	Narrow strip cut out with a chisel. <i>Loc.</i> , Lake Superior Mines.
1101	Do.	Very large distorted macles.
1102	Do.	Very brilliant crystals.
1103	Do.	Large distorted macles. <i>Loc.</i> , Lake Superior Mines.

Catalogue Number.	<i>COPPER GROUP—Continued.</i>	
	<b>COPPER—<i>continued.</i></b>	
1104		Mossy aggregations of minute crystals. <i>Loc.</i> , Knockmahon Mines.
1105	Do.	Large somewhat distorted crystals.
1106	Do.	Crystals coated with Cuprite, in brilliant crystals.
1107	Do.	Large mass with Cuprite and green mammillations of Serpentine. <i>Loc.</i> , Mullion.
1108	Do.	Moss-like mass of crystals, apparently formed as a coating on some other mineral now removed.
1109	Do.	Capillary and arborescent crystals, coated with green carbonate. <i>Loc.</i> , Creegbrowse Mine.
1110	Do.	Massive, with Cuprite and Serpentine. <i>Loc.</i> , Mullion.
1111	Do.	Large polished specimen, with Cuprite and Malachite.
1112	<b>CUPRITE—</b> Mass of large dark-colored cubes. <i>Loc.</i> , Cuba. <i>Obs.</i> , presented by Mr. W. M. Tweedy.	
1113	Do.	Brilliant octahedrons, with Quartz and Native Copper.
1114	Do.	Octahedrons and cubes, with Quartz and Native Copper.
1115	Do.	Brilliant octahedrons, with Quartz.
1116	Do.	Mass of small dark-coloured octahedrons.
1117	Do.	Bright complex crystals.
1118	Do.	Octahedrons, on Cuprite.
1119	Do.	Modified octahedrons. <i>Loc.</i> , Wallaroo. <i>Obs.</i> , presented by Mr. S. Higgs.
1120	Do.	Small brilliant octahedrons. <i>Loc.</i> , Wallaroo. <i>Obs.</i> , presented by Mr. S. Higgs.

Catalogue Number	<i>COPPER GROUP—Continued.</i>
	<b>CUPRITE—continued.</b>
1121	Octahedrons, coated with Chalcocite. <i>Loc.</i> , Condurrow Mine. <i>Obs.</i> , presented by Mr. T. Joseph.
1122	Minute crystals on Quartz and oxide of Iron. <i>Loc.</i> , Knockmahon Mines.
1123	Do. Red cubes, with Quartz. <i>Loc.</i> , Cuba. <i>Obs.</i> , presented by Mr. W. M. Tweedy.
1124	Do. Brilliant octahedrons in Quartz, with Native Copper.
1125	Do. Large modified octahedrons on Quartz.
1126	Do. Brilliant cube-octahedrons on Quartz, with oxide of Iron.
1127	Do. Brilliant red minute crystals on massive Cuprite, with Native Copper.
1129	Do. Massive, passing into Chalcotrichite.
1135	Do. Massive, with Malachite. <i>Loc.</i> , Capunda, Australia. <i>Obs.</i> , presented by Mr. J. M. Williams.
1128	Do. ( <i>Chalcotrichite.</i> )—Brilliant filaments, in grey and green Copper ore.
1130	Do. Beautiful filaments in gozzan.
1131	Do. Bright-red short filaments, in Chalcocite.
1132	Do. Minute crystals on massive Cuprite.
1133	Do. Minute crystals on massive Cuprite <i>Loc.</i> , Fowey Consols. <i>Obs.</i> , presented by Mr. R. Pearce.
1134	Do. ( <i>Tile ore.</i> )—Large mass, with Malachite. <i>Loc.</i> , Wallaroo, Australia. <i>Obs.</i> , presented by Mr. S. Higgs.
1136	Do. Mass covered with minute crystals. <i>Loc.</i> , Valparaiso.

Catalogue Number.	<i>COPPER GROUP--Continued.</i>	
	<i>CUPRITE—(Tile ore)—continued.</i>	
1137	Part of vein, with Malachite walls. <i>Loc.</i> , Valparaiso.	
1138	Do. Solid mass coated with Malachite.	
1139	Earthy mass coated with Malachite. <i>Loc.</i> , Cape Mines. <i>Obs.</i> , presented by Mr. Whitley.	
1140	<i>MALACHITE—Large botryoidal mass, on Quartz.</i> <i>Loc.</i> , Condurrow Mine. <i>Obs.</i> , presented by Mr. W. M. Tweedy.	
1141	Do. Large botryoidal mass, beautifully radiated.	
1142	Do. Large hollow mass. <i>Loc.</i> , Burra Burra Mine. <i>Obs.</i> , presented by Mr. S. Higgs.	
1143	Do. Concentric concretions. <i>Loc.</i> , Australia. <i>Obs.</i> , presented by Mr. J. M. Williams.	
1144	Do. Bright green, beautifully radiated. <i>Loc.</i> , Burra Burra Mine, Australia. <i>Obs.</i> , presented by Mr. J. Joseph.	
1145	Do. Globular mass. <i>Loc.</i> , Wallaroo, South Australia. <i>Obs.</i> , presented by Mr. S. Higgs.	
1146	Do. Small polished specimen.	
1147	Do. Brilliant dark-green crystals. <i>Loc.</i> , Burra Burra. <i>Obs.</i> , presented by Mr. S. Higgs.	
1148	Do. Small radiated crystal groups.	
1149	Do. Large mammillary concretions on red oxide of copper.	
1150	Do. Stalactitic mass on tile ore.	
1151	Do. Beautiful radiated masses. <i>Loc.</i> , North Huel Basset. <i>Obs.</i> , presented by Mr. T. Spry.	

Catalogue Number.	<i>COPPER GROUP—Continued.</i>	
	<i>MALACHITE—continued.</i>	
1152	Thin layer coating black and red oxide of copper	
1153	Do.	Brilliant stellate groups, silky lustre. <i>Loc.</i> , Chessy, France.
1154	Do.	Small dark-green crystals.
1155	Do.	Large mass of rough concretions.
1156	Do.	Silky masses in red oxide of copper.
1157	Do.	Brilliant light-green mammillations, coated with dark-green.
1158	Do.	Fibrous, diverging, in red oxide. <i>Loc.</i> , Copiapo. <i>Obs.</i> , presented by Mr. J. Dennis.
1159	Do.	Light-green, with blue chrysocolla. <i>Loc.</i> , Cape Colony, South Africa. <i>Obs.</i> , presented by Mr. N. Whitley.
1160	Do.	Granular mass. <i>Loc.</i> , Chili. <i>Obs.</i> , presented by Mr. R. Tweedy.
1161	Do.	Very dark-green, botryoidal.
1162	Do.	Large mass, green mammillations, with Chessylite
1163	CHESSYLITE.—Large mass, with Malachite.	
1164	Do.	Small blue crystals, with massive Chessylite and Malachite.
1165	Do.	Very large modified prisms.
1166	Do.	Large blue crystals on massive malachite.
1167	Do.	Small brilliant crystals on massive Chessylite and Malachite. <i>Loc.</i> , Copiapo, Chili. <i>Obs.</i> , presented by Mr. R. Tweedy.
1168	Do.	Large blue prisms.
1169	Do.	Large drusy surfaces upon Malachite. <i>Loc.</i> , Chessy, France.
1170		
1171	Do.	Dark blue crystalline groups, blue internally, on Quartz.

Catalogue Number.	<i>COPPER GROUP—Continued.</i>	
	<b>CHESSYLITE—<i>continued.</i></b>	
1172		Large mass, with Malachite and Melaconite.
1173	Do.	Small crystals, with Chalcocite and Cuprite. <i>Loc.</i> , Ting Tang Mine.
1174	Do.	Nodular, crystallized and massive.
1175	Do.	Small brilliant prisms, with Malachite and Quartz.
1176	Do.	Very brilliant prisms, in a brown earthy substance <i>Loc.</i> , Chili. <i>Obs.</i> , presented by Mr. R. Tweedy.
1177	Do.	Very brilliant crystals in a cavity. <i>Loc.</i> , Copiapo, Chili. <i>Obs.</i> , presented by Mr. R. Tweedy.
1178	Do.	Brilliant crystals, on Chalcocite. <i>Loc.</i> , Copiapo, Chili. <i>Obs.</i> , presented by Mr. R. Tweedy.
1179	<b>LIROCONITE.</b> —Large and brilliant light-blue obtuse pyramids, on Quartz. <i>Loc.</i> , Ting Tang Mine.	
1180	Do.	Very brilliant greenish-blue pyramids on Quartz. <i>Loc.</i> , Ting Tang Mine.
1181	Do.	Large green obtuse pyramids on Quartz. <i>Loc.</i> , Ting Tang.
1183	Do.	Small crystals on Quartz.
1184	<b>CLINOCLASE.</b> —Curved lamellar crystals on Quartz.	
1186	Do.	Large curved lamellar crystals on Quartz.
1187	Do.	Radiated groups, very dark. <i>Obs.</i> , presented by Mrs. Chilcott.
349	Do.	Small dark crystals on Quartz.
1188	<b>CHALCOPHYLLITE.</b> —Small tabular crystals in gozzan. <i>Loc.</i> , Ting Tang.	
1189	Do.	Very large modified hexagonal tabular crystals. <i>Loc.</i> , Ting Tang.
1190	Do.	Dark green crystals, very brilliant.
1191	Do.	Beautifully modified tabular crystals.

Catalogue Number.	<i>COPPER GROUP—Continued.</i>	
	<i>CHALCOPHYLLITE—continued.</i>	
1192	Do.	Very large bright green plates.
1193	Do.	Transparent green plates.
1194	Do.	Modified tabular groups.
1195	<i>OLIVENITE—Dark-green prisms on Quartz.</i>	
		<i>Loc., Huel Unity.</i>
1196	Do.	Small crystals in botryoidal masses, on Quartz.
		<i>Loc., Huel Unity.</i>
1197	Do.	Brilliant acicular crystals, on Quartz.
		<i>Loc., Huel Unity.</i>
1198	Do.	Tarnished crystals, on Quartz.
1199	Do.	Brilliant prisms on Quartz
1200	Do.	Highly complex prisms on Quartz.
1201	Do.	Very small crystals in a cavity in gozzan.
1202	Do.	Dark-green crystals in grey killas.
1203	Do.	Very brilliant oblique prisms in gozzan.
1204	Do.	Large drusy pyramids on Quartz.
		<i>Loc., Huel Unity</i>
1205	Do.	Minute light-green prisms on Quartz.
1206	Do.	Small light-green prisms on Quartz.
1207	Do.	Small dark-green crystals in mammillary groups on Quartz.
1208	Do.	Silky fibres, with Cyanosite.
		<i>Loc., Huel Unity.</i>
1209	Do.	( <i>Wood arseniate</i> ).—Mammillary groups, radiated structure, greenish-brown.
		<i>Loc., Huel Unity.</i>
1210	Do.	Greyish-green, massive.
		<i>Loc., Huel Unity.</i>
1211	Do.	Greyish-green, massive, with small dark-green crystals.
1212	Do.	Greyish-green, radiated structure, on Quartz.
		<i>Loc., Huel Unity.</i>

Catalogue Number.	COPPER GROUP—Continued.
	<b>OLIVENITE</b> —( <i>Wood Arseniate</i> )—continued.
1213	Do. Light yellowish-green, silky lustre. <i>Loc.</i> , Huel Unity.
1214	Do. Very light yellowish-green. <i>Loc.</i> , Huel Unity.
1220	<b>LIBETHENITE</b> —Bright bluish-green crystals, with Chessylite, on Quartz.
1221	Do. Dark olive-green crystals, on Quartz. <i>Loc.</i> , Libethen, Hungary.
1222	Do. Dark olive-green crystals, on Quartz. <i>Loc.</i> , Libethen, Hungary.
1224	<b>PHOSPHOROCHALCITE</b> —Bright-green, with minute dark-green crystals, on Quartz.
1225	<b>TORBERNITE</b> —Small green tables, on Quartz. (See also under Uranium.)
1226	<b>CHALCOSIDERITE</b> —Brilliant dark-green crystals, on Quartz. <i>Loc.</i> , West Phoenix Mine. <i>Obs.</i> , presented by Capt. Jos. Hosking.
1389	<b>ANDREWSITE</b> —Small green spherules, on rich Tin-stone. <i>Loc.</i> , West Phoenix Mine. <i>Obs.</i> , presented by Capt. Jos. Hosking.
1227	<b>ATACAMITE</b> —Very large green crystallized mass. <i>Loc.</i> , Atacama, Chili.
1228	Do. Small crystals, with Cuprite and Chrysocolla.
1229	Do. Fine crystals, on Quartz.
1230	Do. Brilliant crystals. <i>Loc.</i> , Wallaroo, South Australia. <i>Obs.</i> , presented by Mr. Samuel Higgs.
1231	Do. Small crystals on massive Cuprite.
1232	Do. Minute crystals on lava. <i>Loc.</i> , Monte Rossi, Etna. <i>Obs.</i> , Found after the eruption of 1669.
1233	Do. Massive crystallized mass.
1234	Do. Small crystals on dark shale.
1235	<b>CHRYSOCOLLA</b> —Thin layer on Quartz.
1236	Do. Bluish-green, coated with minute Quartz crystals.



Catalogue Number.		COPPER GROUP.—Continued.
		CHRYSOCOLLA—continued.
1237		Bluish-green, on Cuprite and Quartz.
1238	Do.	Small specimen, with Chalcopyrite.
1239	Do.	Bluish-green, on Cuprite.
1240	Do.	Massive, dark-green, with Chalcopyrite. <i>Loc.</i> , Cumberland.
1241		HENWOODITE.—Bright-blue, globular, on ferruginous Quartz. <i>Loc.</i> , West Phoenix Mine.
1242		CYANOSITE.—Aggregated tabular crystals, on Quartz.
1243		VANADIATE OF COPPER.—Greenish radiations on Chalce- dony. <i>Loc.</i> , Rhine Mines.
1252		CHALCOCITE.—Black crystals on ferruginous Quartz.
1253	Do.	Fine crystals, somewhat tarnished, on Quartz. <i>Loc.</i> , Huel Basset.
1254	Do.	Dark acicular crystals on Quartz. <i>Loc.</i> , Carn Brea Mines.
1255	Do.	Fine drusy crystals. <i>Loc.</i> , St. Ives Consols. <i>Obs.</i> , presented by Mr. W. J. Henwood.
1256	Do.	Large macled crystals. <i>Loc.</i> , St. Ives Consols. <i>Obs.</i> , presented by Mr. W. J. Henwood.
1257	Do.	Small tarnished crystals. <i>Loc.</i> , Huel Basset.
1258	Do.	Large hexagonal tabular crystals on Chalybite.
1259	Do.	Brilliant slender prisms on Quartz, with Melanconite <i>Loc.</i> , Huel Basset.
1260	Do.	Fine tabular crystals on Quartz.
1261	Do.	Good macled prisms, tarnished, on Quartz.
1262	Do.	Macled prisms, tarnished.
1263	Do.	Tarnished crystals on Quartz.
1264	Do.	Small "nail-head" crystals. <i>Loc.</i> , Camborne Vean Mine,

Chalcocite Number	COPPER GROUP—Continued.	
	<b>CHALCOCITE—continued.</b>	
1265		Slender prisms on Chalcopyrite.
1266	Do.	Massive, steel-grey, tarnished.
1267	Do.	Fine "nail-head" crystals on Calcite.
1268	Do.	Massive, lead-grey.
1269	Do.	Massive, iron-gray.
1270	Do.	Massive, lead-gray, with Chrysocolla. <i>Loc.</i> , Valparaiso.
346	<b>DOMYKITE (Condurrite).—</b> Part of a large nodule. <i>Loc.</i> , Condurrow Mine.	
347	Do.	Part of a large nodule. <i>Loc.</i> , Condurrow Mine.
348	Do.	A complete nodule. <i>Loc.</i> , Condurrow Mine.
1271	<b>ERUBESCITE.</b> —Large macled crystals on massive Chalcopyrite.	
1272	Do.	Small confused crystals.
1273	Do.	Small confused macles on Quartz.
1274	Do.	Radiating macled groups.
1275	Do.	Large macles, with curved faces.
1276	Do.	Massive, part of a vein.
1278	Do.	Purple, with Quartz, Calcite, and Chalcopyrite.
1280	Do.	Dark purple, with Quartz and Dolomite.
1281	Do.	Brilliantly coloured. <i>Loc.</i> , Port Nalloth, Cape of Good Hope. <i>Obs.</i> , presented by Mr. N. Whitley.
1282	Do.	Brilliantly coloured. <i>Loc.</i> , Port Nalloth. <i>Obs.</i> , presented by Mr. N. Whitley.
1284	Do.	Very brilliant greenish and purple mass. <i>Loc.</i> , Cape of Good Hope. <i>Obs.</i> , presented by Mr. J. M. Williams.
1285	<b>CHALCOPYRITE.</b> —Very fine sphenoids on Quartz.	

Copper No.	<i>COPPER GROUP—Continued.</i>
	<i>CHALCOPYRITE—continued.</i>
1286	Very fine sphenoids on Quartz.
1287	Do. Fine sphenoids on Pearl-spar.
1288	Do. Large sphenoids, with Quartz and Chalybite. <i>Loc.</i> , East Pool Mine.
1289	Do. Fine sphenoids on Pearl-spar.
1290	Do. Large confused crystals on Quartz.
1291	Do. Small brilliant crystals on Quartz.
1292	Do. Very large modified sphenoid, with Quartz, Blende, and Pyrites.
1293	Do. Large tarnished crystals, on massive, with Chalybite.
1294	Do. Large tarnished crystals, on massive, with Chalybite.
1295	Do. Large confused crystals.
1296	Do. Very fine botryoidal mass. <i>Loc.</i> , Huel Clyjah and Wentworth. <i>Obs.</i> , presented by Mr. Rickard.
1297	Dull purplish botryoidal mass.
1298	Do. Dull botryoidal mass.
1299	Do. Iridescent crystals. <i>Loc.</i> , Moonta Mines, Australia. <i>Obs.</i> , presented by Mr. S. Higgs.
1300	Do. Brilliant crystals in decomposing Fluor.
1301	Do. Massive, variegated, very fine specimen.
1302	Do. Massive, reddish-purple.
1303	Do. Large yellow mass. <i>Loc.</i> , Valparaiso.
1304	Do. Massive, brilliantly variegated.
1305	Do. Brilliantly iridescent.
1306	Do. Small brilliantly variegated mass.
1307	Do. Very fine-grained and compact.
1308	Do. Brilliant, variegated, in Quartz and Calcite. <i>Loc.</i> , Kenmare.

Catalogue Number.	<i>COPPER GROUP—Continued.</i>
	<i>FAHLERZ—Continued.</i>
1309	Do. Massive, brass-yellow. <i>Loc.</i> , Ting Tang Mine.
1310	Do. Bright yellow and iridescent. <i>Loc.</i> , Cape Colony. <i>Obs.</i> , presented by Mr. N. Whitley.
1311	Do. Massive, bright yellow.
1312	Do. Large variegated mass. <i>Loc.</i> , Valparaiso.
1313	Do. Massive, changing into oxide and carbonate.
1314	Do. Massive, dull-yellow. <i>Loc.</i> , New Zealand. <i>Obs.</i> , presented by Mr. J. M. Williams.
1315	Do. Massive, yellow, variegated. <i>Loc.</i> , Cumberland.
1386	Do. Large mass, changing to carbonate and oxide. <i>Loc.</i> , Arequipa. <i>Obs.</i> , presented by Mr. William Oates.
1316	Do. Massive, "slickenside" surface. <i>Loc.</i> , Camborne.
1317	<i>FAHLERZ.</i> —Brilliant yellow crystals on Galena, resting on Quartz.
1318	Do. Fine yellow crystals on Quartz.
1319	Do. Beautiful iridescent crystals, on Quartz.
1320	Do. Large iron-gray crystals, on Quartz.
1321	Do. Small crystals with brown tarnish, on Quartz.
1322	Do. Large gray crystals, on Quartz. <i>Loc.</i> , Huel Unanimity.
1323	Do. Small steel-gray veins in Quartz, with Chalybite. <i>Loc.</i> , Huel Jubilee, near Padstow.
1324	Do. Irregular masses, in Quartz. <i>Loc.</i> , Great Crinnis Mine.
1325	Do. Large steel-gray tetrahedrons, on Quartz.
1326	Do. Fine gray and yellow crystals. <i>Loc.</i> , Herodsfoot.

Catalogue Number.	
	<i>COPPER GROUP—Continued.</i>
	<i>FAHLERZ—Continued.</i>
1327	Do. Large tetrahedrons, in Quartz. <i>Loc.</i> , Dillenburg.
1450	Do. Massive, with Chalcopyrite and Blende. <i>Loc.</i> , Old Treburgett Mine, St. Teath. <i>Obs.</i> , presented by Dr. C. Le Neve Foster.
1451	Do. Indistinctly crystallised, with Pyrites, Chalco- pyrite, and Quartz. <i>Loc.</i> , Kingston Mine, Stoke-Climsland. <i>Obs.</i> , presented by Dr. C. Le Neve Foster.
1328	TENNANTITE.—Small brilliant gray crystals, on cellular- Quartz.
1329	Do. Fine macled cubes.
1330	Do. Small confused crystals. <i>Loc.</i> , East Huel Jewell.
1331	Do. Minute crystals, on Erubescite.
1332	Do. Dark crystals, with brown tarnish.
1333	Do. Tarnished crystals, on Erubescite.
1334	Do. Confusedly crystalline and botryoidal, on Quartz
1335	Do. Brilliant modified cubes. <i>Loc.</i> , Tincroft Mine.
1336	Do. Dark confused crystals, on Chalcopyrite. <i>Loc.</i> , East Huel Jewell.
1337	Do. Large modified tetrahedrons.
	—◆—
	<i>TIN GROUP.</i>
1338	CASSITERITE.—Brown crystals, with Quartz. <i>Loc.</i> , Trevaunance Mine. <i>Obs.</i> , presented by Mrs. Chilcott.
1339	Do. Brilliant yellowish-brown crystals on elvan. <i>Loc.</i> , Sealhole, St. Agnes.
1340	Do. Large blackish-brown crystals, on elvan. <i>Loc.</i> , Sealhole, St. Agnes.
1341	Do. Small brown crystals, various forms.

Catalogue number.	<i>TIN GROUP—Continued.</i>	
	<i>CASSITERITE—Continued.</i>	
1342	Do.	Very large black crystals.
1343	Do.	Beautiful black prisms.
1344	Do.	Small brilliant crystals, with Quartz, on killas. <i>Loc.</i> , St. Agnes.
1345	Do.	Fine prisms, with Quartz, on killas. <i>Loc.</i> , St. Agnes.
1346	Do.	Large dark maced crystals, from a vein in decomposed granite. <i>Loc.</i> , Beam Mine, Roche.
1347	Do.	Small dark-brown crystals, on killas.
1348	Do.	Large light and dark-brown prisms, with Quartz, on killas. <i>Loc.</i> , St. Agnes.
1349	Do.	Very dark crystals, on Quartz.
1350	Do.	Large black macles. <i>Loc.</i> , St. Agnes.
1351	Do.	Dark-brown crystals with Quartz, on killas. <i>Loc.</i> , St. Agnes.
1352	Do.	Opaque black macles. <i>Loc.</i> , St. Agnes.
1353	Do.	Highly modified dark prisms ("Sparable Tin.") <i>Loc.</i> , Huel Vor.
1354	Do.	Dark-brown crystals, with Quartz and oxide of iron. <i>Loc.</i> , West Tresavean Mine.
1355	Do.	Brilliant brown acicular prisms, with Chalco- pyrite and Quartz.
1356	Do.	Large black prisms, on killas.
1357	Do.	Irregular black crystals, on elvan.
1358	Do.	Beautiful dark-brown modified prisms, with Quartz. <i>Loc.</i> , Bohemia.
1359	Do.	Brown macles, on Chlorite. <i>Loc.</i> , Poldice.

Catalogue Number.	<i>TIN GROUP—Continued.</i>	
	<b>CASSITERITE—Continued.</b>	
1360	Do.	Black highly modified prisms, on Gilbertite.
1361	Do.	Brilliant black macles. <i>Loc.</i> , St. Agnes.
1362	Do.	Fine black crystals. <i>Loc.</i> , Trevaunance Mine. <i>Obs.</i> , presented by Mrs. Chilcott.
1363	Do.	Fine resinous crystals ("Rosin tin.")
1364	Do.	Brown crystals, with Schorl.
1365	Do.	Light-brown acicular prisms. <i>Loc.</i> , St. Austell Consols. <i>Obs.</i> , presented by Mr. J. H. Collins.
1366	Do.	Small crystals in a breccia of decomposing tourmaline-schist.
1367	Do.	Brilliant dark-brown crystals, in massive Cassiterite.
1368	Do.	Fine brown crystals ("Rosin tin"), with Quartz.
1369	Do.	Brilliant black crystals, on killas. <i>Loc.</i> , St. Agnes.
1370	Do.	Brilliant resinous crystals, on massive <i>Loc.</i> , St. Agnes.
1371	Do.	Small acicular prisms on killas.
1372	Do.	Large light-brown crystals, on killas. <i>Loc.</i> , St. Agnes.
1373	Do.	Beautifully modified crystals ("Rosin tin.")
1374	Do.	Fine crystal of "Sparable tin."
1375	Do.	Fine black modified prisms and pyramids
1376	Do.	Very large dark-brown macle.
1377	Do.	Small broken crystals. <i>Loc.</i> , Piriai, Brittany.
1378	Do.	Fine crystals of "Sparable tin." <i>Loc.</i> , St. Agnes.
1379	Do.	Dark irregular crystals.

Catalogue Number.	<i>TIN GROUP—Continued.</i>	
	<b>CASSITERITE—Continued.</b>	
1380	Do.	Fine brown crystals, in Quartz. <i>Loc.</i> , Corpiono, Galicia. <i>Obs.</i> , presented by Capt. C. F. Bray.
1381	Do.	Brown crystals. <i>Loc.</i> , Dreuse, Spain. <i>Obs.</i> , presented by Mr. Wm. Hustler.
1382	Do.	Small dark crystals, in massive. <i>Loc.</i> , Park of Mines. <i>Obs.</i> , presented by Dr. C. Le Neve Foster.
1383	Do.	Black crystals with Chalcopyrite in Hornblende. <i>Loc.</i> , Pitkaranda, Finland. <i>Obs.</i> , presented by Mr. Hjalmar Furuholm.
1384	Do.	Light and dark-brown crystals with Apatite on capel. <i>Loc.</i> , Huel Kitty, St. Agnes. <i>Obs.</i> , presented by Dr. C. Le Neve Foster.
1385	Do.	Small acicular prisms, on cellular Quartz.
1387	Do.	Reddish crystals in decomposed granite. <i>Loc.</i> , Bohemia. <i>Obs.</i> , presented by Mr. J. H. Collins.
1388	Do.	( <i>Tinstone</i> ).—Dark masses with small crystals of Cassiterite, plates of Native Copper and Red Hematite. <i>Loc.</i> , Burthy Mine, St. Enoder. <i>Obs.</i> , presented by Dr. Barham.
1389	Do.	Vein of tin ore in elvan. <i>Loc.</i> , Budnick Mine. <i>Obs.</i> , presented by Dr. C. Le Neve Foster.
1390	Do.	Thin veins in tourmaline schist. <i>Loc.</i> , Huel Vor.
1391	Do.	Reddish-brown mass.
1392	Do.	Dark-brown, with Quartz.
1393	Do.	Brownish-black. <i>Loc.</i> , Goss Moor.
1394	Do.	Light-brown, disseminated. Huel Primrose, St. Agnes.



Catalogue Number.	<i>TIN GROUP—Continued.</i>	
	<i>CASSITERITE—Continued.</i>	
1395	Do.	Dark-brown veins in killas. <i>Loc.</i> , St. Agnes.
1400	Do.	Nearly black, with Schorl and Gilbertite.
1401	Do.	Dark grains, in decomposing Elvan. <i>Loc.</i> , Mt. Bischoff, Tasmania. <i>Obs.</i> , presented by Mr. Wm. Nicholas.
1407	Do.	Light-brown, disseminated. <i>Loc.</i> , Huel Primrose, St. Agnes.
1408	Do.	Light-brown, disseminated. <i>Loc.</i> , Huel Primrose.
1409	Do.	Light-brown, disseminated, with Quartz. <i>Loc.</i> , Huel Primrose.
1396	Do.	Beautiful light-brown bands, in Quartz. <i>Loc.</i> Garth Mine.
		<i>Wood Tin.</i>
1397	Do.	Light-brown, in Quartz. <i>Loc.</i> , Garth Mine.
1398	Do.	Dark-brown, in Quartz. <i>Loc.</i> , Tregoss Moor.
1399	Do.	Very dark-brown. <i>Loc.</i> , Bodmin Moors.
1402	Do.	Brown, fibrous and radiated, with Quartz and Felspar. <i>Loc.</i> , Garth Mine.
1403	Do.	Brown, fibrous, with pink Felspar. <i>Loc.</i> , Garth Mine.
1404	Do.	Brown layers, investing Quartz crystals. <i>Loc.</i> , Garth Mine.
1405	Do.	Dark-brown, with brown crystals, on tourmaline-schist. <i>Loc.</i> , Gavrigan Mine.
1406	Do.	( <i>Toad's-eye Tin</i> )—Light-brown, globular, radiated. <i>Loc.</i> , Polberrow Consols, St. Agnes.

Catalogue Number.	<i>TIN GROUP—Continued.</i>
<i>CASSITERITE—Continued.</i>	
1410	Do. Dark-brown, in massive Tinstone and tourmaline schist. <i>Loc.</i> , Gavrigan Mine.
1411	Do. Light-brown, in large radiated masses. <i>Loc.</i> , Gavrigan.
1412	Do. Light-brown, in dark-brown tinstone. <i>Loc.</i> , Metal lode, Great Wheal Vor. <i>Obs.</i> , presented by Mr. Wm. Argall.
1413	Do. Brown veins, in light-gray killas.
1414	Do. Brown veins, in dark schorlaceous tinstone, with Blende. <i>Loc.</i> , Penhalls Mine, St. Agnes?
1415	Do. Light-brown, coating hemispherical cavities. <i>Loc.</i> , Carbear, St. Austell.
1416	Do. ( <i>Toad's-eye Tin.</i> )—Light-brown, in veins and radiated masses. <i>Loc.</i> , Penhall's Mine, St. Agnes?
1417	Do. ( <i>Shot Tin</i> ) ( <i>Klaproth</i> ), small brown concretions, with Gilbertite. <i>Loc.</i> , St. Enoder.
1418	Do. ( <i>Pseudomorphous Tin-ore</i> )—Twenty-three crystals of felspar, partly changed to oxide of tin. <i>Loc.</i> , Huel Coates. <i>Obs.</i> , presented by Mr. W. Mansell Tweedy. <i>Stream Tin.</i>
1419	Do. Large black rolled mass.
1420	Do. Large mass of crystals, partially rounded.
1421 to 1434	Do. Fourteen specimens of Australian tin ore. <i>Obs.</i> , presented by Wm. Jory Henwood.*
1435	Do. Large mass of Chloritic conglomerite, pebbles of slate cemented by Cassiterite, Chlorite, and Chalcopyrite. <i>Loc.</i> , Relistian Mine, Gwinear.

\* Nos. 1421, 1422, 1423, and 1432 from the Upper Murray River, Victoria; 1424 from Beechworth; 1425, 1429, 1430, 1431 from Sugar Loaf Creek, Queensland; 1426 from Mount Bischoff, Tasmania; 1427 from Snowy Creek, Victoria; 1428 from Koelong, Victoria; 1433 from New England, New South Wales; 1434 from Mount Fatigue, Victoria.

Catalogue Number.	<i>TIN GROUP—Continued.</i>	
	<i>CASSITERITE—Continued.</i>	
1757	Do.	Very large rolled Pebble. <i>Loc.</i> , St. Agnes Beacon. <i>Obs.</i> , presented by Dr. C. Le Neve Foster.
1436	Do.	Rolled pebbles and fragments, mostly of a brown colour.
1437	Do.	Rolled and sub-angular fragments, mostly dark-brown or black.
1438	Do.	Large rolled fragments of Wood-Tin.
1439	Do.	Small sub-angular fragments.
1440	Do.	Partially rolled masses of light-brown Wood-Tin.
1441	Do.	Angular masses, red and brown.
1443	Do.	Large sub-angular masses, dark-brown.
1444	Do.	Small globular and botryoidal masses, light-brown.
1445	Do.	Globular and botryoidal masses, reddish-brown.
1446	STANNITE.—( <i>Bell-Metal ore</i> ).—Fine large mass, with a little Chalcopryrite. <i>Loc.</i> , Carn Brea Mines.	
1447	Do.	Large mass, with Chalcopryrite, <i>Loc.</i> , Carn Brea Mines.
1448	Do.	Large Mass, with Gilbertite. <i>Loc.</i> , Stenna Gwynn, St. Stephens.
1449	Do.	Large somewhat columnar mass. <i>Loc.</i> , St. Agnes.
1452	Do.	With Chalcopryrite. <i>Loc.</i> , East Pool Mine. <i>Obs.</i> , presented by Capt. Maynard.
1453	Do.	Dark steel-gray mass. <i>Loc.</i> , St. Agnes.
1454	Do.	Somewhat foliated. <i>Loc.</i> , St. Agnes.

Catalogue Number.	<i>LEAD GROUP.</i>	
1455	CERUSSITE.—Very fine acicular and fasciculated crystals, on Quartz. <i>Loc.</i> , Pentire Glaze Mine, St. Minver.	
1456	Do. Dull crystals, on massive. <i>Loc.</i> , Cumberland.	
1458	Do. Fine crystals, on brown iron ore. <i>Loc.</i> , Pentire Glaze Mine.	
1459	Do. Very pale pinkish crystals. <i>Loc.</i> , Pentire Glaze.	
1460	Do. Brownish-white acicular crystals. <i>Loc.</i> , Cumberland. <i>Obs.</i> , presented by Mr. Chilcott.	
1461	Do. Very large white crystals, on brown iron ore and Quartz. <i>Loc.</i> , Pentire Glaze.	
1462	Do. Large brilliant crystals, on Quartz, with brown iron ore. <i>Loc.</i> , Pentire Glaze.	
1463	Do. White crystals coated with Pyromorphite. <i>Loc.</i> , Cumberland.	
1464	Do. Brown crystals, on Quartz.	
1465	Do. Large crystals, on Quartz, with green Pyromor- phite. <i>Loc.</i> , Pentire Glaze.	
1466	Do. Small, but very brilliant prism-pyramids. <i>Loc.</i> , Pentire Glaze.	
1467	Do. Massive white crystals, coated with Pyromor- phite.	
1468	Do. Long crystals in a cavity. <i>Loc.</i> , Upper Treamble Iron Mine <i>Obs.</i> , presented by Mr. J. H. Collins.	
1469	Do. Large white opaque crystals, on iridescent Galena.	
1470	Do. Large dark crystals, on brown Quartz.	
1471	Do. Milk-white crystals, in gossan.	

Catalogue Number	<i>LEAD GROUP—Continued.</i>
	<i>CERUSSITE—Continued.</i>
1472	Do. White crystals, with Pyrites and Galena.
1473	Do. Small white crystals, with Galena.
1474	Do. Large brown imperfect crystals. <i>Loc.</i> , Cumberland.
1475	Do. Beautifully transparent acicular crystals on black Quartz. <i>Loc.</i> , Pentire Glaze.
1476	Do. Dark-brown mass of confused crystals.
1477	<i>ANGLESITE</i> .—Small brilliant brown crystals. <i>Loc.</i> , Parys Mine, Anglesea.
1478	Do. Brilliant crystals with Cerussite. <i>Loc.</i> , Caldbeck Fells.
1479	Do. Indistinct crystals, with Cerussite. <i>Loc.</i> , Leadhills.
1480	Do. Indistinct crystals with Cerussite. <i>Loc.</i> , Caldbeck Fells.
1481	Do. Very brilliant crystals, on Galena. <i>Loc.</i> , Monte Poni, Sardinia.
1751	Do. Very fine brilliant crystals. <i>Loc.</i> , Monte Poni, Sardinia.
1482	<i>LINARITE (Cupreous Sulphate of Lead.)</i> .—Brilliant blue crystals. <i>Loc.</i> , Cumberland.
1761	<i>CALEDONITE</i> .—With Cerussite. <i>Loc.</i> , Lead Hills, Lanarkshire.
1483	<i>PYROMORPHITE</i> .—Large mass of Gozzan, coated with brilliant green crystals. <i>Loc.</i> , Huel Penrose. <i>Obs.</i> , presented by Mr. John Hunt.
1484	Do. Small green crystals. <i>Loc.</i> , Huel Penrose. <i>Obs.</i> , presented by Mr. John Hunt.
1485	Do. Brilliant yellowish-green prisms. <i>Loc.</i> , Huel Alfred.

Catalogue Number.	<i>LEAD GROUP—Continued.</i>
	<i>PYROMORPHITE—Continued.</i>
1486	Do. Very fine yellowish-green crystals. <i>Loc.</i> , Huel Alfred.
1487	Do. Minute green crystals, on Quartz.
1488	Do. Brilliant yellowish-green crystals, on Quartz.
1489	Do. Small dark-green prisms, with Galena. <i>Obs.</i> , presented by Mrs. Chilcott.
1490	Do. Greenish globular groups, on Quartz. <i>Loc.</i> , Carrock Fell, Cumberland.
1491	Do. Bright-green crystals. <i>Loc.</i> , Huel Alfred.
1492	Do. Brown prisms, macted. <i>Loc.</i> , Pullaouen, Brittany.
1493	Do. Greenish-yellow six-sided prisms, on Quartz. <i>Loc.</i> , Carrock Fell.
1494	Do. Brownish-yellow globules and prisms, on Quartz, <i>Loc.</i> , Cumberland.
1495	Do. Bright greenish-yellow crystals, on Quartz. <i>Loc.</i> , Huel Penrose.
1496	Do. Greenish-yellow prisms, on Quartz. <i>Loc.</i> , Cumberland.
1497	Do. Dull brownish-yellow, indistinct crystals. <i>Loc.</i> , Cumberland.
1498	Do. Brownish-yellow, indistinct crystals. <i>Loc.</i> , Cumberland.
1499	Do. Brownish-yellow, curved crystals. <i>Loc.</i> , Cumberland.
1500	Do. Minute orange-coloured crystals. <i>Loc.</i> , Lead hills, Scotland.
1501	<i>MIMETITE</i> .—Fine green crystals. <i>Loc.</i> , Huel Alfred.
1502	Do. Small brown crystals, on Quartz.
1503	Do. Minute greenish crystals, with brown Cerussite.
1504	Do. Greenish-yellow, macted crystals. <i>Loc.</i> , Huel Alfred.

Catalogue Number.	
	<i>LEAD GROUP—Continued.</i>
	<i>MIMETITE—Continued.</i>
1505	Do. Very brilliant greenish-yellow crystals. <i>Loc.</i> , Huel Alfred.
1506	Do. Small, but very brilliant crystals. <i>Loc.</i> , Huel Alfred.
1507	<i>Kampylite.</i> Do. Large globular masses of curved crystals. <i>Loc.</i> , Cumberland.
1508	Do. Large curved crystals. <i>Loc.</i> , Cumberland.
1509	Do. Very fine brown curved crystals. <i>Loc.</i> , Cumberland.
1510	Do. Brownish-yellow curved crystals. <i>Loc.</i> , near Keswick. <i>Obs.</i> , presented by Mr. Rd. Pearce.
1511	Do. Small bright-yellow crystals.
1512	Do. Small greenish-gray crystals, on Quartz.
1513	CROCOISITE.—Small prisms of a deep orange colour, on a large mass of Quartz. <i>Loc.</i> , Gongonhas de Campo, Brazil. <i>Obs.</i> , presented by Mr. T. Treloar.
1514	Do. Small red crystals, on soft schist. <i>Loc.</i> , Minaes Geraes, Brazil.
1515	Do. Bright red crystals, on Quartz.
1516	WULFENITE.—Fine tabular crystals. <i>Loc.</i> , Bleiberg, Carinthia.
1517	Do. Massive.
1518	VANADINITE.—Small indistinct crystals on Quartz.
1519	GALENA.—Very large crystals shewing faces of the cube ( <i>a</i> ), octahedron ( <i>o</i> ), and dodecahedron ( <i>d</i> ).
1520	Do. Large crystals coated with Blende.
1521	Do. Very large and fine crystals, shewing the faces <i>a</i> , <i>o</i> , <i>d</i> .
1522	Do. Bright crystals, lying between Quartz prisms.
1523	Do. Very bright crystals on Quartz.

Catalogue Number	<i>LEAD GROUP—Continued.</i>	
	<i>GALENA—Continued.</i>	
1524	Do.	Large bright crystals coated with Pyrites.
1525	Do.	Very large crystals, with Pyrites.
1526	Do.	Large flattened crystals, with rough faces.
1527	Do.	Large bright crystals.
1528	Do.	Very large crystals ( <i>a, o, d</i> ), with rough surfaces.
1529	Do.	Very large crystals ( <i>a, o, d</i> ), with rough surfaces.
1530	Do.	Large crystals, coated with Pyrites.
1531	Do.	Small cubes in Blende.
1532	Do.	Large macled crystals.
1533	Do.	Large cubes, with Dolomite.
1534	Do.	Large mass, slightly radiated structure.
1535	Do.	Large crystals, shewing successive depositions.
1536	Do.	Large crystals, with roughened surfaces.
1537	Do.	Large crystals with curved surfaces.
1538	Do.	Large irregular crystals, with Quartz and Dolomite.
1539	Do.	Peculiar flattened crystals.
1549	Do.	A large crystal ( <i>a, o, d</i> ), on Quartz.
1540	Do.	Large mass, coated with Cyanosite.
1541	Do.	Slightly radiated mass. <i>Loc.</i> , Galena, Illinois, U. S. A.
1542	Do.	Imperfect crystals, with crystallized Chalcopyrite.
1543	Do.	Lamellar, slightly radiated. <i>Loc.</i> , Caldbeck Fells.
1544	Do.	Massive, lamellar, with Fahlerz. <i>Loc.</i> , Aignure Mines, Bundelcund, India.
1545	Do.	Massive granular. <i>Loc.</i> , Crinnis Mine.
1546	Do.	Small crystals, on Limestone.
1547	Do.	Massive, fine-grained, granular "Blue Lead." <i>Obs.</i> , presented by Mrs. Chilcott.



Catalogue Number.	<i>LEAD GROUP—Continued.</i>
	<i>GALENA—Continued.</i>
	Do. ( <i>Specular Galena.</i> )—Large cleavable mass. <i>Loc.</i> , North Hendre Mines, Flintshire. <i>Obs.</i> , presented by Dr. C. Le Neve Foster.
	Do. ( <i>Steel Ore.</i> )—Large gray granular mass. <i>Loc.</i> , Tanyralt Mine, Cardiganshire. <i>Obs.</i> , presented by Dr. C. Le Neve Foster.
1548	Do. A specular surface, or "Slickenside."
1560	CLAUSTHALITE.—Dark grayish-blue, massive, in pink calcite. <i>Loc.</i> , Hartz Mountains.
1550	BOURNONITE.—Fine crystals, with Chalybite and Quartz. <i>Loc.</i> , Herodsfoot, near Liskeard.
1551	Do. Large imperfect crystals, with Chalybite and Quartz. <i>Loc.</i> , Herodsfoot, near Liskeard.
1552	Do. Imperfectly crystallized, with Pyrites. <i>Loc.</i> , Herodsfoot, near Liskeard.
1553	Do. Large imperfect crystals. <i>Loc.</i> , Herodsfoot, near Liskeard.
1554	Do. Large irregular crystals, with Pyrites.
1555	Do. Large dull crystals, with brilliant crystals of Blende.
1556	Do. Large compound crystals, with Pyrites and Quartz.
1557	Do. Large dull imperfect crystals. <i>Loc.</i> , Huel Boys, Endellion.
1558	Do. Very large brilliant crystals, partly coated with Quartz.
1559	Do. Very small brilliant crystals, on Quartz, with Blende, Pearl-spar and Antimonite. <i>Loc.</i> , Huel Boys, Endellion.



Catalogue  
Number.*BISMUTH GROUP—Continued.**BISMUTH—Continued.*

- 1576 Do. Compact mass, dull.  
*Loc.*, Botallack.
- 1577 Do. Large tarnished, broken crystal, in Quartz.  
*Loc.*, East Huel Crofty.
- 1578 Do. Amorphous masses, apparently rolled.
- 1579 BISMITE.—Yellowish, earthy, impregnating Gozzan.
- 1580 AIKINITE.—Steel gray needles, on Quartz.
- 1581 Do. Steel-grey needles, on Quartz and Chalcopyrite.
- 1582 Do. Brilliant iridescent needles, between veins of Quartz.
- 1583 BISMUTHINITE.—Brilliant needles in cavities, in Quartz.  
*Loc.*, East Pool Mine.  
*Obs.*, presented by Mr. J. H. Collins.
- 1584 Do. Very delicate needles, on Quartz.  
*Loc.*, Huel Basset.  
*Obs.*, presented by Mr. Rd. Pearce,
- 1585 Do. Dull flattened prisms, on Chalcopyrite.
- 1586 Do. Massive, on Quartz.
- 1587 Do. Small dark irregular masses.  
*Loc.*, St. Wenn.
- 1588 EULYTITE.—Massive, earthy, with Oxide of Iron.  
*Loc.*, Restormel Mine.
- 1589 Do. Massive, amorphous.  
*Loc.*, Huel Coates, St. Agnes.

*ARSENIC GROUP.*

- 1590 REALGAR.—Thick coating of minute orange-colored crystals, on dark clay.  
*Loc.*, Muscht, Hungary.
- 1591 Do. Minute orange-coloured crystals.
- 1592 Do. Minute orange-coloured crystals.
- 1593 Do. Dark orange-coloured crystals, with pale Rhodocrosite.  
*Loc.*, Nagyag.

Catalogue Number	<i>ARSENIC GROUP—Continued.</i>
1595	ORPIMENT.—Waxy mass, in a bluish-grey earthy matrix. <i>Loc.</i> , Muscht, Hungary.
1646	Do. Brilliant yellow mass, with Realgar.
1647	WAPFLERITE.—White, in soft radiated groups of crystals. <i>Loc.</i> , Joachimsthal.
1600	PHARMACOLITE.—Pale pinkish mammillary coating on cobalt ore. <i>Loc.</i> , Bieber.
1594	MISPICKEL.—Massive, light steel-gray. <i>Loc.</i> , East Pool Mine. (See also under "Iron Group.")
 <i>TELLURIUM GROUP.</i> 	
1791	NATIVE TELLURIUM.—Brilliant cleavable mass. <i>Loc.</i> , Boulder County, Colorado. <i>Obs.</i> , presented by Mr. Rd. Pearce.
1596	SYLVANITE.—( <i>Graphic Tellurium.</i> )—Dark-colored laminæ, on a gray porphyry. <i>Loc.</i> , Offenbanya.
1597	Do. Brilliant dendrites, on gray Porphyry. <i>Loc.</i> , Offenbanya.
 <i>IRON GROUP.</i> 	
1601	METEORIC IRON.—Rough irregular mass.
1602	Do. Flat plate, shewing Wiedmanstätt figures.
1603	MAGNETITE.—Large mass, shewing very imperfect crystals.
1604	Do. Imperfectly crystallized mass.
1605	Do. Brilliant mass of imperfect crystals.
1606	Do. Granular mass of small imperfect crystals.
1607	Do. Small brilliant octahedrons on Actinolite. <i>Loc.</i> , Haytor, Devon.
1608	Do. Black, massive. <i>Loc.</i> , Nagpore, India.

Catalogue Number.	
	<i>IRON GROUP—Continued.</i>
	<b>MAGNETITE—Continued.</b>
1609	Do. Coarse-grained, lamellar. <i>Loc.</i> , Isle of France.
1610	Do. Very large octahedron, in Chlorite.
1612	Do. Dark, massive, water-worn.
1613	Do. Black, massive. <i>Loc.</i> , Botallack cliffs.
1614	Do. Black, amorphous.
1615	Do. Minute grains, in lava. <i>Loc.</i> , Vesuvius.
1616	Do. ( <i>Magnetic Iron Sand</i> ), dark brilliant grains. <i>Loc.</i> , Iceland.
1617	<b>HEMATITE.</b> —( <i>Specular Iron</i> ).—Large mass of brilliant iridescent crystals. <i>Loc.</i> , Elba.
1618	Do. ( <i>Do.</i> )—Brilliant plates, on smoky Quartz. <i>Loc.</i> , Cumberland. <i>Obs.</i> , presented by Mr. Rd. Pearce.
1619	Do. ( <i>Do.</i> )—Minute crystals, on lava. <i>Loc.</i> , Vesuvius.
1620	Do. ( <i>Do.</i> )—Brilliant scales, on smoky Quartz. <i>Loc.</i> , Cumberland.
1621	Do. ( <i>Do.</i> )—Small black crystals, much modified, on Quartz.
1622	Do. ( <i>Do.</i> )—Minute crystals, on lava. <i>Loc.</i> , Vesuvius.
1623	Do. ( <i>Do.</i> )—Small lenticular crystals, on lava. <i>Loc.</i> , Sicily.
1624	Do. ( <i>Do.</i> )—Brilliant crystals on Quartz.
1625	Do. ( <i>Do.</i> )—Large specular mass. <i>Loc.</i> , Brazil. <i>Obs.</i> , presented by Mr. Hitchens.
1626	Do. ( <i>Do.</i> )—Small brilliant scales.
1627	Do. ( <i>Micaceous Iron Ore.</i> )—Brilliant mass. <i>Loc.</i> , Bamfylde Mines, N. Molton. <i>Obs.</i> , presented by Mr. M. G. Klingender.

Catalogue Number.	<i>IRON GROUP—Continued.</i>
	<i>HEMATITE—Continued.</i>
1628	Do. ( <i>Red Hematite.</i> )—Large [botryoidal radiated mass. <i>Loc.</i> , Cumberland.
1629	Do. Very fine botryoidal mass. <i>Loc.</i> , Cumberland. <i>Obs.</i> , presented by Mr. Rd. Pearce.
1630	Do. Fine botryoidal mass, coated with red ochre. <i>Loc.</i> , Ulverstone.
1631	Do. Fine botryoidal mass. <i>Loc.</i> , Cumberland.
1632	Do. Small botryoidal mass. <i>Loc.</i> , Ulverstone, Lancashire.
1633	Do. Scaly, with Quartz. <i>Loc.</i> , Nagpore.
1634	Do. Very dark, massive.
1635	Do. Very dark, massive.
1636	Do. Fine dark-coloured radiated mass. <i>Loc.</i> , Hodbarrow Mine, Cumberland. <i>Obs.</i> , presented by Mr. J. H. Collins.
1637	GÖTHITE.—Very fine mass of small prismatic crystals. <i>Loc.</i> , Restormel Mine.
1638	Do. Groups of small prisms. <i>Loc.</i> , Restormel Mine.
1639	Do. Small crystals on radiated mass. <i>Loc.</i> , Restormel Mine.
1640	Do. Large prisms, partly coated with Quartz. <i>Loc.</i> , Restormel Mine.
1642	Do. Large radiated Mass. <i>Loc.</i> , Restormel Mine.
1643	Do. Fine crystals, partly coated with Quartz. <i>Loc.</i> , Restormel Mine.
1644	Do. Very fine prisms, on Quartz. <i>Loc.</i> , Restormel Mine.

Catalogue Number.	<i>IRON GROUP—Continued.</i>
1651	LIMONITE.—( <i>Wood Iron.</i> )—Beautifully radiated. <i>Loc.</i> , Goss Moor.
1652	Do. Beautifully radiated, coated with Quartz. <i>Loc.</i> , Goss Moor.
1653	Do. Radiated, with Quartz and red ochre. <i>Loc.</i> , Goss Moor.
1654	Do. Beautifully radiated, dark-brown. <i>Loc.</i> , Restormel Mine.
1655	Do. Very dark-brown, shining, radiated.
1656	Do. Dark-brown, radiated. <i>Loc.</i> , Restormel Mine.
1657	Do. Light and dark-brown, ochreous.
1658	Do. Dull-brown mass, with rounded surface.
1659	Do. Dull-brown, stalactitic.
1660	Do. Large waterworn mass. <i>Loc.</i> , Goss Moor.
1661	Do. Yellowish-brown, radiated, earthy. <i>Loc.</i> , Hotwells, Bristol.
1662	Do. ( <i>Bog Iron Ore.</i> )—Yellowish and brownish, pitchy, somewhat cellular.
1663	Do. ( <i>Do.</i> )—Dark-brown, pitchy lustre.
1664	Do. ( <i>Yellow Ochre.</i> )—Light-brown, compact.
1665	Do. ( <i>Do.</i> )—Dull-brown, compact.
1666	Do. ( <i>Do.</i> )—Bright Yellow. <i>Loc.</i> , Knightor and Treverbyn Mines. <i>Obs.</i> , presented by Mr. J. H. Collins.
1667	Do. ( <i>Pea Iron Ore.</i> )—Indistinct globular masses. <i>Loc.</i> , Scotland.
1668	Do. Indistinct globular masses. <i>Loc.</i> India.
1694	CHALYBITE.—Very large specimen, rhombic prisms coating Quartz.
1695	Do. "Cockscomb" crystals, on Quartz, with Fyrites
1696	Do. Brown rhombohedrons, on Quartz.

Catalogue number	<i>IRON GROUP—Continued.</i>
	<i>CHALYBITE—Continued.</i>
1697	Do. "Fish-scale" crystals, on Quartz.
1698	Do. Minute botryoidal groups on Pyrites.
1699	Do. Fine rhombohedrons, on Quartz.
1700	Do. Dark-brown cleavable masses in Quartz.
1701	Do. Very small and brilliant scalenohedrons, on Quartz.
1702	Do. Large "fish-scale" crystals, on Quartz.
1703	Do. Light coloured "fish-scale" crystals, on Quartz.
1704	Do. Groups of "fish-scale" crystals, on Pyrites.
1705	Do. Very small brilliant scalenohedrons, on killas.
1706	Do. Minute crystals, in botryoidal groups.
1707	Do. Fine crystal, shewing planes of prisms, pyramid and basal plane.
1708	Do. Brown rhombohedrons. <i>Loc.</i> , Neudorf, Harz.
1709	Do. Large "fish-scale" crystals, with Chalcopyrite and Dolomite.
1710	Do. "Fish-scale" crystals on Quartz.
1711	Do. Small "fish-sale" crystals, on massive.
1712	Do. Small curved rhombohedrons, on prisms of Quartz.
1713	Do. Large rhombohedrons, on Quartz with Galena.
1714	Do. Large drusy crystals on Quartz and Chalcopyrite.
1715	Do. ( <i>Fibrous.</i> )—Silky mass. <i>Loc.</i> , Tincroft mine.
1716	Do. ( <i>Clay Ironstone.</i> )—Amorphous, shewing "basaltic" structure from contraction. <i>Loc.</i> , Staffordshire.
1721	PYRITES.—Large indistinct crystal ine mass.
1722	Do. Indistinct crystals, on Quartz.
1723	Do. Small cubes, on Quartz.



Catalogue Number.	<i>IRON GROUP—Continued.</i>	
	<i>PYRITES—Continued.</i>	
1724	Do.	Fine modified cube-octahedrons, on Quartz.
1725	Do.	Fine pentagonal dodecahedrons, on Quartz with Chlorite.
1726	Do.	Small crystals, with Marcasite, on gozzan. <i>Loc.</i> , Dolcoath. <i>Obs.</i> , presented by Mr. J. H. Collins.
1727	Do.	Small modified octahedrons, on Quartz.
1728	Do.	Large imperfect crystal, with flaky Blende.
1729	Do.	Highly modified macles, in Calcite on Epidote. <i>Loc.</i> , Norway.
1730	Do.	Large cube-octahedrons.
1731	Do.	Minute druses, on Quartz.
1732	Do.	Globular groups of cubes, on Quartz.
1733	Do.	Globular group of cubes, with Chalybite.
1734	Do.	Confusedly crystalline mass
1735	Do.	Large broken pentagonal dodecahedron.
1736	Do.	Large macled cube.
1737	Do.	Large cube, not striated.
1738	Do.	Large macled cube.
1739	Do.	Large cube, deeply striated.
1740	Do.	Bright macled cube-octahedrons.
1796	Do.	Fine modified crystals, on Erubescite. <i>Loc.</i> , Arequipa, Peru. <i>Obs.</i> , presented by Mr. Wm. Oats.
1741	Do.	Minute crystals, on Quartz, with Galena.
1742	Do.	Globular groups of modified cubes.
1743	Do.	Very small cubes, on capel.
1744	Do.	Cube-octahedrons, much tarnished, on Lime-stone.
1745	Do.	Highly modified crystal.
1801	Do.	Macled cubes, changing to oxide of iron. <i>Loc.</i> , New South Wales.

Catalogue Number.	IRON GROUP—Continued.
	<b>PYRITES—Continued.</b>
1802	Do. Small modified cubes, in Chlorite.
1803	Do. Stalactitic groups of minute crystals.
1804	Do. Pentagonal dodecahedrons, in chlorite. <i>Loc.</i> , Prospidnick Mine, Sithney. <i>Obs.</i> , presented by Mr. J. H. Collins.
1805	Do. Large cube-octahedron, on Quartz.
1806	Do. Octahedrons, on limestone.
1807	Do. Large irregular cubes.
1808	Do. Large indistinct octahedrons, changing to oxide of iron.
1811	<b>MARCASITE.</b> —Very large mass of prismatic groups.
1812	Do. Radiated groups, on Quartz.
1813	Do. Fine hexagonal table, on Quartz.
1814	Do. Fine crystals, on Calcite. <i>Loc.</i> , Alston Moor.
1815	Do. Fine crystals, in grey chalk. <i>Loc.</i> , Folkestone.
1816	Do. Large mass of fine crystals.
1817	Do. Large irregular tables, on Quartz.
1795	Do. ( <i>Hepatic Pyrites.</i> )—Large indistinct pyramids. <i>Loc.</i> , Gravesend.
1809	Do. ( <i>Do.</i> )—Radiated globular mass of indistinct crystals.
1810	Do. ( <i>Do.</i> )—Group of indistinct crystals.
1818	<b>PYRRHOTITE.</b> — <i>Magnetic Pyrites.</i> —Large amorphous mass. <i>Loc.</i> , Huel Falmouth.
1819	Do. Large amorphous mass.
1820	Do. Amorphous mass. <i>Loc.</i> , Huel Jane. <i>Obs.</i> , presented by Mr. J. H. Collins.
1821	<b>MISPICKEL.</b> —Fine gray rhombic prisms.

Catalogue Number.	<i>IRON GROUP—Continued.</i>
	<i>MISPICKEL—Continued.</i>
1822	Do. Rhombic prisms, on Quartz, with Fluor. <i>Loc.</i> , St. Agnes.
1823	Do. Large rhombic tables, on Quartz, with Galena. <i>Loc.</i> , St. Agnes.
1824	Do. Very large prisms, with Blende. <i>Loc.</i> , St. Agnes.
1825	Do. Small loose crystals. <i>Loc.</i> , St. Agnes.
1826	Do. Large rhombic prisms, on Quartz. <i>Loc.</i> , St. Agnes.
1827	Do. Rhombic crystals, with Chalcopyrite.
1828	Do. Flat prismatic crystals, on talc slate. <i>Loc.</i> , River Sair.
1829	Do. Very large irregular crystals.
1830	Do. Minute crystals, embedded in a light-green rock.
1831	Do. Small crystals embedded.
1679	PHARMACOSIDERITE.—Fine green cubic crystals.
1678	Do. Fine dark-green crystals, on brown iron ore. <i>Obs.</i> , presented by Mrs. Chilcott.
1681	Do. Dark-green cubes, on Gozzan.
1682	Do. Light-green crystals, on Quartz.
1685	Do. Small dark-green cubes, on gozzan.
1686	Do. Large dark-green cubes.
1688	SCORODITE.—Light-green crystals, on siliceous Hematite. <i>Loc.</i> , Terras Mine.
	<i>Obs.</i> , presented by Mr. J. H. Collins.
1689	Do. Dark-green crystals, on white granite. <i>Loc.</i> , Beam Mine.
1684	Do. Light-green drusy groups, on Pharmacosiderite.
1687	Do. Fine crystal, mounted on pedestal. <i>Loc.</i> , Brazil.
	<i>Obs.</i> , presented by Mr. J. H. Collins.

Catalogue Number.	<i>IRON GROUP—Continued.</i>
1669	VIVIANITE.—Long radiated prisms, on capel. <i>Loc.</i> , Huel Jane. <i>Obs.</i> , presented by Mr. W. Mansell Tweedy.
1670	Do. Small dark prisms, on capel.
1671	Do. Large broken crystal, on Pyrites with Blende.
1672	Do. Small broken crystals, with chalybite and blende. <i>Loc.</i> , Huel Kind, St. Agnes.
1673	Do. Large embedded crystal, with chalybite and Pyrites. <i>Loc.</i> , Huel Kind, St. Agnes.
1800	Do. Large broken macled crystal. <i>Loc.</i> , Huel Jane.
1674	Do. ( <i>Blue Iron Earth</i> ).—Pale-blue, in granite.
1675	Do. ( <i>Do.</i> )—Dark-blue, in minute acicular crystals, on brown iron ore. <i>Loc.</i> , Treamble Mine, Perranzabuloe. <i>Obs.</i> , presented by Mr. J. H. Collins.
1776	Do. ( <i>Do.</i> )—Dark-blue, massive. <i>Loc.</i> , New Jersey.
1799	LUDLAMITE.—Light-green crystals, on pyrites. <i>Loc.</i> , Huel Jane.
1692	CHILDRENITE.—Very fine brown crystals, on Pyrites and Quartz. <i>Obs.</i> , presented by W. M. Tweedy.
1691	Do. Small brown crystals, with Pyrites and Chalco- pyrite. <i>Obs.</i> , presented by Mr. W. M. Tweedy.
1693	TRIPHYLLITE.—Massive, with Apatite. <i>Loc.</i> , Rabenstein, Bavaria.
1690	HALOTRICHITE.—Fibrous masses. <i>Loc.</i> , Bavaria.
1798	AERINITE. Fine blue mass. <i>Loc.</i> , Aragon, Spain.
1717	WOLFRAM.—Large crystals, in Quartz. <i>Loc.</i> , East Pool Mine. (See also under Tungsten group.)

*IRON GROUP—Continued.*

- 1718 MANACCANITE.—Dark iron-gray grains.  
*Loc.*, Manaccan.  
(See also under Titanium group.)
- 1719 CHROMITE.—Dark grains in talcose rock.  
*Loc.*, Baltimore, U.S.  
(See also under Chromium group.)
- 1720 LIEVRITE.—Large irregular crystal.  
*Loc.*, Elba.
- 1797 CRONSTEDTITE.—Small black crystals, on Pyrites.  
*Loc.*, Huel Jane.  
*Obs.*, presented by Mr. H. F. Collins.

*NICKEL & COBALT GROUP.*

- 1832 ANNABERGITE.—Fine powder, in bottle.
- 1833 Do. Green efflorescence, on Chalybite.
- 1834 EMERALD NICKEL.—Green efflorescence, on Chromite.  
*Loc.*, Texas, U.S.
- 1835 MILLERITE.—Minute prisms, in Calcite.
- 1836 Do. Hair-like crystals, with Pyrites on Quartz.
- 1747 Do. Felted mass of hair-like crystals.  
*Loc.*, St. Louis, U.S.
- 1794 Do. Acicular crystals on pearl spar.  
*Loc.*, Gerrans Bay.  
*Obs.*, presented by Mr. J. H. Collins.
- 1837 NICKELITE.—Amorphous mass, with nickel ochre.  
*Loc.*, Pengelly Mine, St. Ewe.
- 1838 Do. Massive, with nickel ochre.  
*Loc.*, South America.  
*Obs.*, presented by Capt. R. H. Williams.
- 1839 Do. Massive, very rich.  
*Loc.*, Spain.  
*Obs.*, presented by Capt. R. H. Williams.
- 1840 Do. Massive, with Chalybite and Quartz.

Catalogue Number.	<i>NICKEL &amp; COBALT GROUP—Continued.</i>
	<i>NICKELITE—Continued.</i>
1841	Do. Massive, with Chalybite.
1843	Do. Amorphous mass, with nickel ochre and Pyrites. <i>Loc.</i> , Pengelly Mine, St. Ewe.
1844	BREITHAUPHITE.—Crystalline Mass, with Chalybite. <i>Loc.</i> , Schlösschen, Lobenstein.
1851	CHLOANTHITE.—Dark grey vein, in Quartz.
1845	ERYTHRITE.—Pink efflorescence, on Smaltite.
1846	Do. Fine pink efflorescence, on Smaltite.
1847	Do. Minute acicular groups on Quartz.
1848	Do. Fine radiating groups of acicular crystals. <i>Loc.</i> , Schneeberg.
1849	Do. Fine stellate groups, on Quartz. <i>Loc.</i> , Schneeberg.
1850	Do. Pink efflorescence, on Quartz.
1852	SMALTITE.—Octahedral crystals and massive, in Quartz. <i>Loc.</i> , Schneeberg.
1853	Do. Crystalline mass. <i>Loc.</i> , Schneeberg.
1854	Do. Dark grey vein in Chalybite. <i>Loc.</i> , East Pool Mine. <i>Obs.</i> , presented by Mr. J. H. Collins.
1856	Do. Grey, massive.
1857	Do. Dark grey, with Quartz. <i>Loc.</i> , Huel Sparnon (?)
1858	Do. Grey, massive, with Quartz. <i>Loc.</i> , Schneeberg.
1859	Do. Dark-grey, massive, with Quartz.
1860	Do. Concentric coatings lining a vugh, with specks of Native Silver. <i>Loc.</i> , Herland Mine.
1861	COBALTITE.—Beautiful crystalline grains. <i>Loc.</i> , Sweden.

Catalogue Number.	<i>MANGANESE GROUP.</i>
	<i>MANGANESE GROUP.</i>
1867	PYROLUSITE.—Fine radiated mass. <i>Loc.</i> , Sweden.
1868	Do. Beautiful radiated groups. <i>Loc.</i> , Ilmenau, Thuringia.
1869	MANGANITE.—Acicular crystals, on massive. <i>Loc.</i> , Lifton, near Launceston.
1870	Do. Very fine rhombic prisms. <i>Loc.</i> , Ihlefeld, Hartz.
1871	Do. Very fine radiated groups of prisms, with Quartz.
1872	Do. Beautiful acicular crystals. <i>Loc.</i> , Warwickshire.
1873	Do. Light steel-grey, radiated prisms.
1874	Do. Flat prisms, on Calcite. <i>Loc.</i> , Ihlefeld, Hartz.
1875	PSILOMELANE.—Large reniform drusy mass, with Quartz.
1876	Do. Reniform or stalactitic mass, on oxide of iron. <i>Loc.</i> , Lostwithiel.
1877	Do. Mammillary mass.
1878	Do. Delicate dendritic mass.
1879	Do. Cleavable mass, tarnished.
1880	Do. Stalactitic mass.
1881	BRAUNITE.—Minute black crystals on massive.
1883	HAUSMANNITE.—Fine pyramids. <i>Loc.</i> , Ilmenau, Thuringia.
1882	LUDWIGITE.—Dull stellate groups. <i>Loc.</i> , Maravicza, Banat.
1884	WAD.—Stalactitic, hollow. <i>Loc.</i> , Killiow, Kea.
1885	Do. Brown stalagmitic mass.
1886	Do. Brown stalactitic mass.
1887	Do. Stalactitic fragments.

Catalogue Number	<i>MANGANESE GROUP—Continued.</i>
1888	RHODONITE.—Fine pink mass. <i>Loc.</i> , near Launceston.
1889	Do. Fine pink mass. <i>Loc.</i> , near Launceston.
2101	PENWITHITE.—Large dull-brown mass. <i>Loc.</i> , Huel Owles. <i>Obs.</i> , presented by Dr. C. Le Neve Foster.
1890	RHODOCROSITE.—Light-pink, massive and mammillated. <i>Loc.</i> , Warwickshire.
1891	Do. Mammillary, massive. <i>Loc.</i> , Warwickshire.
1892	Do. Minute, pale-pink, curved rhombohedrons.
1893	Do. Brownish-pink mammillary masses. <i>Loc.</i> , Huel Owles.
1894	APJOHNITE.—Fine fibrous masses, <i>Loc.</i> , Bushman's River, Cape of Good Hope. <i>Obs.</i> , presented by Archdeacon Hardie.
<hr style="width: 10%; margin: 10px auto;"/> <i>ZINC GROUP.</i>	
1895	ZINCITE.—Large red mass, with Franklinite. <i>Loc.</i> , Sussex Co., New Jersey.
1896	Do. Red mass, with Franklinite. <i>Loc.</i> , Sussex Co., New Jersey. <i>Obs.</i> , presented by Mr W. M. Tweedy.
1897	Do. Dark red grains, with Franklinite. <i>Loc.</i> , Sparta, New Jersey.
1898	Do. Dark-red, with Franklinite. <i>Loc.</i> , Sparta, New Jersey.
1899	CALAMINE.—Very fine crystals, in "combed" structure. <i>Loc.</i> , Laurium, Greece. <i>Obs.</i> , presented by Mr. A. P. Vivian, M.P.
1900	Do. Fine crystals, on "combed" structure. <i>Loc.</i> , Laurium mines, Greece. <i>Obs.</i> , presented by Mr. A. P. Vivian, M.P.



Catalogue Number.	<i>ZINC GROUP—Continued.</i>	
	<i>CALAMINE—Continued.</i>	
1901	Do.	Botryoidal mass. <i>Loc.</i> , Cumberland. <i>Obs.</i> , presented by Mr. Rd. Pearce.
1902	Do.	Green coating, on massive. <i>Loc.</i> , Cumberland.
1903	Do.	Yellowish-green mass, polished to shew structure. <i>Loc.</i> , Cumberland.
2100	Do.	Pale greenish-white, in cellular mass. <i>Loc.</i> , Park Mine, Minera, near Wrexham. <i>Obs.</i> , presented by Capt. E. Bryan.
1905	Do.	Greenish-white concentric bands. <i>Loc.</i> , Cumberland.
1906	Do.	Bright bluish-green, coating mammillary. <i>Loc.</i> , Caldbeck Fell, Cumberland.
1907	Do.	Cellular mass, with white crystals. <i>Loc.</i> , Carthagen, Spain. <i>Obs.</i> , presented by Mr. B. Kitto.
1908	WILLEMITE.—Blue mammillary mass, with greenish-yellow crystals. <i>Loc.</i> , Carrock Fell.	
1909	Do.	Reddish-white, stalactitic.
1910	Do.	Light-green mammillary coating, on massive
1911	Do.	Greenish crystals, curved. <i>Loc.</i> , Alston Moor.
1912	Do.	Dark-brown mammillary mass, on Quartz.
1913	BLENDE.—Fine crystalline mass.	
1914	Do.	Small highly-modified crystals, on Quartz.
1915	Do.	Fine octahedrons, unequally developed.
1916	Do.	Large imperfect crystals. <i>Loc.</i> , Cumberland. <i>Obs.</i> , presented by Mr. Rd. Pearce.
1917	Do.	Crystalline mass, with Barytes and Pyrites. <i>Loc.</i> , Cumberland. <i>Obs.</i> , presented by Mr. Rd. Pearce.

Catalogue Number.	<i>ZINC GROUP—Continued.</i>
	<b>BLLENDE—Continued.</b>
1918	Do. Large modified tetrahedron, macled.
1919	Do. Indistinct crystals, on Quartz, with Chalcopyrite.
1920	Do. Very large tarnished tetrahedrons, modified.
1921	Do. Small crystals, with Chalybite and Galena. <i>Loc.</i> , Garras mine, near Truro.
1922	Do. Small highly modified crystals. <i>Loc.</i> , Cornwall.
1923	Do. Fine macled tetrahedrons, with Quartz and Fluor.
1924	Do. Highly modified tetrahedrons, on Quartz, with Pearl Spar. <i>Loc.</i> , Alston Moor, Cumberland.
1925	Do. Large modified tetrahedron.
1926	Do. Beautifully iridescent crystals, on killas.
1927	Do. Large positive and negative tetrahedrons.
1928	Do. Brown crystals, on Fluor.
1929	Do. Minute red crystals, on Quartz. <i>Loc.</i> , Garras Mine. <i>Obs.</i> , presented by Mr. H. F. Collins.
1930	Do. Brown, botryoidal, coating Galena.
2102	Do. ( <i>Bluestone.</i> )—Compact mass. <i>Loc.</i> , Mona Mines, Anglesey. <i>Obs.</i> , presented by Dr. C. Le Neve Foster.
1759	<b>GREENOCKITE.</b> —Yellow efflorescence, on Quartz.
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	<b>CHROMIUM GROUP.</b>
1931	<b>CHROMITE.</b> —Dark, massive. <i>Loc.</i> , Corrie Burn, Perthshire. <i>Obs.</i> , presented by Mr. W. J. Henwood.
1932	Do. Dark, massive. <i>Loc.</i> , Baltimore.

Catalogue Number.	<i>CHROMIUM GROUP—Continued.</i>
	<i>CHROMITE—Continued.</i>
1933	Do. Dark, massive. <i>Loc.</i> , Frankenstein, Silicia.
1935	CROCOISITE.—Fine crystals, on soft killas <i>Loc.</i> , Minaes Geraes, Brazil.
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	<i>URANIUM GROUP.</i>
1936	PITCHBLEND.—Dark mass. <i>Loc.</i> , Huel Trenwith.
1937	Do. Dark mass, with Chalcopyrite and uranium ochre. <i>Loc.</i> , Russel District, Gilpin Co., Colorado. <i>Obs.</i> , presented by Mr. Rd. Pearce.
1939	Do. Dark mass, with cobalt ore. <i>Loc.</i> , St. Austell Consols. <i>Obs.</i> , presented by Capt. R. H. Williams.
1934	Do. Dark, very compact. <i>Loc.</i> , Bohemia. <i>Obs.</i> , presented by Capt. R. H. Williams.
1840	AUTUNITE.—Greenish-yellow flakes, on black gozzan.
1841	Do. Greenish-yellow flakes, on black gozzan.
1793	Do. Greenish-yellow flakes, on black gozzan.
1942	TORBERNITE.—Thick tables, shewing pyramid and basal plane. <i>Loc.</i> , South Huel Basset. <i>Obs.</i> , presented by Mr. Sam. Michell.
1943	Do. Large eight-sided scales, on ferruginous Quartz.
1944	Do. Fine rectangular prisms, on Quartz. <i>Loc.</i> , South Huel Basset.
1945	Do. Small eight-sided tables, on capel.
1946	Do. Small crystals, some beautifully macled.
1947	Do. Small eight-sided scales, on quartz, some beauti- fully macled. <i>Loc.</i> , Huel Buller.

Catalogue Number.	<i>URANIUM GROUP—Continued.</i>
<b>TORBERNITE—Continued.</b>	
1948	Indistinctly aggregated crystals, on Quartz.
1950	Do. Light-green aggregates, on gozzan.
1951	Do. Indistinct crystals, pyramidal, on Quartz.
1952	Do. Small eight-sided plates, drusy, on Quartz.
1953	Do. Fine large plates, on Quartz. <i>Loc.</i> , Gunnislake.
1954	Do. Fine prisms, deeply striated, on gozzan. <i>Loc.</i> , South Huel Basset. <i>Obs.</i> , presented by Mr. Samuel Michell.
1955	Do. Dark-green crystals, shewing two pyramids and two prisms.
1956	Do. Large scales, on Limonite.
1957	Do. Light-green crystals, on Quartz.
1958	Do. Light-green coating, on granite. <i>Loc.</i> , Huel Edward, St. Just.
1959	URANOCIRCITE.—Light greenish-yellow scales, on Quartz. <i>Loc.</i> , Falkenstein.
—◆—	
<b>MOLYBDENUM GROUP.</b>	
1960	MOLYBDENITE.—Very fine flaky masses, with Pyrites on Quartz. <i>Loc.</i> , Virgin Gorda Mine, West Indies. <i>Obs.</i> , presented by Capt. Joel Hitchens,
1961	Do. Small scales, with Gilbertite, in granite. <i>Loc.</i> , St. Day United Mines. <i>Obs.</i> , presented by Capt. J. Blight.
1962	Do. Large scales, on pink granite. <i>Loc.</i> , Loch Tay Side, Perthshire. <i>Obs.</i> , presented by Mr. W. J. Henwood.
1963	Do. Small bunches, on Quartz. <i>Loc.</i> , Norway.
1964	Do. Brilliant scales, in a granitic rock.

Chalcogen Number	<i>MOLYBDENUM GROUP—Continued.</i>
	<i>MOLYBDENITE—Continued.</i>
1965	Brilliant masses, in a dark volcanic rock. <i>Loc.</i> , Wallaroo, Australia. <i>Obs.</i> , presented by Mr. S. Higgs.
1966	Do. Brilliant crystals in a felspathic rock. <i>Loc.</i> , Tomnadashan Mine, Perthshire. <i>Obs.</i> , presented by Mr. W. J. Henwood.
1967	Do. Large scales, with mica, on Quartz.
	<i>TUNGSTEN GROUP.</i>
1968	WOLFRAM.—Large crystals, with Pyrites, in Quartz. <i>Loc.</i> , East Pool Mine. <i>Obs.</i> , presented by Capt. John Hosking.
1969	Do. Brilliant crystals, in Quartz. <i>Loc.</i> , Prospidnick Mine, Sithney. <i>Obs.</i> , presented by Mr. J. H. Collins.
1970	Do. Minute acicular crystals, in Quartz. <i>Loc.</i> , Poldice Mine. <i>Obs.</i> , presented by Mr. Rickard.
1971	Do. Very fine crystal. <i>Loc.</i> , Saxony.
1972	Do. Very fine crystals. <i>Loc.</i> , Saxony.
1973	Do. Radiated mass, in Quartz.
1974	SCHEELITE.—Beautiful little crystals on Quartz, with Wolfram and Mica. <i>Loc.</i> , Saxony.
1975	Do. Divergent, fibrous, on Quartz. <i>Loc.</i> , Saxony.
1976	Do. Small crystals, on Quartz. <i>Loc.</i> , Saxony.
1977	Do. Indistinct crystals, in Chlorite.
1978	Do. Indistinct crystals, in Chlorite, with Cassiterite <i>Loc.</i> , Huel Friendship.
1979	Do. Fine pyramids, on Quartz. <i>Loc.</i> , Saxony.

Catalogue Number.	<i>TUNGSTEN GROUP—Continued.</i>
	<b>SCHEELITE.—Continued.</b>
1980	Massive brown. <i>Loc.</i> , Val Toppa, Italy. <i>Obs.</i> , presented by Dr. C. Le Neve Foster.
1981	Do. Very fine crystal, with felspar. <i>Loc.</i> , Traversella.
1792	Do. Large crystals, in Wolfram, <i>Loc.</i> , Saxony.
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	<b>TITANIUM GROUP.</b>
1982	BROOKITE.—Very fine crystals, in a granitic rock.
1983	ANATASE.—Brilliant prisms, in Chlorite. <i>Loc.</i> , Virtuous Lady Mine, Tavistock.
1984	Do. Brilliant prism-pyramids, in Chlorite. <i>Loc.</i> , Virtuous Lady Mine, Tavistock.
1985	RUTILE.—Fine crystals, in Pyrophyllite. <i>Loc.</i> , Mount Titanium.
1986	Do. Reticulated crystals, on Quartz. <i>Loc.</i> , Pfitschthal, Tyrol.
1987	Do. Very fine prisms, in greyish-green talc schist.
1988	Do. Very fine light-red prism.
1989	MANACCANITE.—Dark crystalline grains. <i>Loc.</i> , Manaccan.
1990	SPHENE.—Very fine crystal, in hornblende rock, with garnet. <i>Loc.</i> , Norway.
1991	Do. Fine crystals, in Epidote. <i>Loc.</i> , Norway.
1992	Do. Very fine crystals in Felspar. <i>Loc.</i> , Norway.
1993	Do. Portion of a large crystal. <i>Loc.</i> , Norway.
1994	YTTROTANTALITE.—Amorphous, black, in felspar. <i>Loc.</i> , Norway.

Catalogue Number.	<i>TITANIUM GROUP—Continued.</i>
	<i>YTTROTANTALITE—Continued.</i>
1995	Amorphous, black, in felspar. <i>Loc.</i> , Norway.
1749	Do. Large black mass. <i>Loc.</i> , Ytterby, Norway.
1750	Do. Black grains, in pink felspar. <i>Loc.</i> , Ytterby, Norway.
1996	<i>TANTALITE</i> —Black prisms, in felspar. <i>Loc.</i> , Norway.
1997	Do. Very fine crystal. <i>Loc.</i> , Norway.

CATALOGUE  
OF THE  
PROVINCIAL TOKENS  
OF  
GREAT BRITAIN AND IRELAND.  
IN THE MUSEUM  
OF THE  
ROYAL INSTITUTION OF CORNWALL.

BY J. H. JAMES.

No. of Specimens.	Nominal Value.	17TH CENTURY.	
d.		CORNWALL.	
		FALMOUTH.	
1	$\frac{1}{4}$	Obv.—“ <i>Michaell Russell</i> ”	Arms, Three Escallops
		Rev.—“ <i>In Smithicks.</i> ”—“M.A.R.”	
		HELSTON	
1	$\frac{1}{4}$	Obv.—“ <i>William Penhalorick.</i> ”—“W.P.”	
		Rev.—“ <i>Of Helston, 1667.</i> ”—“W.P.”	
1	$\frac{1}{4}$	Obv.—“ <i>Peter Priske of.</i> ” “1668.”	
		Rev.—“ <i>Hellston, Cornwel.</i> ”—“P.P.”	
1	$\frac{1}{4}$	Obv.—“ <i>Richard Rogers.</i> ”	The Mercers’ Arms
		Rev.—“ <i>Of Helston.</i> ” “1668.”	“R.T.R.”
		MARAZION.	
1	$\frac{1}{4}$	Obv.—“ <i>Thomas Corey.</i> ” “1668”	
		Rev.—“ <i>In Marasion.</i> ”—“T.P.C”	
		PENRYN.	
1	$\frac{1}{4}$	Obv.—“ <i>Michael Coodo.</i> ”	Armorial bearings.
		Rev.—“ <i>Of Penrin, 1667.</i> ”—“M.C.”	
2	$\frac{1}{4}$	Obv.—“ <i>Thomas Spry, 1667.</i> ”—Arms of Spry and Melhuish.	
		Rev.—“ <i>Of Penrin, Cornwall.</i> ”—“T.S.”	conjoined.
1	$\frac{1}{4}$	Obv.—“ <i>Thomas Worth.</i> ”—A double-headed Eagle.	
		Rev.—“ <i>In Cornwall, 1665.</i> ”—“T.W.”	



No. of Specimens. Nominal Value.		17TH CENTURY.	
d.		<b>CORNWALL—Continued.</b>	
		<b>REDRUTH.</b>	
2	½	Obv.—“ <i>Anthony Cocks.</i> ”—Three Cocks.	
		Rev.—“ <i>Of Redruth, 1666.</i> ”—“A.C.”	
2	½	Obv.—“ <i>Anthony Cocks.</i> ”—Three Cocks in escutcheon.	
		Rev.—“ <i>Of Redruth, 1666.</i> ”—“A.M.C.”	
		<b>TRURO.</b>	
1	½	Obv.—“ <i>Matthew Rowett.</i> ”—The Mercers’ Arms.	
		Rev.—“ <i>Of Truro, 1668.</i> ”—“M.A.R.”	
1	½	Obv.—“ <i>Thomas Trewillow.</i> ”—Three Owls.	
		Rev.—“ <i>In Trewrow, 1667.</i> ”—Three Owls.	
		<b>UNCERTAIN</b>	
1	½	Obv.—“ <i>In Cornwall.</i> ”—“T.R.”	
		Rev.—“ <i>Mercer, 1667.</i> ”—Detrited.	
		<b>DEVONSHIRE.</b>	
		<b>PLYMOUTH.</b>	
1	½	Obv.—“ <i>Thomas Powell.</i> ”—Detrited.	
		Rev.—“ <i>Plymouth, 1661.</i> ”—“T.I.P.”—Detrited.	
		<b>HAMPSHIRE.</b>	
		<b>ROMSEY.</b>	
1	½	Obv.—“ <i>Edmond Yonge.</i> ”—Three Crowns.	
		Rev.—“ <i>In Romsey, 1664.</i> ”—“EAY.”	
		<b>LINCOLNSHIRE.</b>	
		<b>GRANTHAM.</b>	
1	½	Obv.—“ <i>By ye Overseers of ye Poore, Grantham, 1667</i> ”	
		Rev.—“ <i>A Halspeny to be exchaingd.</i> ”—Arms of Town.	
		<b>NOTTINGHAMSHIRE.</b>	
		<b>ORSON.</b>	
1	½	Obv.—“ <i>William and Arthur.</i> ”	
		Rev.—“ <i>Collings of Orson.</i> ”—W.A.C.	
		<b>SOMERSETSHIRE,</b>	
		<b>BRISTOL.</b>	
2	½	Obv.—“ <i>A Bristoll Farthing.</i> ”—“C.B., 1662.”	
		Rev.—“ <i>The Armes of Bristoll.</i> ”—Arms of City.	
		<b>TAUNTON.</b>	
1	½	Obv.—“ <i>A Taunton Farthing.</i> ”—A Tun on letter T.	
		Rev.—“ <i>By the Constables.</i> ”—A Castle.	

No. of Specimens		Nominal Value		18TH AND 19TH CENTURIES.	
				ENGLAND.	
				SILVER.	
				LONDON.	
1	6	Obv.—	View of Monument.—“ <i>Charing Cross.</i> ”	Rev.—	Arms of City of London.—“ <i>Sixpenny Silver Token.</i> ”
1	6	Obv.—	“ <i>London Token for Sixpence payable at S. Lloyds', Bucklersbury, 1811.</i> ”	Rev.—	Figure of Britannia.—“ <i>England, Ireland, Scotland, &amp; Wales.</i> ”
				C O P P E R.	
				CAMBRIDGESHIRE.	
				COUNTY.	
1	½	Obv.—	Beehives and Bees.—“ <i>Industry has its sure reward.</i> ”	Rev.—	A Druid's head in profile—“ <i>1795, Current in the Counties of.</i> ”
		Edge—	“ <i>Cambridge, Bedford, and Huntingdon.</i> ”		
1	½	Obv.—	Beehives and Bees.—“ <i>Industry has its sure reward.</i> ”	Rev.—	A Druid's head in profile—“ <i>1795, Current in the Counties of.</i> ”
		Edge—	Milled.		
				CHESTER.	
				MACCLESFIELD.	
2	½	Obv.—	Cipher R & Co. Crest Beehive and Bees.—“ <i>Macclesfield.</i> ”	Rev.—	Female Figure sitting holding Mining Tools. “ <i>Halfpenny,</i> ”
		Ex	“ <i>1719.</i> ”		
		Edge—	“ <i>Payable at Macclesfield, Liverpool, or Congleton.</i> ”		
1	½	Obv.—	Head in profile. “ <i>Charles Roe established the Copper Works, 1758.</i> ”	Rev.—	Female Figure sitting holding Mining Tools.—“ <i>Macclesfield Halfpenny,</i> ” Ex.: “ <i>1791.</i> ”
		Edge—	Payable at Macclesfield, Liverpool, or Congleton.		
				CORNWALL.	
				COUNTY.	
2	½	Obv.—	A Druid's head in profile encircled with wreath of Oak.	Rev.—	Arms and Coronet—“ <i>Cornish Copper half-an-ounce, 1791.</i> ”
				FALMOUTH.	
2	½	Obv.—	Arms.—Small border around edge.	Rev.—	Small ornament at the top and border around Edge—“ <i>Falmouth Independent Volunteers, 1797.</i> ”
		Edge—	Milled.		

No. of Specimens Material Value.	
	18TH AND 19TH CENTURIES.
	d. <b>CORNWALL—Continued.</b>
	<b>PENRYN.</b>
2 ½	Obv.—The De Dunstanville Arms.—Ex. : “ <i>Lord De Dunstanville, Colonel.</i> ” Rev.—Small Roman Head and Trophies of War.—“ <i>Penryn Volunteers.</i> ”—Ex. : “First enrolled April 3, 1794.”
	<b>CORNISH MINES.</b>
2 1	Obv.—“ <i>Success to the Cornish Mines</i> ”—In circle in centre—“ <i>Penny Piece, 1812.</i> ” Rev.—The De Dunstanville Arms. Edge—Milled.
	<b>DOLCOATH MINE.</b>
2 1	Obv.—“ <i>Payable in Cash Notes at Dolcoath Mine.</i> ”—In circle in centre—“ <i>Cornish Penny.</i> ” Rev.—The De Dunstanville Arms. Edge—Milled.
	<b>SCORRIER HOUSE.</b>
2 1	Obv.—Mine at Work.—“ <i>Payable at Scorrier House,</i> ” Ex. : “ <i>One pound for 24 Tokens, 1812.</i> ” Rev.—Prince of Wales’ Plume—“ <i>Cornish Penny</i> ” on Garter. Edge—Milled.
2 1	Obv.—A Pilchard between 3 Blocks of Tin and 4 Cakes of Copper—“ <i>For the accommodation of the County.</i> ” Rev.—Mine at Work—“ 1812 ”—“ <i>Cornish Penny.</i> ” Edge—Milled.
	<b>WEST WHEAL FORTUNE MINE.</b>
2 1	Obv.—Prince of Wales’ Plume—“ <i>West Wheal Fortune One Penny Token.</i> ” Rev.—View of St. Michael’s Mount—“ <i>Cornish Mount One Penny Token.</i> ” Edge—Milled.
	<b>DEVONSHIRE.</b>
	<b>EXETER.</b>
2 ½	Obv.—Three-quarter figure of Bishop Blaize, holding Comb in one hand and Book in the other—“ <i>Success to the Woollen Manufactory.</i> ” Rev.—Arms, Supporters, Crest and Motto of City—“ <i>Exeter Half-penny,</i> ” Ex. : “ 1796.” Edge—“ <i>Payable at the Warehouse of Samuel Kingdon.</i> ”

No. of Specimens	Nominal Value	18TH AND 19TH CENTURIES.	
		d.	
			<b>DEVONSHIRE—Continued.</b>
			<b>PLYMOUTH.</b>
2	½		Obv.—Woman sitting Spinning at a Wheel—" <i>Sail Canvas Manu- factory.</i> " Ex: "1796." Rev.—Man weaving in a Loom—" <i>Plymouth Halfpenny.</i> " Edge—" <i>Payable at Shephard, Dove, Hammett &amp; Co.</i> "
			<b>TAVISTOCK.</b>
1	1		Obv.—Prince of Wales' Plume—" <i>Tavistock Penny Token.</i> " Rev.—Mine at work—" <i>Devon Mines, 1811.</i> " Edge—Milled.
			<b>DORSETSHIRE</b>
			<b>POOLE.</b>
1	½		Obv.—Arms of Town—" <i>Prosperity to the Town of Poole, 1795.</i> " Rev.—Figure of Hope leaning on an Anchor, supporting an Oval inscribed " <i>Jas. Bayley, Draper, Poole.</i> " Edge—" <i>I promise to pay on demand one halfpenny.</i> "
1	½		Obv.—Arms of Town—" <i>Prosperity to the Town of Poole, 1795.</i> " Rev.—Figure of Hope leaning on an Anchor, supporting an Oval inscribed " <i>Jas. Bayly, Draper, Poole.</i> " Edge—Milled.
			<b>SHERBORNE.</b>
1	½		Obv.—Arms of Town. " <i>Sherborne Halfpenny, 1793.</i> " Rev.—Cipher—"P.P. & W." under Beehive and Bees. Edge—" <i>Payable at the Bank in Sherborne, Dorset.</i> "
			<b>ESSEX</b>
			<b>COLCHESTER.</b>
2	½		Obv.—View of Colchester Castle.—Ex "1794." Rev.—A Loom—" <i>Success to the Bay Trade.</i> " Edge—" <i>Payable at Charles Heath's, Baymaker, Colchester.</i> "
			<b>WARLEY.</b>
1	½		Obv.—Head in profile—" <i>George, Prince of Wales.</i> " Rev.—Prince of Wales' Crest and Motto—" <i>Halfpenny.</i> " Ex. "1794." Edge—" <i>Warley Camp Halfpenny.</i> "
			<b>GLOUCESTERSHIRE</b>
			<b>BRIMSCOMBE PORT.</b>
1	½		Obv.—A Barge sailing—" <i>Thames and Severn Canal.</i> " Ex. "MDCCXCV." Rev.—View of Entrance to Tunnel. Edge—" <i>Payable at Brimscombe Port.</i> "

No. of Specimens Nominal Value	18TH AND 19TH CENTURIES.
d.	<b>HAMPSHIRE</b>
2 ½	<b>EMSWORTH.</b> Obv.—Head in profile with Hat—" <i>Earl Howe and the Glorious First of June.</i> " Rev.—Britannia seated on Globe with Spear and Shield—" <i>Rule Britannia,</i> " Ex. "1795." Edge—" <i>Emsworth Halfpenny payable by John Stride.</i> "
2 ½	<b>GOSPORT.</b> Obv.—Helméd Head in profile—" <i>Promissory Halfpenny.</i> " Rev.—Large Ship in full sail—" <i>Pro bono publico.</i> " Ex. "1794." Edge—" <i>Payable at J. Jordan's, Draper, Gosport.</i> "
2 ½	<b>PETERSFIELD.</b> Obv.—Man on Horseback—" <i>Petersfield.</i> " Rev.—A Stork—" <i>Promissory Halfpenny, 1793.</i> " Edge—" <i>James Holland and Andrews, Petersfield.</i> "
2 ½	<b>PORTSEA.</b> Obv.—Arms and Crest of Town—" <i>Portsea Halfpenny,</i> " Ex. "1794" Rev.—Ship sailing, at the bottom Sprigs of Leaves—" <i>Payable.</i> " Edge—" <i>At George Edward Sargeant's, Portsea.</i> "
2 ½	Obv.—St. George and the Dragon—" <i>Promissory Halfpenny,</i> " Ex. 1796." Rev.—Man of War in full sail, a large Fish swimming underneath. Edge—" <i>Payable at S. Salmon, J. Courtney, &amp; E. Frost, Portsea.</i> "
2 ½	<b>PORTSMOUTH.</b> Obv.—Head in profile—" <i>John Howard, F.R.S., Philanthropist.</i> " Rev.—Sun and Moon over a Castle—" <i>Portsmouth and Chichester Halfpenny.</i> " Edge—" <i>Payable at Sharp's Portsmouth, and Chaldecott's, Chichester</i> "
2 ½	Obv.—Head in profile—" <i>John Howard, F.R.S., Philanthropist.</i> " Rev.—Sun and Moon over a Castle—" <i>Chichester and Portsmouth Halfpenny.</i> " Edge—" <i>Payable at Sharp's Portsmouth, and Chaldecott's Chichester</i> "
2 ½	<b>SOUTHAMPTON.</b> Obv.—Helméd Head in profile—" <i>Sr Bevois, Southampton.</i> " Rev.—Rose and Crown in Shield—" <i>Promissory Halfpenny, 1791.</i> " Edge—" <i>Payable at the Office of W. Taylor, E. V. Moody &amp; Co.</i> "

No. of Specimens Noted Value.	d.	18TH AND 19TH CENTURIES.	
		<b>WIGHT, ISLE OF.</b>	
1	½	Obv.—An Ancient Ship in a Circle—" <i>Isle of Wight Halfpenny, 1792.</i> "	
		Rev.—Head in profile—" <i>Robert Bird Wilkins.</i> "	
		Edge—" <i>Payable at his Office, Newport.</i> "	
		<b>HEREFORDSHIRE</b>	
		<b>HEREFORD.</b>	
1	½	Obv.—An Apple Tree—" <i>Success to the Cider Trade.</i> "—" <i>Hereford Halfpenny.</i> "—" <i>C. Honiatt, Birm. Warehouse.</i> "	
		Rev.—Figure of Justice standing—" <i>For Change not Fraud,</i> " Ex. "1794."	
		Edge—Milled.	
		<b>KENT</b>	
		<b>APPLEDORE.</b>	
1	½	Obv.—A Windmill—" <i>The Union of Appledore, Kent, 1794.</i> "	
		Rev.—A Lion and a Lamb lying in a Field of Corn—" <i>Peace, Innocence, and Plenty.</i> "	
		Edge—" <i>Payable by W. Friggles, Goudhurst.</i> "	
		<b>CANTERBURY.</b>	
1	½	Obv.—Arms of City and Mural Crown—" <i>Protection to our King and Country Laws and Trade, 1794.</i> "	
		Rev.—View of Cathedral—" <i>Unity, Peace, and Concord, Good Will to all Men.</i> " Ex. " <i>Canterbury Token.</i> "	
		Edge—" <i>Payable at James Robertson's.</i> "	
		<b>GOUDHURST.</b>	
1	½	Obv.—A prancing Horse—" <i>Kent Halfpenny Token.</i> " Ex. "1794."	
		Rev.—Arms of Town—" <i>For General Convenience.</i> "	
		Edge—" <i>Payable by W. Myns, Goudhurst.</i> "	
		<b>LANCASHIRE</b>	
		<b>LANCASTER.</b>	
1	½	Obv.—Crowned Head in profile, Star underneath—" <i>John of Gaunt, Duke of Lancaster, 1791.</i> "	
		Rev.—Arms—" <i>Lancaster Half-penny.</i> "	
		Edge—" <i>Payable at the Warehouse of Thomas Worswick &amp; Sons.</i> "	
1	½	Obv.—Crowned Head in profile, Star underneath—" <i>John of Gaunt, Duke of Lancaster.</i> "	
		Rev.—Arms—" <i>Lancaster Half-penny, 1792.</i> "	
		Edge—" <i>Payable in London, Bristol, and Lancaster.</i> "	

## 18TH AND 19TH CENTURIES.

No. of Specimens.	Nominal Value.	
d.		
<b>LANCASHIRE—Continued</b>		
<b>LANCASTER.</b>		
1	½	Obv.—Head in profile—" <i>John Wilkinson, Iron Master.</i> " Rev.—Figure of Vulcan at Work, part of Ship at a distance—" <i>Halfpenny.</i> " Ex "1792." Edge—" <i>Payable in Lancaster, London, or Bristol.</i> "
<b>LIVERPOOL.</b>		
2	½	Obv.—Ship sailing, at bottom Sprigs of Leaves—" <i>Liverpool Halfpenny.</i> " Rev.—Arms—" <i>Deus nobis hæc olia fecit, 1791.</i> " Edge—" <i>Payable at the Warehouse of Thomas Clarke.</i> "
1	½	Obv.—Ship sailing, at bottom Sprigs of Leaves—" <i>Liverpool Halfpenny.</i> " Rev.—Arms—" <i>Deus nobis hæc olia fecit, 1792.</i> " Edge—" <i>Payable in London or Anglesea.</i> "
1	½	Obv.—Ship sailing, at bottom Sprigs of Leaves—" <i>Liverpool Halfpenny.</i> " Rev.—Arms—" <i>Deus nobis hæc olia fecit, 1791.</i> " Edge—" <i>Payable at the Warehouse of Thomas Clarke.</i> "
1	½	Obv.—Ship sailing, at bottom Sprigs of Leaves—" <i>Liverpool Halfpenny.</i> " Rev.—Head in profile with Hat—" <i>Earl Howe and the glorious first of June.</i> " Edge—" <i>Birmingham, Redruth, and Swansea.</i> "
<b>MANCHESTER.</b>		
1	½	Obv.—A Porter carrying a Pack—" <i>Manchester Halfpenny,</i> " Ex "1793." Rev.—Arms—" <i>Success to Navigation.</i> " Edge—" <i>Payable at J. Fielding's, Manchester.</i> "
1	½	Obv.—A Porter carrying a Pack—" <i>Manchester Halfpenny,</i> " Ex "1793." Rev.—Arms—" <i>Success to Navigation.</i> " Edge—Engrailed.
1	½	Obv.—Grocers' Arms, Supporters Crest and Motto—" <i>Manchester Promissory Halfpenny, 1793.</i> " Rev.—East India Company's Tea Mark—" <i>Payable at Jno. Fielding's, Grocer and Tea Dealer.</i> " Edge—Plain.

No. of Specimens. Nominal Value.		18TH AND 19TH CENTURIES.	
d.		LINCOLNSHIRE	
		WAINFLEET.	
1	$\frac{1}{2}$	Obv.—Figure of Hope standing—" <i>Wainfleet Halfpenny</i> ," Ex. "1793."	
		Rev.—View of Wainfleet Abbey—" <i>Founded by William Waynflete, 1459.</i> "	
		Edge—" <i>Payable at the Warehouses of D. Wright and S. Palmer.</i> "	
		MIDDLESEX	
		CHELSEA.	
1	$\frac{1}{2}$	Obv.—Sailor with a Wooden Leg presenting a Petition to Britannia—" <i>Chelsea.</i> " Ex. " <i>Halfpenny.</i> "	
		Rev.—Figure of Hope—" <i>The Support of our Endeavours.</i> " Ex. "1795."	
		Edge—Milled.	
		HENDON.	
1	$\frac{1}{2}$	Obv.—View of Church—" <i>Hendon, value One halfpenny</i> ," Ex. "1794."	
		Rev.—Profile Head—" <i>David Garrick, Esq.</i> "	
		Edge—Plain.	
		HORNSEY.	
1	$\frac{1}{2}$	Obv.—View of Church—" <i>Hornsey Halfpenny.</i> " Ex. "1797."	
		Rev.—" <i>A speedy and lasting peace</i> " between Branches.	
		Edge—Engrailed.	
		LONDON.	
1	$\frac{1}{2}$	Obv.—A Girl sitting under a Tree making Lace—" <i>Lace Manufactory.</i> "	
		Rev.—A Lamb—" <i>Pay at Leighton, Berkemsted, or London, 1794.</i> "	
		Edge—" <i>Chambers, Langston, Hall and Co.</i> "	
1	$\frac{1}{2}$	Obv.—Head of Neptune with Trident—" <i>Halfpenny.</i> "	
		Rev.—Four men in a Boat killing a Whale—Ex. " <i>Whale Fishery, 1794.</i> "	
		Edge—" <i>Payable at J. Fowler's, London.</i> "	
1	$\frac{1}{2}$	Obv.—Head of Shakespeare in profile—" <i>London and Middlesex.</i> "	
		Rev.—Female Figure sitting on Bale of Goods, holding a Cornucopia—" <i>Halfpenny</i> ," Ex. "1792."	
		Edge—Milled	
2	$\frac{1}{2}$	Obv.—Head in profile—" <i>George Prince of Wales.</i> "	
		Rev.—Prince of Wales' Arms, Supporters Crest and Motto—" <i>London and Middlesex Halfpenny.</i> "	
		Edge—" <i>Payable in Lancaster, London, or Bristol.</i> "	



## 18TH AND 19TH CENTURIES.

No. of Specimens. Nominal Value.	d	
		<b>MIDDLESEX</b> -- <i>Continued</i>
		<b>LONDON.</b>
2 ½		Obv.—Mail Coach travelling—" <i>Mail Coach Halfpenny, payable in London.</i> " Ex. " <i>To Trade Expedition, and to Property Protection.</i> "
		Rev.—" <i>To J. Palmer, Esq., this is inscribed as a Token of Gratitude for Benefits reced. from the establishment of Mail Coaches</i> "—Small cipher J.F., encircled with Palm Branches underneath.
		Edge—Plain.
2 ½		Obv.—Front View of Prison—" <i>Newgate MDCCXCIV.</i> "
		Rev.—" <i>Payable at the Residence of Messrs. Symonds, Winterbotham, Ridgway and Holt.</i> "
		Edge—Milled.
1 ½		Obv.—Female Figure, seated with sword in one hand and supporting the Arms of City with the other—" <i>Siss Lane Halfpenny,</i> " Ex. "1795."
		Rev.—Crown upon a Triangle supported by two Hands in the centre—" <i>Br. Constitution</i> " radiated " <i>King, Lords, Commons.</i> "
		Edge—" <i>Payable at the House of T. and R. Davidson.</i> "
1 ½		Obv.—Fire Stove—" <i>Payable at Skidmore's Furnishing Repository, No. 123, High Holborn, London.</i> "
		Rev.—Forge—" <i>Manufactory and Iron Foundry, Clerkenwell, 1793.</i> "
		Edge—Milled.
1 ½		Obv.—A Plough—" <i>Industry supplieth Want.</i> " Ex. "1796."
		Rev.—A Stag—" <i>Freedom with Innocence.</i> "
		Edge—" <i>Payable in London.</i> "
1 ½		Obv.—Royal Arms Supporters and Crest—" <i>Francis Shackelton, London.</i> "
		Rev.—A Candle Mould—" <i>Fine Mould and Store Candles, 1794.</i> "
		Edge—" <i>Payable in Suffolk Street, Haymarket.</i> "
1 ½		Obv.—A printing press—" <i>Sic oritur Doctrina Surgatque Libertas, 1794.</i> "
		Rev.—" <i>Payable at the Franklin Press, London.</i> "
		Edge—Plain.
1 ½		Obv.—Head, Front Face—" <i>J. Lackington.</i> " Ex. "1794."
		Rev.—Figure of Fame blowing Trumpet—" <i>Halfpenny of J. Lackington and Co., The Cheapest Booksellers in the World.</i> "
		Edge—" <i>Asylum for the oppressed of all Nations.</i> "

No. of Specimens Original Value		18TH AND 19TH CENTURIES.	
d.		<b>MIDDLESEX—Continued.</b>	
		<b>LONDON—Continued.</b>	
1	½	Obv.—Head, Front Face—"J. Lackington, 1795, Finsbury Square"	
		Rev.—Figure of Fame blowing Trumpet—"Halfpenny of Lackington, Allen, & Co.," "Cheapest Booksellers in the World."	
		Edge—Milled.	
		<b>MONMOUTHSHIRE</b>	
		<b>MONMOUTH.</b>	
1	½	Obv.—A Cask—"James Powell, Importer, 1795."	
		Rev.—Bunch of Grapes at the top, Sprigs of Vine at the bottom—"J. Powell, Wine and Brandy Merchant, Monmouth."	
		Edge—"Payable at Monmouth and Abergavenny."	
		<b>NORFOLK</b>	
		<b>NORWICH.</b>	
1	½	Obv.—Ancient Fortress on a Hill and part of a Bridge—"Norwich Castle."	
		Rev.—A Fleece—"Good Times will come MDCCXCIV."	
		Edge—"Richard Bacon, Cockey Lane."	
2	½	Obv.—Arms of City—"Norfolk and Norwich Halfpenny, 1792."	
		Rev.—A Castle and Lion—"May Norwich flourish; Pro bono publico."	
		Edge—"Payable at N. Bolingbroke's, Haberdasher, &c., Norwich."	
2	½	Obv.—A Key in a Frame—"1794."—"Payable at Bullen and Martin's, Market Place, Norwich."	
		Rev.—A Shuttle and Plough—"Success to the Plough and Shuttle."	
		Edge—Plain.	
2	½	Obv.—A Castle and a Lion in a ribbed Shield—"1792."	
		Rev.—A Man weaving in a Loom.	
		Edge—"John Harvey of Norwich."	
1	½	Obv.—A Castle and a Lion in a plain Shield—"1792."	
		Rev.—A Man weaving in a Loom.	
		Edge—"John Harvey of Norwich."	
1	½	Obv.—Arms between Palm Branches, Crest a Mural Crown, behind the Arms a Sword and Mace—"Success to the City of Norwich."	
		Rev.—An Eagle—"Norwich Halfpenny." Ex. "1793."	
		Edge—"Payable at the Shop of Dunham and Yallop, Goldsmiths."	
		<b>YARMOUTH.</b>	
1	½	Obv.—A Ship in full Sail—"Yarmouth Halfpenny." Ex. "1792."	
		Rev.—Arms between Sprigs of Oak—"Let Yarmouth Flourish."	
		Edge—"Payable at the Glass Warehouse of W. Absolom."	

## 18TH AND 19TH CENTURIES.

No. of Specimens	Nominal Value.	
	d.	<b>SHROPSHIRE</b>
		<b>COALBROOKDALE.</b>
1	½	Obv.—View of Bridge over Severn—" <i>Iron Bridge at Coalbrookdale, 1792, Erected Anno 1779, Span 100 Feet.</i> " Rev.—Man working Machine—" <i>Inclined Plane at Ketley, 1789.</i> " Edge—" <i>Payable at Coalbrookdale and Ketley.</i> "
		<b>SHREWSBURY.</b>
1	½	Obv.—Arms—" <i>Shrewsbury Halfpenny, 1793.</i> " Rev.—A Woolpack—" <i>Salop Woollen Manufactory.</i> " Edge—" <i>Payable at Shrewsbury.</i> "
1	½	Obv.—Arms—" <i>Shrewsbury Halfpenny, 1794.</i> " Rev.—A Woolpack—" <i>Salop Woollen Manufactory.</i> " Edge—" <i>Payable at London, York, or Lancaster.</i> "
		<b>SOMERSETSHIRE</b>
		<b>BATH.</b>
1	½	Obv.—Arms of City—" <i>W. Gye, Printer and Stationer, Bath, 1794.</i> " Rev.—Benevolence sitting giving directions to a figure with a Key in his hand to open the Prison Door—" <i>Go forth</i> " in rays of sun " <i>Remember the Debtors in Ilchester Gaol.</i> " Edge—" <i>Payable at W. Gye's, Printer, Bath.</i> "
2	½	Obv.—View of Entrance to Botanic Garden—" <i>He spake of Trees from the Cedar Tree that is in Lebanon.</i> " Ex. " <i>Bath Token, 1794.</i> " Rev.—Plants growing on a Wall and a Tree—" <i>Even unto the Hyssop that springeth out of the Wall.</i> " Ex. " <i>1 Kings, ch. 4, v. 33.</i> " Edge—Plain.
1	½	Obv.—Crowned Head in profile with Bow and Quiver—" <i>Success to the Bath Waters, Bladud Founder of Bath.</i> " Rev.—View of Building—" <i>West Front of New Pump Room, Bath,</i> " Ex. " <i>Heath 1795, Ironmonger, &amp;c.</i> " Edge—Milled.
1	½	Obv.—Arms and Supporters of City in Sunk Oval—" <i>Bath City Token.</i> " Rev.—View of Building. Ex. " <i>All Saint's Chapel.</i> " Edge—Plain.
1	½	Obv.—Arms and Supporters of City in sunk Oval—" <i>Bath City Token.</i> " Rev.—View of Building—" <i>Cross Bath Pump Room.</i> " Edge—Plain.

No. of Specimens Serial Value.	
d.	
	<b>SOMERSETSHIRE—Continued</b>
	<b>BATH.</b>
1 ½	Obv.—Arms and Supporters of City in sunk Oval—" <i>Bath City Token.</i> " Rev.—View of Building—" <i>General Hospital.</i> " Ex. " <i>Open to People of all Countries, Bath alone excepted.</i> " Edge—Plain
2 ½	Obv.—Monogram L—" <i>Bath Farthing Token, 1795.</i> " Rev.—Tea Chest inscribed—" <i>M. Lambe and Son, Grocers, Bath</i> " —" <i>Spices, Teas, Sugars, Coffees.</i> " Edge—Milled.
1 ½	Obv.—View of Building—" <i>Stall Street, Bath.</i> " Ex. " <i>India House, 1794.</i> " Rev.—Tea Chest inscribed—" <i>M. Lambe and Son, Grocers, Bath</i> " —" <i>Spices, Teas, Sugars, Coffees.</i> " Edge—Plain.
	<b>BRIDGWATER.</b>
1 ½	Obv.—Arms of Town—" <i>B. water Halfpenny,</i> " " <i>For Change, not Fraud.</i> " Rev.—View of House—" <i>J. Holloway and Son, Drapers, &amp;c., Post Office.</i> " Ex. " <i>1794.</i> " Edge—" <i>On Demand we promise to pay.</i> "
	<b>BRISTOL.</b>
1 ½	Obv.—A Tower and Spire of a Church—" <i>One Halfpenny, Hawkins Bird.</i> " Rev.—View of Building—" <i>Payable at the India Tea Warehouse, 1793.</i> " Edge—Milled.
1 ½	Obv.—A Tower and Spire of a Church—" <i>One Halfpenny, Hawkins Bird,</i> " " <i>Wine Street, No. 2, Bristol.</i> " Rev.—View of Building—" <i>Payable at the India Tea Warehouse, 1793.</i> " Edge—Milled.
2 ½	Obv.—A large Chest. Crest a Leopard—" <i>General Commission and Public Sale Room, Bridge Street, Bristol.</i> " Rev.—Figure of Justice standing. " <i>1795.</i> " " <i>Payable at Niblock and Hunter's.</i> " Edge—Plain.
1 ½	Obv.—Two Men in Conversation—" <i>I want to buy 'some cheap bargains. Then go to Niblock's, in Bridge Street.</i> " Rev.—View of a Bridge—" <i>Bristol Token,</i> " Ex. <i>1795.</i> " Edge—Plain.

## 18TH AND 19TH CENTURIES.

No. of Specimens.	Nominal Value.		
	d.	<b>SOMERSETSHIRE—Continued.</b>	
		<b>BRISTOL—Continued.</b>	
2	1	Obv.—Prince of Wales' Plume and Motto—" <i>One Penny Token, Bristol and South Wales.</i> "	
		Rev.—Arms and Crest of City—" <i>Virtute et Industria, 1811.</i> "	
		Edge—Milled.	
1	1	Obv.—B.B. & Copper Co.—" <i>One Penny payable at Bristol, Swansea and London.</i> "	
		Rev.—Arms and Crest of City—" <i>Virtute et Industria, 1811.</i> "	
		Edge—Milled.	
		<b>STAFFORDSHIRE</b>	
		<b>LEEK.</b>	
2	$\frac{1}{2}$	Obv.—A Caduceus supported by a large Bale of Goods lying across a Chest—" <i>Leek Commercial Halfpenny, 1793.</i> "	
		Rev.—Two hands united and an Olive Branch—" <i>Arte favente nil desperandum.</i> "	
		Edge—" <i>Payable at Leek, Staffordshire.</i> "	
		<b>SUFFOLK</b>	
		<b>BECCELES.</b>	
2	$\frac{1}{2}$	Obv.—View of part of a Church—" <i>B' Ecclesia.</i> "	
		Rev.—A Bridge. " <i>F.S.U.</i> " on a Label at the bottom—" <i>Communitate Aucta, 1795.</i> "	
		Edge—" <i>Payable at Beccles, Suffolk.</i> "	
		<b>BUNGAY.</b>	
2	$\frac{1}{2}$	Obv.—View of Ruins of a Castle—" <i>Bungay Halfpenny,</i> " Ex. " <i>Bigod's Castle.</i> "	
		Rev.—Figure of Justice standing—" <i>For Change, not Fraud.</i> " Ex. " <i>1794.</i> "	
		Edge—Plain.	
		<b>BURY.</b>	
1	$\frac{1}{2}$	Obv.—Arms of Town—" <i>Success to the Plough and Fleece.</i> "	
		Rev.—Cipher P.D. above a Crown between Palm and Laurel Branches—" <i>The Commerce of Britain.</i> "	
		Edge—" <i>Payable at P. Deck's, Post Office, Bury.</i> "	
1	$\frac{1}{2}$	Obv.—Arms of Town—" <i>Success to the Plough and Fleece.</i> "	
		Rev.—Cipher P.D. above a Crown between Palm and Laurel Branches—" <i>The Commerce of Britain.</i> "	
		Edge—" <i>Payable at Edinburgh, Glasgow, and Dumfries.</i> "	

No. of Specimens Nominal Value.	18TH AND 19TH CENTURIES.
d.	<b>SUFFOLK—Continued</b>
	<b>IPSWICH.</b>
2 $\frac{1}{2}$	Obv.—Ancient Market Cross—" <i>Ipswich Cross</i> ." Ex. "1794."
	Rev.—" <i>Payable at Conder's Drapery Warehouse, Ipswich.</i> "
	Edge—Milled.
1 $\frac{1}{2}$	Obv.—Arms Supporters and Crest of Town, Motto on Label under-
	neath—" <i>Kings, Lords, and Commons.</i> "
	Rev.—Ship sailing and a Man ploughing—" <i>God preserve the</i>
	<i>Plough and Sail.</i> "
	Edge—" <i>Payable at Robert Manning's, Ipswich.</i> "
	<b>LOWESTOFT.</b>
1 $\frac{1}{2}$	Obv.—Bathing Machines in Water—" <i>Lowestoft Token.</i> " " <i>Sea</i>
	<i>Bath, 1793.</i> " " <i>R.P.</i> "
	Rev.—Men in Boats fishing—" <i>Success to the Fisheries.</i> "
	Edge—Milled.
	<b>GUILDFORD. SUSSEX</b>
1 $\frac{1}{2}$	Obv.—Arms of Town—" <i>Guildford Halfpenny.</i> "
	Rev.—Bust of Bishop Blaize and a Woolpack—" <i>Success to the</i>
	<i>Woollen Manufactory.</i> "
	Edge—Plain.
	<b>CHICHESTER. SUSSEX</b>
1 $\frac{1}{2}$	Obv.—Front Face of Queen Elizabeth with Crown and Sceptre—
	" <i>Queen Elizabeth.</i> "
	Rev.—View of Chichester Cross—" <i>Chichester Halfpenny.</i> " Ex.
	"1794."
	Edge—Plain.
	<b>HASTINGS.</b>
1 $\frac{1}{2}$	Obv.—Sloop sailing, Sprigs of Leaves at the bottom—" <i>Success and</i>
	<i>Safety attend the Endeavour.</i> "
	Rev.—Arms between Palm and Laurel Branches—" <i>Hastings</i>
	<i>Halfpenny, 1794.</i> "
	Edge—" <i>Payable at James Tobay's, Hastings.</i> "
	<b>LAMBERHURST.</b>
1 $\frac{1}{2}$	Obv.—Arms between Sprigs of Laurel—" <i>Sussex Halfpenny Token,</i>
	1794."
	Rev.—A Hop Garden—" <i>May Hops for ever Flourish.</i> "
	Edge—" <i>Payable by J. Foster, Lamberhurst.</i> "
	<b>WINCHELSEA.</b>
1 $\frac{1}{2}$	Obv.—Arms of Town—" <i>Winchelsea Halfpenny, 1794.</i> "
	Rev.—Beehives and Bees between Shrubs—" <i>Industry the source</i>
	<i>of Content.</i> "
	Edge—" <i>Payable at Richard Maplesden's, Winchelsea.</i> "

## 18TH AND 19TH CENTURIES.

No. of Specimens.	Nominal Value.	d.	
			<b>WARWICKSHIRE</b>
			<b>BIRMINGHAM.</b>
2	½	<p>Obv.—Female Figure seated on a Rock holding Fasces, under the Rock a small "W"—"<i>Birmingham Mining and Copper Company.</i>" Ex. "1791."  Rev.—A Stork standing on a Cornucopia of Flowers and Fruit—" <i>Halfpenny payable at</i>"  Edge—" <i>Birmingham, Redruth, and Swansea.</i>"</p>	
1	½		
1	½		
2	½	<p>Obv.—Female Figure seated on a Rock holding Fasces—" <i>Birmingham Mining and Copper Company.</i>" Ex. 1792."  Rev.—A Stork standing on a Cornucopia of Flowers and Fruit—" <i>Halfpenny payable at</i>"  Edge—" <i>Birmingham, Redruth, and Swansea.</i>"</p>	
1	½		
1	½		
2	½	<p>Obv.—Head in profile—" <i>Dr. Samuel Johnson.</i>"  Rev.—Three Lions—" <i>Promissory Halfpenny payable at</i>"  Edge—" <i>Birmingham, W.hampton, or Litchfield.</i>"</p>	
2	½		
1	½		
2	½	<p>Obv.—A Boy standing leaning on a Screw—" <i>Birmingham Halfpenny.</i>" Ex. "1793."  Rev.—Arms of Town. Crest. Hedgehog—" <i>Industry has its sure reward.</i>"  Edge—" <i>Current everywhere.</i>"</p>	
1	½		
1	½		
			<b>COVENTRY.</b>
2	½	<p>Obv.—Lady Godiva on Horseback—" <i>Pro bono publico.</i>" Ex. "1792."  Rev.—An Elephant carrying a Castle—" <i>Coventry Halfpenny.</i>"  Edge—" <i>Payable at the Warehouse of Robert Reynolds and Co.</i>"</p>	
1	½		
1	½		
2	½	<p>Obv.—Lady Godiva on Horseback—" <i>Pro bono publico.</i>" Ex. "1793."  Rev.—An Elephant carrying a Castle—" <i>Coventry Halfpenny.</i>"  Edge—" <i>Payable in Bedworth, Hinkley, or Nuneaton.</i>"</p>	
1	½		
1	½		
1	½	<p>Obv.—Arms and Crest of Town—" <i>The Arms of Coventry, 1797,</i>"  " <i>P. Kempson Fecit.</i>"  Rev.—View of Ruins—" <i>Remains of Cathedral.</i>" Ex. " <i>Erected 1043.</i>"  Edge—" <i>Coventry Token.</i>"</p>	
1	½		
1	½		

## 18TH AND 19TH CENTURIES.

No. of Specimens, Nominal Value.	
d.	<b>WARWICKSHIRE—Continued</b>
2 $\frac{1}{2}$	<b>COVENTRY—Continued.</b>
	Obv.—Arms and Crest of Town—" <i>The Arms of Coventry, 1797,</i> "
	" <i>P. Kempson Fecit.</i> "
	Rev.—View of a Church—" <i>Trinity Church.</i> "
2 $\frac{1}{2}$	Edge—" <i>Coventry Token.</i> "
	Obv.—Lady Godiva on Horseback—" <i>Pro bono publico.</i> " Ex.
	" <i>1794.</i> "
	Rev.—An Ancient Cross—" <i>Coventry Halfpenny.</i> " Ex. " <i>Cov: Cross</i> "
	Edge—" <i>Payable at the Warehouse of Robert Reynolds and Co.</i> "
1 $\frac{1}{2}$	<b>WILLEY.</b>
	Obv.—Head in profile—" <i>John Wilkinson, Iron Master.</i> "
	Rev.—A Man working at a Forge—Ex. " <i>1790.</i> "
1 $\frac{1}{2}$	Edge—" <i>Willey, Snedshill, Bersham, Bradley.</i> "
	Obv.—Head in profile—" <i>John Wilkinson, Iron Master.</i> "
	Rev.—A Man working at a Forge—Ex. " <i>1792.</i> "
1 $\frac{1}{2}$	Edge—" <i>Willey, Snedshill, Bersham, Bradley.</i> "
	Obv.—Head in profile—" <i>John Wilkinson, Iron Master.</i> "
	Rev.—A Man working at a Forge—Ex. " <i>1793.</i> "
1 $\frac{1}{2}$	Edge—" <i>Willey, Snedshill, Bersham, Bradley.</i> "
	Obv.—Head in profile—" <i>John Wilkinson, Iron Master.</i> "
	Rev.—A Man working at a Forge—Ex. " <i>1792.</i> "
1 $\frac{1}{2}$	Edge—" <i>Payable in Anglesey, London, or Liverpool.</i> "
	<b>WILTSHIRE.</b>
	<b>SALISBURY.</b>
1 $\frac{1}{2}$	Obv.—View of Cathedral—" <i>Cathedral Church,</i> " Ex. " <i>of Sarum.</i> "
	Rev.—Grocers' Arms, Supporters, Crest and Motto—" <i>Fine Teas,</i>
	<i>&amp;c.</i> " " <i>1796.</i> "
	Edge—" <i>Payable at J. and T. Sharpe's, Salisbury.</i> "
	<b>YORKSHIRE.</b>
	<b>HULL.</b>
2 $\frac{1}{2}$	Obv.—Large Ship in full Sail—" <i>Pro bono publico,</i> " Ex. " <i>1794.</i> "
	Rev.—Arms between Sprigs of Oak—" <i>Hull Halfpenny, 1791.</i> "
	Edge—" <i>Payable in London, Bristol, and Lancaster.</i> "
1 $\frac{1}{2}$	Obv.—Equestrian Statue of William III—" <i>Gulielmus Tertius</i>
	<i>Rex.</i> " " <i>MDCLXXXIX.</i> "
	Rev.—Arms between Sprigs of Oak—" <i>Hull Halfpenny, 1791.</i> "
	Edge—" <i>Payable at the Warehouse of Jonathan Garton &amp; Co.</i> "



## 18TH AND 19TH CENTURIES.

No of Specimens	Denom- inal Value	
d.		
<b>YORKSHIRE—Continued.</b>		
<b>HULL—Continued.</b>		
1	$\frac{1}{2}$	Obv.—A Dove with Olive Branch flying and Cornucopia of Fruit and Flowers—"Peace and Plenty." Rev.—A Man weaving in a Loom. Edge—"Payable in Hull and in London."
<b>LEEDS.</b>		
1	$\frac{1}{2}$	Obv.—Head in profile of Bishop Blaize and Comb—"Success to the Yorkshire Woollen Manufactory." Rev.—View of Leeds Wool Hall—"Leeds Halfpenny," Ex. "1793." Edge—"Payable at H. Brownbill's, Silversmith."
2	$\frac{1}{2}$	Obv.—Whole length figure of Bishop Blaize and a Lamb—"Artis nostræ conditor." Rev.—Arms—Crest an Owl—"Leeds Halfpenny, 1791." Edge—"Payable at the Warehouse of Richard Paley."
<b>SHEFFIELD.</b>		
1	$\frac{1}{2}$	Obv.—Arms of Tower—"Sheffield Halfpenny, Payable at John Hands." Rev.—Four Hands united—"Love, Peace, and Union." Edge—Engrailed.
<hr/> <b>WALES.</b>		
1	$\frac{1}{2}$	Obv.—Laurelled Head with Sprigs underneath—"Medallion of St. David." Rev.—Shield with Prince of Wales' Feathers, "1793" over Shield—"Pro bono publico." Edge—Plain.
<b>NORTH WALES.</b>		
2	$\frac{1}{2}$	Obv.—A Druid's Head in profile encircled with Wreath of Oak. Rev.—Cipher R.N.G.—"North Wales Halfpenny, 1793." Edge—"Payable in London, Bristol, and Lancaster."
1	$\frac{1}{2}$	Obv.—A Druid's Head in profile, encircled with open Wreath of Oak. Rev.—Harp between Sprigs of Oak, small ornament at the top—"North Wales Halfpenny, 1793." Edge—"Payable at London or Anglesea."
1	$\frac{1}{2}$	Obv.—A Druid's Head in profile encircled with Wreath of Oak— Rev.—Harp between Sprigs of Oak, small ornament at the top—"North Wales Halfpenny, 1793." Edge—"Payable at London or Anglesea."

No. of Specimens Metallic Value.	18TH AND 19TH CENTURIES.
d.	
	<b>NORTH WALES—Continued.</b>
1 ½	Obv.—Head in profile—"John Wilkinson, Iron Master." Rev.—A Crown and Harp—"North Wales." Edge—Plain.
1 ½	Obv.—Helméd Head in profile—"Sr Bevois, Southamton." Rev.—A Crown and Harp—"North Wales." Edge—Plain.
1 ½	Obv.—Head in profile—"Sr Bevois, Southamton." Rev.—A Crown and Harp—"North Wales"—Device—Inscription reversed and indented. Edge—Plain.
	<b>ANGLESEA.</b>
	COUNTY.
1 1	Obv.—Druid's Head in profile encircled with thick Wreath of Oak. Rev.—Cipher P.M.Co. Date "1787" above Cipher—Border of Dots—"We promise to pay the Bearer One Penny." Edge—"On Demand in London, Liverpool, or Anglesey."
1 1	Obv.—Druid's Head in profile encircled with open Wreath of Oak and Border of Acorns. Rev.—Cipher P.M.Co. Date "1788" above Cipher—Border of Acorns—"We promise to pay the Bearer One Penny." Edge—"On Demand in London, Liverpool, or Anglesey."
2 ½	Obv.—Druid's Head in profile encircled with open Wreath of Oak. Rev.—Cipher P.M.Co.—"The Anglesey Mines Halfpenny, 1788." Edge—"Payable in Anglesey, London, or Liverpool."
	<b>CARMARTHENSHIRE.</b>
	CARMARTHEN.
2 ½	Obv.—Inside View of a Blast Furnace—"Caermarthen Ironworks,"—Ex. "Halfpenny." Rev.—Inside View of a Forge—"Kidwelly, Whitland, Blackpool, and Cwmdwyfron Forges," Ex. "J. Morgan." Edge—"Payable in London, Bristol, and Caermarthen."
	<b>FLINTSHIRE.</b>
	COUNTY.
1 1	Obv.—View of Lead Works, "1813."—"Flint Lead Works." Rev.—"One Penny Token" within circle in centre—"One Pound for 240 Tokens." Edge—Milled.

No. of Specimens, Nominal Value.		18TH AND 19TH CENTURIES.	
d.		<b>GLAMORGANSHIRE.</b>	
		<b>GLAMORGAN.</b>	
2	$\frac{1}{2}$	Obv.—Head in profile—"Jestyn-ap-Gorgan Tywysog Morgannwg, 1091." Rev.—Figure of Britannia seated on a Globe with Spear and Shield pointing to a Ship in the distance, behind her a Crown on a pedestal and Olive Branch—"Y. Brehin-w-Gyfraith," Ex. "1795." Edge—"Glamorgan Halfpenny."	
		<b>SWANSEA.</b>	
2	$\frac{1}{2}$	Obv.—View of Swansea Castle—"Swansea Halfpenny, 1796." Rev.—A Key—"John Voss, Draper, &c." Edge—"Payable on Demand." Remainder engraved.	
		<b>SCOTLAND.</b>	
		<b>ANGUSSHIRE.</b>	
		<b>DUNDEE.</b>	
1	$\frac{1}{2}$	Obv.—Arms of Town—"Payable at W. Croom's, High Street, Dundee." Rev.—"Sells Wholesale Woolen & Linen Drapery Goods, Watches, &c., &c., Cheap." Edge—Plain.	
		<b>LANARKSHIRE.</b>	
		<b>GLASGOW.</b>	
2	$\frac{1}{2}$	Obv.—Arms of Glasgow—"Let Glasgow Flourish." Rev.—River Deity "Clyde," "Nunquam arecercs," Ex. "MDCCXCI-RD." Edge—"Payable at the House of Gilbert Shearer & Co."	
		<b>LOTHIAN.</b>	
		<b>EDINBURGH.</b>	
1	$\frac{1}{2}$	Obv.—St. Andrew and Cross between Thistles—"Nemo me impune lacessit." Ex. "1790." Rev.—Arms—Crest, Anchor and Cable between Thistles—"Edinburgh Halfpenny." Edge—"Payable at the Warehouse of Thos. & Alexr. Hutchinson."	
1	$\frac{1}{2}$	Obv.—St. Andrew and Cross between Thistles—"Nemo me impune lacessit." Ex. "1791." Rev.—Arms—Crest, Anchor, and Cable between Thistles—"Edinburgh Halfpenny." Edge—"Payable at the Warehouse of Thos. & Alexr. Hutchinson."	

No. of Specimens Nominal Value.		18TH AND 19TH CENTURIES.	
	d.	<b>LOTHIAN—Continued.</b>	
		<b>LEITH.</b>	
1	$\frac{1}{2}$	Obv.—Ship sailing, at the bottom Sprigs of Leaves—" <i>Leith Halfpenny.</i> "	
		Rev.—Figure of Britannia seated—" <i>Leith Halfpenny,</i> " Ex. "1797."	
		Edge—" <i>Payable in Leith, Edinburgh, and Glasgow.</i> "	
		<b>I R E L A N D.</b>	
1	$\frac{1}{2}$	Obv.—Laurelled Head in profile—" <i>Voco Populi.</i> "	
		Rev.—Hibernia seated.	
		Edge—Plain.	
1	$\frac{1}{2}$	Obv.—Laurelled Head, "P" on one side of Head—" <i>Voco Populi.</i> "	
		Rev.—Hibernia seated.	
		Edge—Plain.	
1	$\frac{1}{2}$	Obv.—Laurelled Head in profile—" <i>George Ford's Token.</i> "	
		Rev.—Harp Crowned—" <i>Ireland.</i> "	
		Edge—Plain.	
1	$\frac{1}{2}$	Obv.—Head,—Front Face—" <i>J. Lackington.</i> "	
		Rev.—Figure of Hope leaning on an Anchor—Ex. "1795."	
		Edge—Plain.	
2	$\frac{1}{2}$	Obv.—Head in profile—" <i>John Wilkinson, Iron Master.</i> "	
		Rev.—Hibernia seated—" <i>Incorporated by Act of Parliament,</i> " Ex. "1792."	
		Edge—Plain.	
2	$\frac{1}{2}$	Obv.—Head in profile—" <i>Shakespeare.</i> "	
		Rev.—Hibernia seated—" <i>Incorporated by Act of Parliament, 1792</i> "	
		Edge—Plain.	
		<b>DUBLIN.</b>	
		<b>DUBLIN.</b>	
2	$\frac{1}{2}$	Obv.—Female Figure sitting holding Harp—" <i>Incorporated by Act of Parliament, 1792.</i> "	
		Rev.—Cipher H.M.Co.—" <i>Camac Kyan and Camac Halfpenny.</i> "	
		Edge—" <i>Payable in Dublin or Ballymurtagh.</i> "	
1	$\frac{1}{2}$	Obv.—Female Figure sitting holding Harp—" <i>Industry has its sure reward, 1792.</i> "	
		Rev.—Cipher R.L.T. & Co.—" <i>Pro bono publico.</i> "	
		Edge—Plain.	

## 18TH AND 19TH CENTURIES.

No. of Specimen Nominal Value.	d.	
<b>DUBLIN—Continued.</b>		
1	$\frac{1}{2}$	Obv.—Female Figure sitting holding Harp—“ <i>Industry has its sure reward, 1792.</i> ” Rev.—Cipher R. L. T. & Co.—“ <i>Pro bono publico.</i> ” Edge—“ <i>Payable in Dublin or Derry.</i> ”
1	$\frac{1}{2}$	Obv.—Figure of Justice standing—“ <i>For the Honor and use of Trade.</i> ” Rev.—A Sugar Loaf and Bottle “ <i>Brandy,</i> ” “ <i>Talbot Fyem, Grocer, Poolbeg Street, Dublin, 1794.</i> ” Edge—“ <i>Halfpenny payable at Dublin, Cork, or Derry.</i> ”
1	$\frac{1}{2}$	Obv.—Figure of Justice standing holding pair of Scales in right hand, “1794” on sides of Figure—“ <i>The Land we live in.</i> ” “ <i>Halfpenny.</i> ” Rev.—Cipher L. & R. encircled with Wreath of Oak. Edge—“ <i>Payable in Dublin or Harolds Cross Button Factory.</i> ”
1	$\frac{1}{2}$	Obv.—Figure of Justice standing holding Pair of Scales in left hand, “1794” on sides of Figure—“ <i>The Land we live in.</i> ” “ <i>Halfpenny.</i> ” Rev.—Cipher L. & R., at the bottom Sprigs of Leaves—“ <i>Pro me si merear in me.</i> ” Edge—“ <i>Payable in Dublin or Harolds Cross Button Factory.</i> ”
1	$\frac{1}{2}$	Obv.—Figure of Hope standing—“ <i>Irish Halfpenny,</i> ” Ex. “1795.” Rev.—Ship sailing, at the bottom Sprigs of Leaves—“ <i>Navigation and Trade.</i> ” Edge—“ <i>Payable in Dublin, Cork, and Belfast.</i> ”
1	$\frac{1}{2}$	Obv.—Three Castles between Oak and Palm Branches—“ <i>Dublin Halfpenny.</i> ” Rev.—Harp on a Rock, and a Ship in the distance—“ <i>God grant Peace.</i> ” Edge—Plain.
1	$\frac{1}{2}$	Obv.—Prince of Wales’ Crest—“ <i>Halfpenny,</i> ” “ <i>Payable at Dublin, Cork, or Limerick, 1794.</i> ” Rev.—Cipher H. S. & Co. between Laurel Branches. Edge—Plain.
1	$\frac{1}{2}$	Obv.—Head in profile—“ <i>Freds. Duke of York Halfpenny, 1795.</i> ” Rev.—Small Ship of War sailing—“ <i>The Wooden Walls of Old England.</i> ” Edge—“ <i>Payable at Dublin or at Ballymurtagh.</i> ”

## 18TH AND 19TH CENTURIES.

No. of Specimens	Nominal Value.	
d.		
<b>WICKLOW.</b>		
<b>CRONEBANE.</b>		
1	$\frac{1}{2}$	Obv.—Bishop's Head in profile and Crosier—" <i>Cronebane Half-penny.</i> " Rev.—Arms—Crest, a Crank, date on sides " 1789 "—" <i>Associated Irish Mines Company.</i> " Edge—" <i>Payable at Cronebane Lodge or in Dublin.</i> "
1	$\frac{1}{2}$	Obv.—Bishop's Head in profile and Crosier—" <i>Cronebane Half-penny.</i> " Rev.—Arms—Crest, a Crank, date on sides " 1789 "—" <i>Associated Irish Miners' Arms.</i> " Edge—" <i>Payable in Lancaster, London, or Bristol.</i> "
1	$\frac{1}{2}$	Obv.—Bishop's Head in profile and Crosier—" <i>Cronebane Half-penny.</i> " Rev.—Arms—Crest, a Crank, date on sides " 1795 "—" <i>Associated Irish Miners' Arms.</i> " Edge—" <i>Payable in Dublin, Cork, or Derry.</i> "
1	$\frac{1}{2}$	Obv.—Bishop's Head in profile and Crosier—" <i>Cronebane Half-penny.</i> " Rev.—Arms—Crest, a Crank—" <i>Associated Irish Miners' Arms.</i> " Edge—Plain.
1	$\frac{1}{2}$	Obv.—Head in profile, with Hat—" <i>Earl Howe &amp; the glorious first of June.</i> " Rev.—Arms—Crest, a Crank—" <i>Associated Irish Miners' Arms.</i> " Edge—Plain.
<hr/> <hr/>		
<b>NOT LOCAL.</b>		
2	$\frac{1}{2}$	Obv.—Freemasons' Arms, Supporters, Crest, and Motto—" 24 Nov., 1790, <i>Prince of Wales elected G.M.</i> " Rev.—Cupid and Emblems of Masonry in Triangle—" <i>Sit Lux et Lux fuit.</i> " " <i>Wisdom, Strength, and Beauty.</i> " Edge—" <i>Payable in Lancaster, London, or Bristol.</i> "
1	$\frac{1}{2}$	Obv.—Head in profile—" <i>George Prince of Wales.</i> " Rev.—Prince of Wales' Crest and Motto—" <i>Halfpenny, 1795</i> " " <i>Industry is the Parent of Success.</i> " Edge—" <i>Payable in Lancaster, London, or Bristol.</i> "
1	$\frac{1}{2}$	Obv.—Head in profile—" <i>Fredk. Duke of York Halfpenny, 1795.</i> " Rev.—A small Ship sailing—" <i>The Wooden Walls of Old England.</i> " Edge—" <i>Payable in Lancaster, London, or Bristol.</i> "

## 18TH AND 19TH CENTURIES.

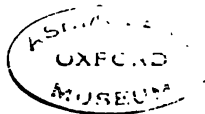
No. of Specimens.	Nominal Value.	
	d.	NOT LOCAL—Continued.
2	$\frac{1}{2}$	Obv.—Head—Front face—"Princess of Wales." Rev.—Prince of Wales' Crest in radiated Circle—"May the Union be crowned with Happiness, 1795." Edge—"Payable at London, Liverpool, or Bristol."
1	$\frac{1}{2}$	Obv.—"A Negro Slave in Chains in supplicating posture—"Am I not a Man and a Brother." Rev.—Two hands united—"May Slavery & Oppression cease throughout the World." Edge—"Payable at London, Liverpool, or Bristol."
1	$\frac{1}{2}$	Obv.—Head in profile—"Fredk. Duke of York Halfpenny., 1795." Rev.—Man of War in full sail—"The Guard & Glory of Britain" Edge—"Payable in Suffolk, Bath, or Manchester."
1	$\frac{1}{2}$	Obv.—View of Building—"East India House." Rev.—Grocers' Arms—"Halfpenny, 1793." Edge—"London, Bristol, and Liverpool."
1	$\frac{1}{2}$	Obv.—Head in profile with Hat—"Earl Howe & the glorious First of June." Rev.—A Ship sailing, at the bottom Sprigs of Leaves—"Halfpenny." Edge—"Current everywhere."
1	$\frac{1}{2}$	Obv.—Head in profile with Hat—"Earl Howe & the glorious First of June." Rev.—A Square of Daggers, the word "Fire" at each corner—a Foot in the middle, under it the word "Honor," over it "France," and the word "Throne" bottom upwards—on one side "Glory" defaced, on the other "Religion" divided—"A Map of France, 1794." Edge—"Current everywhere."
1	$\frac{1}{2}$	Obv.—Head in profile—"John Howard, F.R.S., Philanthropist." Rev.—Figure of Britannia seated on Globe, with Spear and Shield—"Rule Britannia." Ex. "1795." Edge—"Current everywhere."
2	$\frac{1}{2}$	Obv.—Head in profile—"Sr. Isaac Newton." Rev.—A Caduceus—Olive Branch and Cornucopia of Flowers—"Halfpenny, 1793." Edge—Engrailed.

## 18TH AND 19TH CENTURIES.

No. of Specimens, Nominal Value.	d.	
<b>NOT LOCAL—Continued.</b>		
2	$\frac{1}{2}$	Obv.—Laurelled Bust in profile—"Payable at J. Kilvington's." Rev.—Figure of Britannia seated on Globe with Spear and Shield —"Brunswick Halfpenny." Ex. "1795." Edge—Engrailed.
1	$\frac{1}{2}$	Obv.—Laurelled Bust in profile—"Brunswick Halfpenny, 1795." Rev.—Arms of Lancaster—"Halfpenny, 1794." Edge—Plain.
1	$\frac{1}{2}$	Obv.—Head in profile—"Alexr. Cornwall." Rev.—Prince of Wales' Crest on Shield between Sprigs of Laurel in which is "For Trade."—Date on sides "1795." Edge—Plain.
1	$\frac{1}{2}$	Obv.—Laurelled Head—"Brutus Sextus." Rev.—Britannia seated—"Britannia." Edge—Plain.
1	$\frac{1}{2}$	Obv.—Head in profile—"John Howard, F.R.S., Halfpenny." Rev.—Figure of Britannia seated on Globe, with Spear and Shield —"Rule Britannia." Edge—Plain.
1	$\frac{1}{2}$	Obv.—Head in profile with Hat—"Earl Howe & the First of June, 1794." "Halfpenny, 1795." Rev.—Man of War Sailing—"The Guard & Glory of Britain." Edge—Plain.
1	$\frac{1}{2}$	Obv.—Bust in profile—"John Kemp." Rev.—Female Figure seated holding a Palm Branch—"Unity and Peace." Edge—Plain.
1	$\frac{1}{2}$	Obv.—Head in profile—"Shakespeare." Rev.—Female Figure seated holding Mining Tools—"Halfpenny." Edge—Plain.
1	$\frac{1}{2}$	Obv.—Head in profile—"Shakespeare." Rev.—Britannia seated on Globe with Spear and Shield—"Rule Britannia," Ex. "177-." Edge—Plain.
1	$\frac{1}{2}$	Obv.—Laurelled Bust in profile—"Gulielmus Shakespear." Rev.—Female Figure seated holding in one hand a pair of Scales, in the other a small Picture—"England's" Ex. "Glory." Edge—Plain.



Specimens No. of National Value.		18TH AND 19TH CENTURIES.
NOT LOCAL—Continued.		
1	$\frac{1}{4}$	Obv.—Laurelled Bust in profile—" <i>George Rules.</i> " Rev.—Britannia seated—" <i>Farthing.</i> " Ex. "1793." Edge—Plain.
1	1	Obv.—" <i>Rose Copper Company</i> "—In circle in centre " <i>Token,</i> 1811." Rev.—" <i>Birmingham and Swansea</i> "—In circle in centre " <i>One</i> <i>Penny.</i> " Edge—Milled.
2	$\frac{1}{2}$	Obv.—" <i>Rose Copper Company</i> "—In circle in centre " <i>Token,</i> 1811." Rev.—" <i>Birmingham and Swansea</i> "—In circle in centre " <i>Half-</i> <i>penny.</i> " Edge—Milled.



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# ROYAL INSTITUTION OF CORNWALL.

## SPRING MEETING.

1879.

THE Spring Meeting of the Royal Institution of Cornwall was held in the Library as usual, on Tuesday, May 27th. The Chair was taken by the President, Mr. W. C. Borlase, F.S.A.; and amongst those present were Drs. Barham and Jago, *Vice Presidents*; Rev. A. P. Moor, Mr. H. O. Remfry, Mr. Alexander Paull, Major Parkyn, *Members of Council*; Mr. J. H. Collins, *Honorary Secretary*; Rev. Canon Cornish, Rev. Canon Harvey, Messrs Criddle, Howard Fox, Robert Fox, Rev. W. Iago, Messrs. Spry, Sowell, R. Symons, A. Wilyams, H. M. Whitley, and others, besides many ladies.

The following Lists of Presents to the Library and Museum were read by the Secretary.

### ADDITIONS TO THE MUSEUM.

<i>Bala Radiata</i> .....	Presented by Mr. C. W. Peach.	
The Little Pilchard .....	Presented by Mr. M. Dunn.	
Jaws of the basking Shark. Two specimens...	Presented by Mrs. H. H. Davi	
Part of the Vertebral Column of ditto.....	Ditto.	ditto.
Flying Fish .....	Ditto.	ditto.
<i>Cyphosoma ornatissima</i> , <i>Hemicidaris intermedia</i> , <i>Ammonites biplex</i> , and other fossils	Presented by Mr. J. H. Collins.	
Tooth of <i>Elephas primigenius</i> , from the elephant gravel near Maidstone .....	Ditto.	ditto.

Perthite from Bathurst, Nova Scotia; Edenite  
from Glen Urquhart, Invernesshire; Antho-  
phyllite from Glen Urquhart; Anthophyllite  
from Hillswick, Shetland, and Kyanite from  
Hillswick ..... Presented by Mr. J. H. Collins.

Three specimens of Graphite, together with  
cracibles, &c., of Graphite and fire-clay ..... Presented by Mr. Arthur Peto.

### EXCHANGES.

A large collection of Mammalian Remains, including those of the Bison, Rein-  
deer, Grizzly Bear, and Two-horned Rhinoceros, from Windy Knoll, Castleton;  
Flint Flakes from Cisbury; Fossil Shells from the Glacial Drift Beds of the Clyde,  
&c., &c.; also many rock specimens, obtained in exchange for duplicate minerals.

### ADDITIONS TO THE LIBRARY.

Results of Astronomical Observations made at  
the Royal Observatory, Cape of Good Hope,  
2 vols. 1859 and 1875..... From H.M. Astronomer at the  
Cape.

Annual Report of the Chief Signal Officer to the  
Secretary of War ..... From the American Government.

Bulletin of International Meteorological  
Observations .. ..... Ditto.

Astronomical, Magnetical and Meteorologi-  
cal Observations, made at the Royal Observa-  
tory, Greenwich, 1876 ..... From the Astronomer Royal.

Reductions of Greenwich Meteorological  
Observations ..... Ditto.

Opie and his Works, being a Catalogue of 760  
Pictures, by Mr. J. Jope Rogers..... From the Author.

Obituary Notices of Astronomers, by Edwin  
Dunkin, F.R.S..... From the Author.

Proceedings of the Literary and Philosophical  
Society of Liverpool ..... From the Society.

Proceedings of the Dorset Natural History and  
Antiquarian Field Club..... From the Club.

Collections Historical and Archæological relating to Montgomeryshire and its Borders. issued by the Powys Land Club .....	From the Club.
Report of the Leeds Philosophical and Literary Society, and List of Members.....	From the Society.
Proceedings of the Yorkshire Geological and Polytechnic Society.....	Ditto.
Proceedings of the Society of Antiquaries of London .....	Ditto.
Journal of the Royal Historical and Archæological Association of Ireland .....	From the Association.
Proceedings of the Geologist's Association .....	Ditto.
Collections of the Surrey Archæological Society .....	From the Society.
Monthly Notices of the Royal Astronomical Society .....	Ditto.
Journal of the Royal Geological Society of Ireland .....	Ditto.
Journal of the Anthropological Institute of Great Britain and Ireland.....	From the Institute.
Journal of the Cambrian Archæological Association .....	From the Association.
Transactions of the Manchester Geological Society .....	From the Society.
Transactions of the Royal Irish Academy .....	From the Academy.
Ancient Note Book of John Elliot .....	From the Rev. Hingston Randolph.
Wesley's Ministerial Itineraries in Cornwall .....	From Mr. B. Symons.

The President delivered the usual address, which is printed *in extenso* in the accompanying "Journal."

The following Papers were read or taken as read:—

*On the Starry Ray, (Raia Radiata).* By Mr C. W. Peach.

*Notes on Cornish Ornithology, 1878-79.* By Mr. E. H. Rodd.

*Notes on some Cornish Fishes.* By Mr. Matthias Dunn.



*Note on the Effects of the Winter on the Shrubs at Penrose.* By Mr. John Jope Rogers.

*On Henry Bone, the Cornish Enamel Painter.* By Mr. John Jope Rogers.

*On an Inscribed Stone at Lanhadron.* By the Rev. Wm. Iago.

*On the Meteorology of the year.* By Dr. C. Barham.

*On the History of the Lizard Lighthouses.* By Mr. Howard Fox.

*Notes on C. S. Gilbert, author of "An Historical Survey of the History of Cornwall."* By Sir John McLean.

The usual votes of thanks were passed to donors to the Museum and Library, and Authors of Papers; and to the President for his conduct in the chair.

# ROYAL INSTITUTION OF CORNWALL.

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## 61ST ANNUAL GENERAL MEETING.

*Held on the 24th November, 1879.*

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The Annual Meeting of the Royal Institution of Cornwall was held in the Library of the Institution, at Truro, on Monday, November 24th, 1879, the President, Mr. W. C. Borlase being in the chair. Among those present were the Lord Bishop of the Diocese; Dr. Jago, F.R.S., *Vice-President*; Mr. R. H. Carter, Dr. C. Le Neve Foster, F.G.S., Rev. Wm. Iago, B.A., Mr. H. S. Leverton, M.R.C.S., Major Parkyn, and Mr. H. O. Remfry, *Members of Council*; Messrs. H. M. Whitley, F.M.S, and J. H. Collins, F.G.S., *Honorary Secretaries*; Rev. G. L. Church, Messrs. T. A. Cragoe, F.R.G.S., S. Pascoe, R. M. Paul, Rev. William Rogers, Messrs. E. G. Spry, E. Sharpe, Silvanus Trevel, H. M. Whitley, F.G.S., &c., &c.

Letters expressing regret at their inability to attend the meeting were read from Sir John St. Aubyn, M.P., and Mr. George Freeth, the latter of whom forwarded a few additional particulars in reference to Glasney College, the cartulary of which, as contributed by Mr. Jonathan Rashleigh, is published in the *Journal* for the past year.

## REPORT OF THE COUNCIL.

Mr. J. H. Collins, F.G.S., read the 62nd annual report of the Council, as follows:—

In presenting this sixty-second Annual Report your Council consider that the present condition and future prospects of the Royal Institution of Cornwall may be regarded with satisfaction.

Since the last annual meeting 12 ordinary members have been elected.\*

On the other hand we have to regret the loss by death of one member—Sir R. R. Vyvyan; and by withdrawal of seven ordinary members and two subscribers.

Two of our ordinary members have become life members by paying the usual composition fee.† The actual gain in strength during the year has therefore been two.

The composition fee payable for life membership has hitherto been £5 5s. As the annual subscription is £1 1s., this is only equal to a subscription for 5 years. It is proposed that in future the life composition shall be £10 10s.

The income of the year has amounted to £199 6s. 9d. as against £190 11s. 10d. last year, while the expenditure has been £239 0s. 4d. as against £203 10s. 10d. During the year, however, we have paid off the remaining portion of the mortgage debt on the Institution, amounting to £36 7s. 10d., so that the actual current expenditure has been about one pound less than that of last year.

Two items in the balance sheet which is appended to this report deserve special mention, and these are closely connected with each other. On the one hand the payments to the printer during the year for two Journals and their illustrations have amounted to no less than £70 as against £45 12s. 6d. last year, while the nett amount received for Journals sold to non-members has this year been £17 12s. 3d. as against £8 18s. 10d. last year.

The admissions to the Museum during the year were as follows :

Admitted free .. ..	2199
By Ticket .. ..	104
By payment 6d. each	316

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Total .. .. 2619

Having during the past few years repaired the exterior of the building at a very considerable expense, your Council are now most anxious to carry out the much needed renovation of the

\* Messrs. W. C. Pendarves, R. M. Paul, E. G. Spry, Henry Lake, Samuel Allport, A. C. Williams, Lewis Evans, Henry Rogers, J. R. Collins, the Rev. G. H. Whitaker, Col. S. G. Bake, and Miss Anna Maria Fox.

† Mr. E. Fox and Major Parkyn.

interior. A commencement has been made on the staircase, and they hope during the coming year to continue the work by putting the No. 1 or Cornish Room in thorough repair, and at the same time to continue the re-arrangement of the Antiquarian and Natural History collections which are placed there. These collections being almost exclusively of local origin should undoubtedly be regarded as the distinguishing feature of the Museum.

For the long room a new mineral case has been purchased—the tenth of the series—and the beautiful and rare minerals formerly placed most unsatisfactorily in No. 1 room have been arranged in it. We have now the whole series of mineral specimens arranged in the rooms in cases of uniform design, except the valuable collection of pseudomorphs, which is temporarily placed in room No. 3.

The catalogue of the metallic portion of the mineral collection is now nearly ready for the printer, and will before long be published for the use of the members.

The number of the Journal just issued will be found well worthy of its predecessors. It is strongly local, a most praiseworthy characteristic.

The valuable series of meteorological observations has been continued by Mr. Newcombe with his accustomed care and regularity, and the usual periodical summaries have been published.

The Royal Institution of Cornwall has always been desirous of promoting the study of natural science, and although a certain measure of success has been attained, it is to be wished that its efforts in this direction were more largely turned to account by those for whose benefit they are more especially intended.

The science classes conducted here by one of our Honorary Secretaries during the last winter were very thinly attended, but the few who did attend were very successful in the May examinations.\*

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\* The successes were as follows:—

	Elementary Stage.		Advanced Stage.	
	1st Class.	2nd Class.	1st Class.	2nd Class.
In Practical Chemistry	1	6	1	1
In Geology	2	2	1	2
In Theoretical Chemistry	2	2	1	1

Mr. Collins is now delivering a course of lectures on "Electricity and Magnetism," which so far has been moderately well attended.

The excursion to the St. Just District under the conduct of the President, was one of the most enjoyable which the Institution has ever known. It will too, no doubt, prove to be of permanent interest, as on this occasion the members were able to examine under the guidance of its discoverer, their worthy President, the newly-exposed remains of certainly the most remarkable ancient burial place ever discovered in the West of England, and probably in the United Kingdom. This remarkable structure which finds its nearest analogue in the "topes" of India, has been fully described and illustrated in the number of the Journal just issued.

Mr. Borlase's two year's tenure of office expires to-day, and your council have the pleasure to propose as his successor the Right Rev. the Lord Bishop of the Diocese.

In place of the two retiring Vice-Presidents they propose Mr. W. C. Borlase and Mr. N. Whitley. Mr. Whitley now retires from the office of Senior Honorary Secretary, to the great regret of all his colleagues. They are deeply sensible of the value of his services through a long series of years, during which he has not only assiduously taken his full share of the duties of his post, but has with rare self-abnegation thrown into our common stock as free contributions a great number of objects of interest collected by him, and also the results of many original researches of high value.

Mr. H. M. Whitley is now a resident in the neighbourhood, and your Council propose him for election as joint Honorary Secretary with Mr. J. H. Collins.

As Treasurer they propose the election of Mr. Arthur Willyams.

As other Members of Council they propose Messrs. R. H. Carter, C. L. Neve Foster, R. S. Hudson, Rev. W. Iago, Mr. H. S. Leverton, Rev. A. P. Moor, Major Parkyn, Messrs. Alexander Paull, H. O. Remfry, and Dr. Barham.

It may reasonably be anticipated that under the influence of the spirit of antiquarian inquiry fostered by Mr. Borlase, and congenial to his proposed successor, a strong impulse will be

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given to the pursuit of Archæology among us; and especially that its literary element will be developed through additions to the books and documents in our library. May we venture to look to the parochial clergy of the county for such results of local research, as they of all men are most able to supply.

In conclusion, your council would request every member and proprietor to use his influence so as to promote the prosperity and extend the usefulness of the Royal Institution of Cornwall.

Dy.

# Royal Institution of Cornwall. BALANCE SHEET, 1879.

Gy.

1879.	£	s.	d.
July 31st.—To Annual Subscriptions	124	5	0
" H.R.H. Prince of Wales	20	0	0
" Visitor's Fees	7	18	6
" Illustration Fund	4	10	0
" Sale of Journals	17	12	3
" Life Membership—Mr. R. Fox	5	5	0
" Sale of Fauna	0	6	0
" Excursion Tickets	19	10	0
Balance	52	5	6

1879.	£	s.	d.
July 31st.—To Balance on last Account	36	7	10
" Cornish Bank (balance of debt)	4	14	0
" Taxes and Insurance	7	8	11
" Repairs	44	0	0
" Curator's Salary	11	2	9
" Museum Expenses	65	16	0
" Journals, Reports, &c.	4	4	0
" Illustrations for Do.	9	3	3
" Postages and Carriage	20	0	0
" Editing Journal and superintending	0	11	8
" Museum	0	18	0
" Sundries	4	16	0
" Conversazione	1	1	0
" Printing and Stationery	1	1	0
" Ray Society	1	0	0
" Palaeontographical Society	0	10	0
" Meteorological Society	1	1	0
" Journal of Geological Society	0	10	0
" Botanical Magazine	1	6	6
" British Rainfall, and Magazine	1	8	11
" Nature	0	11	2
" Science Journal	21	8	4
" Geological Record	2251	12	3
" Expenses of Excursion			
	2251	12	3

The Rev. W. ROGERS moved the adoption of the report, and expressed a hope that an increased interest in the operations of the Institution would be shown in large accessions to the subscription list—(hear, hear).

Mr. E. SHARPE seconded the motion. He considered the report to be on the whole very satisfactory. He thought all the members who attended the excursion to St. Just in the summer must have derived the greatest possible pleasure from it—(applause).

The Rev. W. IAGO, in supporting the motion, expressed pleasure at the prospect of Mr. H. M. Whitley assuming the duties of honorary secretary in the place of his father, whose retirement, however, they all deeply regretted—(hear, hear).

The report was adopted.

The PRESIDENT said, with the adoption of the report his two years of office ended, and he should always look back on those years with the greatest possible pleasure on account of the courtesy and kindness and general assistance in his work as President which he had received from all the members of the Institution, but from the members of its council in particular. Having said that he would add something which might appear very anomalous, if not rude, when he said that perhaps the greatest pleasure of all was left for the last, when he vacated the chair; for he hoped that he put the good of the society before any feelings of his own, and he felt that the good of the society would to such a very great degree be brought about by the acceptance of the presidential chair by the Lord Bishop of the Diocese, that he thought he ought to consider that before any other pleasure. He felt sure that his Lordship's acceptance of the office would bring not only prestige, but prosperity to this society, and all he could say in resigning the chair was that he hoped and trusted that in the two years to come under the Bishop's guidance and presidency the sphere of usefulness which this society had already taken in the town might be extended also beyond the limits of his Cathedral city of Truro—(applause). He now begged to resign the chair to the Bishop.

The LORD BISHOP, having assumed the presidential chair, said he had not expected at this actual meeting to succeed Mr. Borlase in the long line of distinguished presidents who had



occupied this position, and he did so with the greatest diffidence. When he was asked by their secretary to accept the office he replied that he knew how unworthy he was to occupy the place—not as failing in heart and zeal for the cause—but both from his incapability to carry on anything like the work that their former presidents had done, and also from the increasing pressure of the occupations which were upon him day by day. He had since he came to Truro, attended the meetings of this society; and he had upon one occasion heard an able and full *résumé* of work done for science and discovery in the course of a year; he had on another occasion heard an essay read which must live as long as the English language lasts and the study of antiquities lives—research of a most difficult nature into an abstruse subject, conducted with wonderful skill on the one hand in the examination of ancient documents—in the rejection of elements which were spurious, and the detection of those which were likely to lead to truth; the whole conducted with great reverence, and without any of that bias which often led men to imagine that to be true which they found picturesque and in agreement with their previously conceived ideas of what the history of the past has been. Leading historical critics had pronounced the essay to be one of great importance and value, and he (the Bishop) was sure Mr. Borlase carried with him the warmest possible thanks of the society which he had honoured by producing for their benefit such a piece of research as that—(applause). He would venture to say more, but for the presence of Mr. Borlase; as it was he would only add that he had derived very great pleasure from reading and re-reading several times that valuable essay—(hear, hear). Their revered vice-president, Dr. Barham, had, however, assured him that in past times there had not always been produced essays of that kind; that, in fact, inaugural addresses were once of a short and simple character; and if they would allow him to present an inaugural address of that unpretending nature he would in the meantime try to be a labourer in the cause he had himself in hand. (applause). It was but doing honour and credit to himself when he said that he shared the intense desire of this society, that the pursuit of natural history and true science should be followed to the utmost limits which the human intellect could

carry them to. No doubt they had their limits, but he believed one of the first duties of man was to trace the history of the scene allotted to him and his existence on earth. With regard to that other great branch of their work—antiquities—he approved of the suggestion made in the report, that they should look to the parochial clergy to assist them. He had, he owned, given some thought to this subject, and, as to how the researches asked for should be carried out. He thought they might prepare schedules which might be sent to able clergymen, tabular schedules, by which they might obtain minute particulars as to the character of architecture in the churches, the antiquarian remains and the like—(hear, hear). He felt sure that those who were really acquainted with Cornish antiquities would help him to prepare such schedules, which they might circulate first in those parishes in which they knew antiquities to exist, and then extend them to others—(hear, hear).

The following lists of Donations, &c., were then read :—

#### ADDITIONS TO THE LIBRARY SINCE THE SPRING MEETING.

Proceedings of the Zoological Society... ..	From the Society.
List of Animals in the Gardens ... ..	Ditto.
Parcel of Books from the University of Christiania ... ..	From the University.
Transactions and Proceedings of the Royal Irish Academy ... ..	From the Academy.
United States Geological and Geographical Survey of Colorado, &c. ... ..	From Mr. T. V. Hayden.
The Birds of Colorado Valley, by Elliot Coues	Ditto.
Bulletin of the United States Geological and Geographical Survey ... ..	Ditto.
Bibliography of North America by White and Nicholson ... ..	Ditto.
Catalogue of the Publications of the United States Geological and Geographical Society ...	Ditto.
Æneides, or Critical, Exegetical, and Aesthetical Remarks on the Æneis, by James Henry ...	Ditto.
Report and Transactions of the Devonshire Association ... ..	From the Association.
Annual Report of the Smithsonian Institution, 1877... ..	From the Institution.
Journal of the Anthropological Institute of Great Britain and Ireland ... ..	From the Institute.
Third Annual Report of the Burton-on-Trant Natural History and Archaeological Society ...	From the Society

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Transactions of the Manchester Geological Society ... ..	From the Society.
Journal of the Royal Geological Society of Ireland ... ..	Ditto.
Annual Report of the Plymouth Institution ...	From the Institution.
47th Report of the Royal Cornwall Polytechnic Society ... ..	From the Society.
Journal of the Royal Historical and Archaeological Association of Ireland ... ..	From the Association.
Proceedings of the Society of Antiquaries of London ... ..	From the Society.
Annual Report of the Leeds Philosophical and Literary Society ... ..	Ditto.
Collections Historical and Archaeological relating to Montgomeryshire and its Borders ... ..	From the Powys Land Club.
Proceedings of the Geologists Association ... ..	From the Association.
Proceedings of the Liverpool Naturalists Field Club ... ..	From the Club.
Transactions of the London and Middlesex Archaeological Society ... ..	From the Society.
Register of Exeter College, Oxford ... ..	From the Rev. C. W. Boase
Monthly Notices of the Royal Astronomical Society ... ..	From the Society.
Bulletin of the International Meteorological Observations ... ..	From the American Government.
Proceedings of the Philosophical Society of Glasgow ... ..	From the Society.

### DONATIONS TO THE MUSEUM.

16 ancient Roman Coins, from Colchester ...	A Friend, through Mr. Newcombe.
Portrait of Henry Bone, R.A., .. ..	Presented by Mr. W. H. Tregellas.
Celt Mould and Stone Ladle, found on the Glebe at Altarnun .. ..	From Rev. R. H. Tripp.
Part of the Top Stone of a Quern, with two Stone weights, a Stone Bowl, and five Pebbles, found at Tregarthen, Zennor ...	Presented by Mr. John Hosking.
Native Tellurium, Mispickel with Proustite, and Horn Silver, from Colorado ... ..	Presented by Mr. R. Pearce.
Stone Celt from Highgate, St. Veep ... ..	Presented by Mr. William Pease, and found on his own estate.
Vein of Tin Ore in Elvan, from Budnick Mine... ..	Presented by Dr. C. Le Neve Foster

Mr. N. WHITLEY briefly explained some of the articles presented, and which were exhibited on the table. Remarking upon the running stone of a quern presented by Mr. Pease, he said that its construction evidenced the intelligence of the men who prepared it. These ancient men had as much intellectual power and as large skulls as some of them had at the present day, and from recent discoveries it would appear that in regard

to some of these ancient men the capacity of their skulls was much larger than the average capacity of those *savants* who desired to connect them with the lower orders of the animal kingdom—(laughter). With regard to the stone weights, they were beautifully cut, but although there was a relation amongst themselves, there was no relation between them and the present day. He had discovered similar weights on some Roman graves in Wiltshire.

Mr. R. M. PAUL proposed "that the thanks of the Society be given to the Officers and Council for their services during the past year"—(applause).

Mr. H. M. WHITLEY seconded the motion, and with regard to what had fallen from the President as to the parochial clergy supplying the Institution with antiquarian information, he said the clergy were placed in a most valuable position for collecting and preserving records of antiquities and antiquities themselves, and he earnestly hoped they would avail themselves of their opportunities. He specially instanced monumental brasses and parish registers as worthy of their care and attention.

The motion was carried.

Mr. H. O. REMFREY proposed a cordial vote of thanks to those gentlemen who had favoured the society with papers and other communications in the course of the year. He alluded to the special facilities which the Institution possessed for the preservation and exhibition of antiquities, which he hoped might be an encouragement to those who possessed such objects to entrust them to their care.

Major PARKYN seconded the proposition, which was unanimously carried.

Mr. WHITLEY read a paper on the supposed discovery of flint implements in the Brixham Cavern, which appears in the *Journal* of the Institution, No. XXII.

Mr. W. COPELAND BORLASE proposed a vote of thanks to the President for the manner in which he had conducted the proceedings of the day.

The motion was seconded by Dr. JAGO, who took occasion to enforce further the desire of the Institution as regarded the parochial clergy. He hoped that the proposed schedules would

meet with a better fate than some circulars which were sent to the clergy once before, and to which only two or three replies had been received.

Mr. BORLASE: We only got one reply, and that was from a layman—(laughter).

The vote of thanks was carried; and the Bishop having briefly acknowledged the compliment, the meeting ended.

### THE CONVERSAZIONE.

The usual conversazione was held in the evening, when the President occupied the chair, and was supported by most of the gentlemen already mentioned, with many others, and a goodly number of ladies. Several interesting addresses were delivered upon scientific subjects and were followed by equally interesting discussions.

Mr. BORLASE spoke upon some Cornish Antiquities discovered in the western part of the county; and Dr. BARHAM gave an exhaustive explanation of a celt mould, and on the uses generally to which stone had been put by the ancients. Amongst these uses were implements of various kinds, weights, querns, and cannon balls.

Mr. WHITLEY thought the weights might show a connexion between the tin trade of this country and that of the East Indies through Alexandria. He had seen them used on one of the quays there, and he believed they were used because they were much cheaper than iron.

Mr. QUIN said they need not go to Alexandria to find stone weights. They were used in many instances in Ireland, and he had seen them in use in England.

The Rev. W. IAGO said great care ought to be exercised in ascertaining whether the weights were used for weighing purposes, or simply as clock weights or any other similar purpose.

Mr. COLLINS suggested that they might have been used for net sinkers.

Mr. N. WHITLEY said the meteorological observations they had taken were working out practical and valuable results. He

had placed on the table a bunch of wheat which he had obtained 600 feet above the sea on the Wiltshire Hills. The stalk was perfect, and the ear was perfect, but in the cold season of June and July when the temperature was two degrees below the mean, the cold so checked the wheat that the grain was scarcely formed at all, and instead of having 600 grains to the ounce, as in ordinary good samples, there was some 1,400 minute grains to the ounce. The application was this, that wheat could not be grown with advantage 600 feet above the sea in this country, and at such altitudes the only thing to be done, was to grow root crops or grass.

Dr. BARHAM mentioned as a peculiarity of the past season, that in regard to the eleven months ending September last, there were only two instances in the century of such continuous low temperature, namely, the years 1813-14 and 1815-16. The cold affected not only England but the whole of Western Europe. He might mention also, that the temperature of the Atlantic had been taken for the last two years, and it was curious to note that the temperature last winter was found to be two degrees higher than in the previous winter, notwithstanding that the weather on the land was so much colder. The reason however was very palpable, and it was that the prevalent winds were land winds, coming over the continent of Europe, and not over the Atlantic at all—(hear, hear).

The Rev. W. IAGO called attention to the rubbings of brasses exhibited on the walls. They included an Archbishop, and a Bishop in their full robes; a Crusader, in chain armour; John Killigrew, of Arwenack, first Captain of Pendennis Castle, and his wife; a former Mayor of Truro, &c. Brasses, Mr. Iago explained took the places of the huge tombs which were sometimes placed in churches and they were a great improvement, inasmuch as they took up little room and were an ornament rather than otherwise to the edifice. They were useful as showing the costumes of the period; but the brasses in Cornwall were as a rule inferior to those in other parts of England. In speaking of monuments Mr. Iago entered a strong plea for the blue slate monuments, which were little thought of and honoured in the restoration of churches. They were most valuable and interesting as furnishing links in the pedigrees of families and

as giving particulars which could not be found in the parish registers. Those of the date of the great Rebellion furnished frequently the only record of the people living then. Those blue slate stones ought not to be destroyed—(applause)—but there had been scarcely a restoration in which one or more of them had not been converted into gutterings, floorings, or had even more completely perished.

Mr. H. M. WHITLEY speaking of the little care which was taken of ancient remains in churches instanced a church which possessed some splendid carved oak bench ends. He entered one day and found them covered with oxide of iron paint—(laughter). On asking the Churchwarden why they had been so treated, he was told that they expected the Bishop down to a confirmation and that thinking he would not like to see the old benches in such a state he had given the ends a good coat of paint—(laughter).

Mr. H. M. WHITLEY then drew attention to an engraved portrait of Mr. Henry Bone, R.A., which had been presented to the Museum by Mr. Walter H. Tregellas. Mr. Tregellas had forwarded with the portrait some notes upon the great Truro painter; a full account of whose works appears in the present number of the Journal from the pen of Mr. J. Jope Rogers.

Dr. BARHAM said Probus claimed Bone as her son.

Mr. WHITLEY replied that the registers of both Truro and Probus had been searched but no record of Bone's birth could be discovered. Mr. Tregellas, however, was satisfied that Bone was a Truro man. At all events they would claim him as of Truro—(laughter and applause).

Mr. H. M. WHITLEY, said he noticed in one of the county papers (the *Royal Cornwall Gazette*) an article upon old Kea Church, and which gave a good deal of interesting folk lore. He thought it would be a good thing if similar contributions could be obtained from other parishes. It was stated in the article that there existed a painting of Old Kea Church as it was before it was pulled down at the beginning of the present century. The painting was said to be by his (the speaker's) grandfather, and he had been able to find the painting which he now handed round for inspection.

XXXV.

Dr. BARHAM drew attention to a poem of seventy-eight verses in Norman-French, dedicated to St. Nonna, and which was believed to have been written by Richard Cœur-de-Lion, in whose time the saint was revered second only to the Almighty. The copy had been sent him by Miss F. E. Tripp, by whom it had been obtained from Herr Keuper, the great German critic.

The proceedings shortly afterwards closed.





# ROYAL INSTITUTION OF CORNWALL.

## SPRING MEETING.

1880.

The Annual Spring Meeting was held in the Library, on the 22nd June. The President, The Lord Bishop of Truro, occupied the Chair, and amongst those present were Dr. Jago, F.R.S., Dr. Barham, F.M.S.; Messrs. A. Paull, R. H. Carter; J. H. Collins, F.G.S., and H. Michell Whitley, F.G.S., (*Hon. Secretaries*); Dr. Le Neve Foster, F.G.S.; Revs. Canon Cornish, Chancellor Whitaker, Canon Mason, T. S. Stephens, F. C. Barham, and F. E. Carter; Messrs. T. Cornish, E. G. Spry, T. Cole, and B. Kitto, F.G.S.

### *Reply from the Prince of Wales.*

Mr. Collins read the following reply received to the address presented to H.R.H. the Prince of Wales on the 20th May :—

"Lieut-General Sir Dighton Probyn is directed to convey to the President and Council of the Royal Institution of Cornwall the thanks of the Prince of Wales for the kind and loyal expressions contained in the address of the 18th inst.

"The Prince of Wales, sharing with the Prince Consort the knowledge of the large field which exists in Cornwall for an institution established for the diffusion of science and promotion of literature, has always gladly given the Royal Institution of Cornwall his hearty support and his Royal Highness regrets that his visit to the Duchy was not of sufficient duration to enable him to find time to inspect the museum of the Institution of Truro.

"The Prince of Wales feels that, from the peculiar character of the county of Cornwall, the Royal Institution depends for its prosperity more on science than would be the case in other counties, and his Royal Highness is glad, therefore, to find the Royal Institution continues to carry on its scientific researches with such zeal and success.

22nd May, 1880."

## THE MUSEUM.

The following is a list of donations to the museum since the last meeting :—Portraits of Richard and John Lander, from Mr. W. H. Tregellas, London ; specimens of Phosphate of Lime from the Rhine mines, and of Phosphate of Alumina from the West Indies, by Mr. E. Dingle, Tavistock ; cast of an ancient Tin ingot, Mr. Thomas Kelly, Yealmpton ; specimens of Copper Ores from Araquipa, Peru, presented by Mr. William Oates, of Puerto de Lomax, Peru ; Red Chalk from Hunstanton Cliffs, by Mr. J. H. Collins, F.G.S. ; three small Sucking Fishes caught in the Truro river, and presented by Mr. J. Dunn ; Cornish Fossils from St. Anthony-in-Meneage, Lower Newham, Duporth, Crinnis, and Newquay, presented by Mr. J. H. Collins and Mr. Thomas Clark, Truro ; Fossils from the Greystone Mines, near Launceston, by Capt. J. H. James ; specimen of Cassiterite associated with Hornblende, from the mines of Lake Ladoga, by Mr. Hjalmar Furuhjelm, Government Inspector of mines for Finland ; Beetles and Moths from Bangalore, Madras, Presented by Dr. Le Neve Foster ; Farthing of King Charles I, found at Kingstou, near Ringmore, presented by the Rev. F. C. Hingeston-Randolph.

Additions had also been made to the Library from the Astronomer Royal, the Powys Land Club, the American Government, Mr. J. E. V. Hayden, Dr. Le Neve Foster, Mr. W. H. Tregellas, Mr. Paul Q. Karkeek, Sir John Maclean, Mr. John Thomas, and various learned institutions.

The President then delivered his address, which will be found printed *in extenso* in the "Journal," No. XXIII.

The following papers were then read :—

"On Polyzoa from Cornwall," by C. W. PEACH, F.L.S.

"Note on Richard & John Lander," by W. H. TREGELLAS.

"Rural Notes, Parish of Kea," by T. A. CRAIGIE, F.R.G.S.

"On some Antiquities in the Parish of Crantock," by W. E. MICHELL, F.R.A.S.

Dr. BARHAM mentioned that there was in the outer room of the Royal Institution buildings a good bust of John Lander. He thought he might also say, without too much family instincts, that it was very much owing to the exertions of the late Dr. Carlyon that the column in Lemon-street was erected at all. The statue on the top of the column was the work of Mr. Nevill Burnard, the "Cornish Sculptor," who achieved considerable reputation and success, but got into difficulties, and ultimately died in the workhouse. He was born at Altarnun.

### THE GEOLOGY OF CORNWALL.

Mr. J. H. COLLINS made some interesting remarks upon the Geology of Cornwall, which he illustrated by a couple of maps. One of these was the official Geological map of the county, the other a map that had been prepared from personal investigation, by himself aided by Mr. T. Clark, of Truro. These investigations had conclusively proved that whilst the "official" map gave the largest part of the county over to the Devonian period, the area of the Lower Silurians was really at least ten times as great as that shown in the Official map. They were accustomed to look back and think that these patches of granite amongst the soil, marked a period something near the beginning of the time when Cornwall began to be dry land, but they had an evidence in these different sets of rocks with their distinct dips, that Cornwall was an extremely ancient country before the granite appeared.

Dr. FOSTER said they might well congratulate the county and the Society upon the work that had been done by Mr. Collins and Mr. Clark in preparing this map. It was the greatest advance that had been made in Cornish Geology for the last 40 years.

### METEOROLOGY.

Dr. BARHAM made his annual statement in regard to the Meteorology of the county, in the course of which he pointed out that the temperature last winter in this Western peninsula was very much milder than in the East of England, especially in Scotland.

Dr. Barham also announced that the meteorological returns for the last 30 years, which he had prepared, were ready for publication.

The usual votes of thanks were passed unanimously—to the President for his able address; to Donors to the Museum and Library; to the Authors of Papers submitted to the Society; and to the President for his conduct of the meeting.

# ROYAL INSTITUTION OF CORNWALL.

## 62ND ANNUAL GENERAL MEETING.

*Held on the 18th November, 1880.*

The Annual Meeting of the Royal Institution of Cornwall was held in the Library of the Institution, on 18th November, 1880, the President, The Lord Bishop of Truro in the chair. Amongst those present were Dr. Barham, F.M.S., and Major Parkyn, *Members of Council*; J. H. Collins, F.G.S., and H. M. Whitley, F.G.S., *Honorary Secretaries*; Revs. G. L. Church, Carey Dickenson, and Canon Harvey; Messrs. T. A. Cragoe, R. Pryor, E. Sharp, E. G. Spry, R. Symons, S. Trevail, &c.

The following list of presents were read by Mr. Collins:—

### ADDITIONS TO THE LIBRARY.

Astronomical and Meteorological Observations made at the Royal Observatory, Greenwich, in the year 1878	...	...	From the Astronomer Royal.
United States Geological Survey of the Territories, vol. 12th	...	...	From E. V. Hayden.
Survey of the Territories of Idaho and Wyomin, 1877	...	...	Ditto.
Smithsonian Report	...	...	Smithsonian Institution.
A Treatise on China Clay, by David Cock	...	...	The Author.
Was Adam the First Man, by Argus	...	...	Do.
Report of the Explosive Committee	...	...	From J. H. Collins.
Journal of the Liverpool Polytechnic Society	...	...	From the Society.
Transactions of the Manchester Geological Society	...	...	Ditto.
Proceedings of the Natural History Society of Glasgow	...	...	Ditto.
Royal Geological Society of Cornwall, vol. X, pt. 2nd.	...	...	Ditto.
Proceedings of the Zoological Society of London	...	...	Ditto.
Monthly Notices of the Royal Astronomical Society	...	...	Ditto.
Journal of the Society of Arts	...	...	Ditto.

Leeds Philosophical and Literary Society ...	From the Society.
Transactions of the Edinburgh Geological Society ...	Ditto.
Journal of Cambrian Archeological Association ...	From the Association.
Journal of the Anthropological Institute of Great Britain and Ireland ...	From the Institute.
Collections, Historical & Archeological, relating to Montgomeryshire ...	From Powy's Land Club.
Annual Report Plymouth Institution ...	From the Institution.
An Address delivered before the Leeds Geological Association, by Mr. B. Holgate ...	From the Association.
Proceedings of the Geologist Association ...	Ditto.
Report and Transactions of the Devonshire Association ...	Ditto.
Proceedings of the Bath Natural History and Antiquarian Field Club ...	From the Club.
Proceedings of the Liverpool Field Club ...	Ditto.
Reports of Her Majesty's Inspector of Coal Mines ...	From Joseph Dickinson.
Parcel of Books from the Royal Irish Academy ...	From the Academy.
The Journal of Psychological Medicine ...	From L. S. Forbes Winslow.
Collections of the Surrey Archeological Society ...	From the Society.
On a Bastion of London Wall, or Excavations in Camomile Street, Bishopsgate, by John Edward Price ...	Ditto.
Transactions of the London and Middlesex Archeological Society. ...	Ditto.
On Some Cornish Tin-Stones, and Tin-Capels, Parts I and II, by J. H. Collins ...	From the Author.

### ADDITIONS TO THE MUSEUM.

A large number of Mountain Limestone Fossils from North Wales ...	Presented by Dr. C. Le Neve Foster.
Calcite containing Chalcopyrite, from Prince Patrick Mine, Holywell, Flintshire ...	Presented by Capt. H. B. Vercoe.
Copper Pyrites with Axinite and Garnet, Epidote, Folybasite, from White Pine, California; Blue-Stone from the Mona Mines; Olivenite, Penwithite, "Steel Ore," and 6 other Mineral and Rock Specimens ...	Presented by Dr. C. Le Neve Foster.
Graptolites from Penarth Slate Quarry, Corwen, Merionethshire ...	Ditto.
Calamine, from Park Mine, Minera, near Wrexham ...	Presented by Capt. E. Bryan.
Orthoceras, from Rope Hawn, near St. Austell, ...	Presented by Messrs. J. H. Collins and T. Clark.
Actinocrinus moniliformis, (?) from Crinnis, near St. Austell ...	Presented by Messrs. J. H. Collins and T. Clark.
Chalybite changing into Red Hematite, from Pawnton Iron Mine ...	Presented by Mr. J. H. Collins.
Unworn Chalk flint, from the overburden of Rosemallyn Clay Works ...	Presented by Capt. Sargent.

Large shell from Venezuelan Guyana	...	Presented by Dr. C. Leve Neve Foster.
Papyrus Plant, from Tunis	...	Presented by Mr. G. F. Remfry
Sketch by Joshua Cristall, of Camborne	...	Do. Mr. W. H. Tregallas.
Specimens of Colours used in the Manufacture of Paper-Hangings, and prepared by the Cornwall Alumina Paint Company, Breage	...	Do. Mr. B. J. Cunnack.
Wooden Bowl, found by Capt. Hampton, in a cavity in the peat, 4 feet below the surface, near Hawk's Tor, in the Parish of Blisland	...	Presented by Lieutenant H. G. Henderson.
Mummy of young Crocodile, from the Pyramids	...	Presented by Mr. John Pethe- rick, of Torquay.

### REPORT OF THE COUNCIL.

Mr. J. H. Collins, F.G.S., Honorary Secretary, read the Report of the Council, as follows:—

Although the year just concluded has not been a term of exceptional prosperity, the Royal Institution of Cornwall has continued its work with unabated vigour. The loss the Society sustained by the death of Mr. John Jope Rogers was eloquently referred to by the President in his Address at the Spring Meeting. Since then we have had to regret the death of the Rev. Dr. Treffry. Five other members have withdrawn, from various causes. On the other hand, six new members have been elected during the year.\*

The income of the year has amounted to £189 19s. 3d., as against £199 6s. 9d. last year, and the expenditure to £203 18s. 4d., as against £239 0s. 4d. last year. As regards this outlay, it may be noted that we have expended upon repairs to building, and maintenance of Museum, the sum of £36 16s. 9d., against £18 11s. 8d. last year.

Our Museum continues to attract large numbers of visitors. The admissions during the past year were as follows:—

Admitted free	.. .. .	1,965
By ticket	.. .. .	124
By payment (6d. each)	.. .. .	335
Total	.. .. .	2,434

The class in electricity and magnetism, conducted here by one of your Hon. Secretaries last winter, was not largely attended,

\*Revs. Sir Vyell Vyvyan, Carey Dickinson, and A. R. Tomlinson; Lieut. Gossett, B.A., and Messrs. Emra Holmes and Theodore Hawken.



but it is gratifying to learn that those who did attend, profited by the instruction they received. This is evidenced by their remarkable success in the May examination, conducted by the Science and Art Department.\*

\* On this occasion 13 students presented themselves for examination, with the following results :—

		1st Class.	2nd Class.
Passed in the elementary stage	... ..	6	5
„ Advanced stage	... ..	1	—
One failed.			

The laboratory of the Institution has been placed at the disposal of Mr. Collins for several years, not only for his work as public analyst, but also with a view of facilitating his scientific investigations. Some interesting results of these enquiries, so far as they relate to the mineral productions of the county, will to-day be brought before the members.

The valuable series of meteorological observations has been carefully continued by Mr. Newcombe. The close of 1879 completed a period of 40 years, during which our register of these natural facts has been regularly kept. This term may be regarded as sufficient for a reliable estimate of our climate; and the calculation of results for yearly and monthly averages is so far advanced that the summary will be ready for the press in the course of this winter, as we are assured by Dr. Barham, who has kindly undertaken the labour of editing them. In addition to the records in our possession for the last century and a half, we have been furnished, by the kindness of our late President, with the registers kept with admirable diligence at Ludgvan, by Dr. Borlase, from 1752 to 1772. And in this connection we feel bound to do honour to the memory of the most veteran meteorologist of Cornwall, the late Mr. Matthew Paul Moyle, of Helston, who died some months ago at the very advanced age of 93, having continued almost to the last the series of careful and minute records, commenced before those of any living observer. The results have been published from year to year by the Royal Cornwall Polytechnic Society; but Mr. Moyle always evinced a spirit of hearty co-operation with this Institution in his special department, and his original MS. registers have been so bestowed as to be available for our enquiries.

The excursion to the Tregony district, under the conduct of our President, was much enjoyed by all who were present; un-

fortunately, the number was much smaller than usual, and this has entailed a loss of over four pounds to the funds of the Institution, notwithstanding the hospitable reception which we received at so many places *en route*. It is, however, satisfactory to know that the excursion has resulted in the addition of several new names to our roll, so that the apparent loss is still a real gain. It may be hoped also that one purpose in view, the encouragement of attention to objects of interest but little known, although near at hand, was in some measure attained. The ecclesiastical colour of this excursion was not accidental nor inappropriate. The intention was in keeping with the proposal made by our President at the Spring Meeting, the execution of which his lordship undertook to assist, viz., the placing of a schedule, after a form prepared by the Camden Society, pointing out every detail in a church to which enquiry should be directed, in the hands of competent persons in each district, with a request that it be returned to this Institution for collation and ultimate publication of results. This suggestion was cordially welcomed, as it was clear that willing workers are alone needed to furnish us with materials for a long succession of valuable contributions to our Journal.

The meetings to be held in these rooms on the third Tuesday in each month, to which our members have been already invited, will serve conveniently for receiving such returned schedules and classifying their contents, and it is hoped that other inquiries may be continued and matured on these occasions in a sociably pleasant, if somewhat informal way.

Dr. Jago, our senior Vice-president, retires from office to-day. In his place we propose the election of Sir Philip Protheroe Smith.

As members of Council we propose the following gentlemen :—Mr. R. H. Carter, Dr. Hudson, Rev. W. Jago, Mr. H. S. Leverton, Rev. A. P. Moor, Major Parkyn, Mr. Alexander Paull, Dr. Barham, Dr. Jago, and Mr. Robert Tweedy.

As Treasurer we propose the re-election of Mr. A. C. Willyams; and as secretaries Messrs. J. H. Collins, and H. M. Whitley.

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The Report was adopted unanimously on the motion of the Rev. Canon Harvey.

The following Papers were then read :—

*On Cornish Tokens.*—By R. N. Worth, F.G.S.

*List of Briefs published in the Parish of Mawnan.*—By the Rev. W. Rogers.

*Note on Work done in the Laboratory of the Royal Institution of Cornwall.*—By J. H. Collins, F.G.S

The following letter from Dr. Jago, accompanying some drawings of an ancient cross in St. Keverne, was read by Mr. Collins

“ I have much pleasure in announcing to his lordship that the cross in the Parish of St. Keverne, of which I had spoken to him, and in whose replacement he expressed a great interest, now actually stands in its original site.

“ My impression is that the cross was overturned nearly 50 years ago. The job was done at night, by undiscovered hands. It was believed in the neighbourhood with the view of appropriating the crock of gold which was imagined to be at its root.

“ When I asked Mr. Richard Smith about two years ago, who had lived on Trelanvean for more than 60 years, what had become of the cross, which I well remembered, he said that he had intended for sometime to replace it: and would not quit Trelanvean (he quitted it at Michaelmas) without having done so. Some weeks ago I received a letter from him saying that he had actually done so.

“ The word Lan does not always mean Church, often simply plan, according to Dr. Williams' lexicon, but I may observe

that we have Trelan—*Lan, plan.*

Ditto. Trelanvean—*Little ditto.*

Ditto. Lanarth—*High Lan.*

all in the field nearest roadway from Trelan to St. Keverne Churchtown. Trelanvean is 3 miles from the Churchtown, lying immediately between and contiguous to Goonhilly and Crousa Downs.

On the motion of Mr. T. A. Cragoe, seconded by Major Parkyn, a vote of thanks was passed to the donors to the Museum, and to the authors of Papers submitted to the Society. A vote of thanks to the President for his conduct of the meeting, —proposed by Dr. Barham, concluded the proceedings.

# THE CONVERSAZIONE.

The usual conversazione was held in the evening, when the chair was again occupied by the President, who, assisted by Mr. Bubb, the clerk of the works for the new Cathedral, exhibited and explained a number of worked stones, coins, and other objects of interest which had been discovered during the removal of St. Mary's Church. Mr. Collins, Mr. Trevail, and other members took part in the subsequent discussion. Mr. Collins stated that the objects exhibited were composed of at least eleven different kinds of stone, each having been chosen no doubt for its special qualities.\*

The Autumn Excursion was then brought under review, and the Bishop exhibited a beautiful drawing of the ancient font at Tregony.

Mr. Collins then read some extracts from a very elaborate catalogue of the Cornish Zoophytes, which had been prepared for the Institution by Mr. C. W. Peach.

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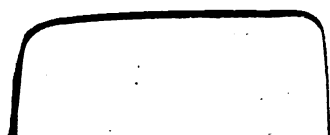
\* The following were the stones recognised,—*Marbles*, Italian, Polyphant or Catacleuse, Purbeck, Devonshire; *Elvans*, Pentewan, Newham; *Granites*, St. Stephens Stone and ordinary Moor Stone; *Slate*, Delabole; *Sandstone*, probably from St. Erme; *Oolite*, probably from Bath.







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