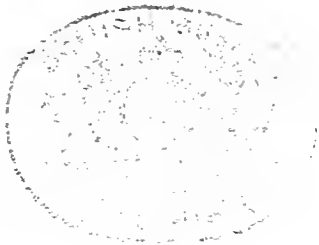


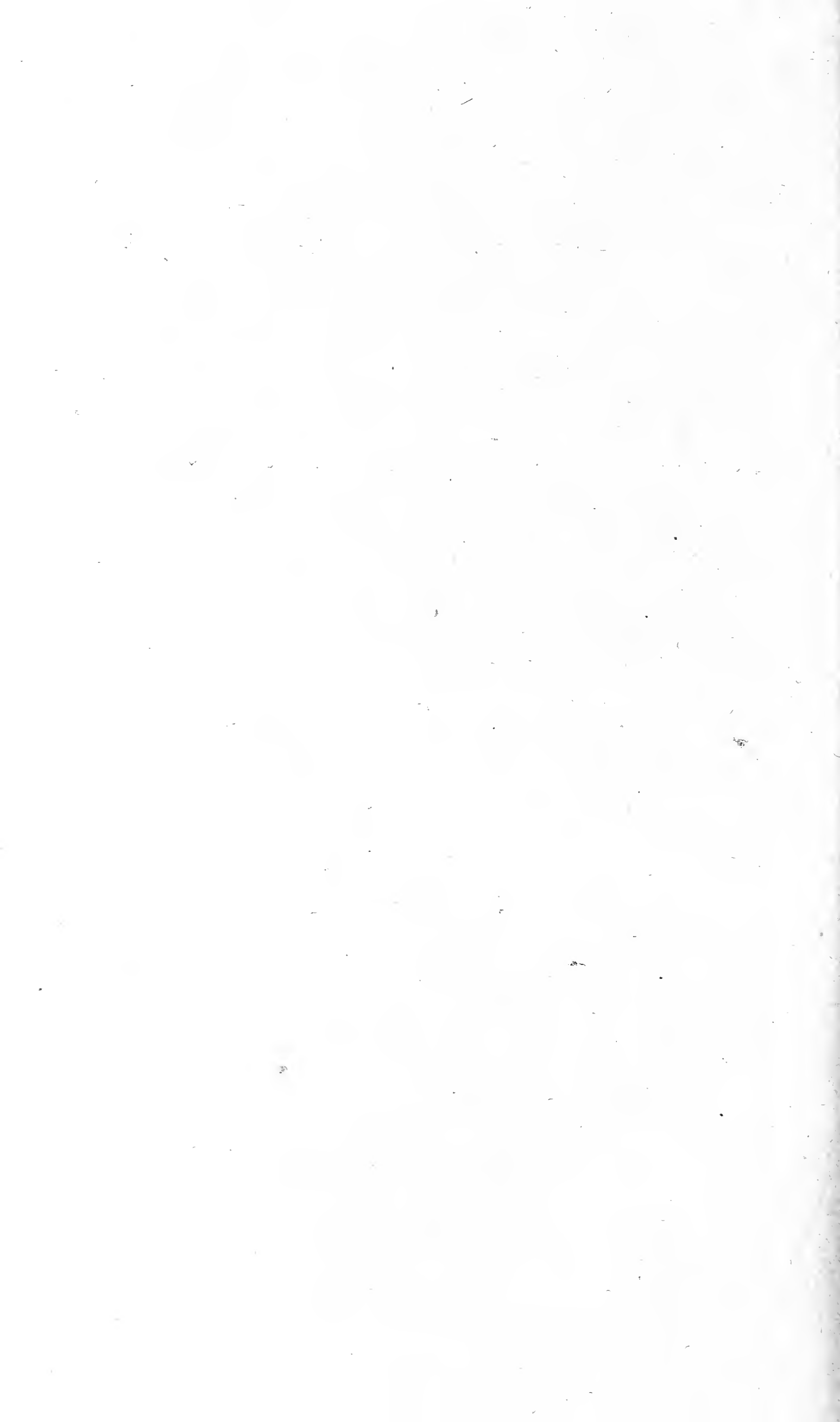
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Workehire Philosophical Society.

ANNUAL REPORT

FOR

MDCCLXXVIII.





ANNUAL REPORT

OF THE COUNCIL

OF THE

Yorkshire Philosophical Society

FOR

MDCCCXXVIII.



YORK :

PRINTED BY W. ALEXANDER AND SON, CASTLEGATE.

1829.

CONTENTS.

	Page
TRUSTEES OF THE SOCIETY.....	4
PATRONS, OFFICERS, COUNCIL, AND CURATORS.....	5-7
PRIVILEGES, &C. OF MEMBERS OF THE SOCIETY.....	8
REPORT.....	9
TREASURER'S ACCOUNT.....	26
SUBSCRIPTIONS TO THE BUILDING FUND.....	27
ADDITIONAL SUBSCRIPTIONS, 1829.....	31
PRIVILEGES OF CONTRIBUTORS.....	32
SCIENTIFIC COMMUNICATIONS READ TO THE SOCIETY.....	33
DONATIONS TO THE MUSEUM.....	35
DONATIONS TO THE LIBRARY.....	51
MEMBERS ELECTED SINCE MARCH, 1828.....	55
HONORARY MEMBERS, DITTO.....	56

TRUSTEES

OF THE

Yorkshire Philosophical Society.

HIS GRACE THE ARCHBISHOP OF YORK

EARL OF CARLISLE

VISCOUNT MILTON, F.R.S. F.S.A.

LORD GRANTHAM

HON. AND REV. HENRY E. J. HOWARD

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ROBERT DENISON, ESQ.

WILLIAM MARSHALL, ESQ. F.G.S.

EUSTACHIUS STRICKLAND, ESQ.

RICHARD J. THOMPSON, ESQ.

REV. W. V. VERNON, F.R.S.

WILLIAM WRIGHT, ESQ.

PATRONS OF THE SOCIETY.

HIS GRACE THE ARCHBISHOP OF YORK
EARL OF CARLISLE
EARL OF TYRCONNEL, F.G.S.
VISCOUNT MORPETH
VISCOUNT MILTON, F.R.S. F.S.A.
LORD STOURTON
LORD WHARNCLIFFE
LORD MACDONALD.

OFFICERS AND COUNCIL, M.DCCC.XXIX.

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REV. WILLIAM VENABLES VERNON, F.R.S. F.G.S.

VICE-PRESIDENTS :

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WILLIAM CONSTABLE MAXWELL

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HON. W. S. LASCELLES

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T R E A S U R E R :

JONATHAN GRAY.

S E C R E T A R I E S :

GEORGE GOLDIE, M.D.

WILLIAM WRIGHT

WILLIAM GRAY, JUN.

CORRESPONDING SECRETARY :

REV. HENRY ATCHESON, F.C.P.S.

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W. MARSHALL, F.G.S...	MINERALOGY.
JAMES ATKINSON.....	COMPARATIVE ANATOMY.
REV. J. B. GRAHAM....	ORNITHOLOGY.
THOMAS BACKHOUSE....	ENTOMOLOGY.
REV. W. HINCKS, F.L.S.	BOTANY.
REV. C. WELLBELOVED..	ANTIQUITIES AND COINS.
EUST. STRICKLAND.....	LIBRARY.

KEEPER OF THE MUSEUM :

JOHN PHILLIPS, F.G.S.

CHAIRMAN OF THE BUILDING COMMITTEE :

REV. W. V. VERNON, F.R.S.

SECRETARY :

WILLIAM WRIGHT.

ABSTRACT OF THE LAWS
OF THE SOCIETY,

RELATING TO THE PRIVILEGES AND PAYMENTS OF MEMBERS.

The Property of the Society is vested in the Subscribing Members collectively. Every Subscribing Member has a right to attend and vote at the Meetings of the Society, and is eligible to all its offices. He has access to the Museum and Library, and the privilege of taking out or sending for Books, and of introducing Visitors. In the new Institution, he will also have access to the Botanic Garden ; and (by a Law passed at the Annual Meeting, 3rd of February, 1829,) the privilege of frequenting the Gardens is extended to the adult members of his family residing under his roof.

A new Member may be balloted for at any one of the General Meetings of the Society, which are held on the first Tuesdays of January, February, March, April, July, October, November, and December. His recommendation, signed by three Subscribing Members, must be hung up in the Library, a week previous to the ballot.

Each Member, on his admission, pays to the Treasurer FIVE POUNDS ; and on every first day of January following, an Annual Subscription of TWO POUNDS, if resident within the County ; or if permanently residing out of the County, an Annual Subscription of ONE POUND. A Member may compound at any time for his Annual Subscriptions, by a payment of TWENTY POUNDS.

Honorary Members have the same privileges as Subscribing Members, except the power of voting and eligibility to offices. Those assigned to Contributors to the Building Fund, *not* being Members of the Society, will be found at page 32.

REPORT

PRESENTED TO THE ANNUAL MEETING,

FEBRUARY 2ND. 1829.

THE COUNCIL have the satisfaction of presenting to the Annual Meeting, the GRANT FROM THE CROWN of three acres of land, situated within the ancient precincts of the Monastery of St. Mary, and including the remains of the Abbey Church. The ground is assigned to Trustees for the use of the Society, on condition that it shall be applied partly to the maintenance of a botanic garden, and partly as a site for buildings appropriated to the purposes of science. The sign manual was first obtained soon after the last Annual Meeting ; but the legal advisers of the Society having stated an objection to the form of the grant, it was engrossed anew, and received the royal signature a second time. The Council advert to this circumstance, for the purpose of remarking the enlightened attention which is paid by the Government of this country to the interests of science ; an attention strikingly displayed in the uniform indulgence with which the applications of this Society have

been favoured, from first to last, through a succession of four administrations.

But the patronage which the Government so readily extends to scientific objects, would be of little avail, if those objects were regarded with indifference by the public. It is therefore a source of no less gratification to the Council, that they have a satisfactory account to render of the SUBSCRIPTIONS TO THE YORKSHIRE MUSEUM, which have increased, since their last report, to an amount little short of the expectations they then ventured to express.

The value of philosophical research is beginning to be more generally appreciated ; and in whatever part of Great Britain public spirit exists to any considerable extent, there institutions are rising for the advancement of natural knowledge. The more than common prevalence of such a spirit in this County, is one of its proudest distinctions ; and when a scientific Institution for Yorkshire was projected, those who were entrusted with the superintendence of the undertaking, did not hesitate to count upon a degree of support, which in a less liberal and less wealthy district they would have had no reason to expect.

These anticipations have not been disappointed. In the report made in February 1828, the expense of the work was estimated at £8000 ; and the amount of subscriptions at the present moment is £7665. Thus the call of the Society has been answered in a manner of which a Yorkshireman has no

reason to be ashamed, and which has not failed to excite the admiration of visitors from other parts of the kingdom.

There may be some, perhaps, who may regard the success of this appeal to the public with different feelings, and, in order to place it in an invidious light, may say that the sum which has been thus collected, might have been bestowed upon more useful objects. But it may be doubted whether they who would thus damp the zeal of the friends of science, have sufficiently weighed the real value of those pursuits, which they place so low in the scale of utility. If all the aids which human life has derived from philosophical speculation were to be lost, it would then be universally agreed, that the most useful of public institutions would be that which should have a tendency to replace them. Withdraw from the sailor the gifts which astronomy, and optics, and mechanical science have bestowed upon his perilous occupation; take away his chronometer, his telescope, and his quadrant; and you would make no amends to him for the security of which he has been divested, if you should even found a hospital for his reception. Deprive the miner of the safeguard by which experimental chemistry has of late years provided for his preservation; and the explosive atmosphere through which he now passes uninjured, will resume its destructive force, and leave no doubt of the utility of the science by which the blasts of death have been disarmed.

The effect which the abstract meditations of philosophy have had upon the business and fortunes of mankind, is

indeed great beyond all calculation. It was the THEORY of the true figure of the earth, which first led the discoverer of a new world across the Atlantic, and conducted the sails of commerce round the globe. It was the refined investigation of the subtle nature and properties of heat, which put in motion the gigantic powers of steam; and, in its consequences, has not only exalted this country to an unprecedented pitch of prosperity and greatness, but has changed in every quarter of the world the whole face of human affairs.

There is not one, among the various sciences cultivated by this Society, which is not directly applicable to the USES OF LIFE. From mechanical inventions, and the discoveries of the philosophical chemist, the greatest improvements in all our manufacturing processes have been derived. The knowledge of the structure of the earth, and of the properties of minerals and plants, is closely connected with the arts of agriculture and mining, of metallurgy and medicine; and the studies of the comparative structure, organization, and general economy of animated nature, have thrown light on those dark subjects of physiological enquiry, upon the development of which the perfection of the art of healing depends.

But it would be to take a very narrow view of the utility of these pursuits, to contemplate them only in their direct effects. The INTELLECTUAL qualities which are formed by such studies, even when they appear the least obviously useful, are often productive of unexpected fruits. To a mind educated in the school of natural history, and exercised in minute and accurate observation, mankind are indebted for

the most extensively beneficial of all the discoveries of the present age. The same habits of thought, which at one time were employed in watching the instincts of the cuckoo,¹ at another, seized upon the preventive power of vaccination, and introduced into the world a practice by which the lives of millions have been saved.

Of still higher importance than any thing which has yet been mentioned, is the MORAL effect which arises from investigating the laws and meditating upon the works of nature. To trace the hand of creative wisdom, whether manifested in its sublimest operations, or in the most minute contrivances for the smallest objects of its care, has a tendency, beyond all other occupations, to elevate the mind of man. And if improvement be the true standard of utility, what can be more improving, and therefore what more useful, than those studies which have furnished such various and striking illustrations of the most momentous of ALL truths? Associated together with undivided sentiments, in contemplating subjects at once so edifying and attractive, we meet one another in an instructive and harmonious intercourse; and science, with a secret moral charm, allays the animosity of parties, and pours a friendly feeling over the most discordant minds.

Impressed with these considerations, the Council have not scrupled to urge the claims of the Institution as strongly as

¹ See the Memoir—"On the natural history of the cuckoo, by Mr. Edward Jenner:" Phil. Transactions, (1788,) vol 78, p. 219.—or, Phil. Trans. abridged by Hutton, &c. vol. 16, p. 432.

they could upon the public attention ; and they see, with unmingled satisfaction, the liberal contributions which have raised a structure, such, both in accommodation and appearance, as fulfils all the wishes of the Society.

The Edifice is worthy of the high reputation of its Architect, and offers a correct and well executed specimen of the purest taste of classical antiquity. But the Meeting will not be of opinion that too great a sacrifice has been made to ornament, when it is informed that this spacious structure has been erected for a sum which, it appears from the minutes of the Committee, will not exceed £6400. If it be considered that the building comprises eight principal apartments to contain the Society's various collections, ten rooms for other purposes, and a hall for lectures of finished architectural character, no one will be disposed to question the economy and success with which this work has been conducted.

Of the remaining expenditure, *exterior* to the Museum, the amount has proved to be about £2100 ; half of that sum being on account of the entrance lodge, the out buildings, and the boundary walls. Of the other half, £600 have been expended on the levelling and laying out of the garden, on the repairs of the ruins, and on the excavations by which the foundations of the Abbey have been traced ; whilst the remainder (£430) includes the payments required to satisfy the claims of the former occupiers of the ground, and to defray the advertisements and presswork, the legal and other miscellaneous expenses.

The total sum, therefore, which has been laid out by the Committee, is £8500, of which about £300 may be considered as balanced by the value of two hundred copies of the publication on St. Mary's Abbey, placed at the disposal of the Council by the Society of Antiquaries. Thus the expenditure has exceeded by £200 the sum at which the execution of the whole undertaking was estimated in the last Report. And though the work is in other respects essentially complete, no provision has been made for fitting up the interior of the Museum with Cases, for the reception of the Society's extensive collections. The error of the estimate, however, will not appear considerable, when it is recollected that to the usual causes which operate in carrying the expense of such undertakings beyond the calculation, there is to be added, in this instance, the variety of objects which were to be accomplished, and the extent and peculiar character of the ground which was to be enclosed, and excavated, and brought into use.

The actual deficiency of the subscriptions is between five and six hundred pounds ; and to raise this sum, and to procure the means of fitting up the Museum, an application has recently been made to the public. It is true that a small additional donation from each member of the Society, would relieve the Institution from embarrassment ; and it will be observed with pleasure by the Meeting, that the name of one of its most distinguished Patrons¹ stands again at the head of a list of Subscribers, who have come forward since the

¹ The Archbishop of York.

commencement of the present year, with a second donation. But the Council have not thought it right, after the advance which has lately been agreed to in the annual subscription, to call upon the members specifically for a further contribution.

The necessity which existed for increasing the ANNUAL INCOME, is sufficiently shown by the report of the Treasurer for the past year ; for although the Meeting will perceive that the balance against the Society is again reduced, so as to amount at present only to an inconsiderable sum, this reduction has been effected as before, out of the fluctuating fund which arises from the entrance of new members, without which the Society's debt, instead of being lessened, would have been augmented to £75. It appears that the increased rate of subscription has not diminished the number of admissions, which have been more in the last than in the preceding year ; and there is every reason to expect that the position which the Society now occupies, and the advantages which it offers, will continue to multiply its numbers. The Council cannot quit this subject, without noticing the liberal manner in which one¹ of the Patrons of the Society has expressed his opinion upon it, by paying the arrears of his subscription for three years, according to the present rate ; nor can they refrain from congratulating the Meeting upon the adoption of a measure which will have fully ensured the efficiency of the Institution, if the contributions solicited for the Building Fund should prove sufficient to leave the annual income unimpaired.

¹ The Earl of Tyrconnel.

It may now be expected that the Society will derive profit from a source, which the want of convenient accommodation has formerly rendered unproductive. In the beautiful LECTURE-ROOM of the new Museum, very complete provision has been made for lighting, ventilation, and warmth ; and it is conceived that an able lecturer will collect a crowded audience. The Council have engaged the Keeper of the Museum to deliver, in the month of July, eight lectures on the animals which inhabit the waters in this neighbourhood ; a subject, the novelty of which will give additional interest to its illustration.

The Society's collections will be removed to their new repository at an earlier period. It is intended to lay down the floors of the Museum in March, and to occupy the premises in May. Thus, by the exertions of the Committee, the work will have been finished within the period proposed. There was indeed no time to be lost : every corner of the Society's present apartments is filled with cases and drawers, and every drawer and case is crowded with specimens ; nor has the number of donations diminished, which have continued to be received at every meeting ; so that in a short time these accessions must either have been declined, or subjected to injury and confusion.

The GEOLOGICAL specimens contributed in the last twelve-month, have amounted to 1380 ; and among these there have been many of more than ordinary value. The oolitic fossils from Switzerland, presented by Professor Necker, with those

brought from Egypt¹ and from America,² have furnished instructive testimonies to the theory of general formations. The British strata have been further illustrated by some beautiful specimens of crinoidal remains from Gloucestershire,³ and of fossil fishes from Swanwich⁴ and Barrow.⁵ A very interesting collection, also, of the fossil fishes discovered in Caithness by Professor Sedgwick and Mr. Murchison, has been received from an honorary member⁶ whose bountiful contributions have been acknowledged in every report ; and a suite of fossils from Sutherland, presented by Mr. Murchison himself, has enabled the Keeper of the Museum to institute a comparison with the fossils of the corresponding strata on the Yorkshire coast, which proves a still closer conformity than had been before observed.

The collections of the Institution have supplied many valuable materials to the work which this meritorious officer of the Society is now publishing, on the Geology of the Eastern part of this County,⁷ a work which, the Council have reason to hope, will complete whatever may have been left wanting by the valuable labours of his predecessors in the same field. The richest part of the Museum is, as it ought to be, that which contains the Yorkshire specimens ; and it

¹ By J. S. Crompton, Esq.

² By S. Stapylton, Esq.

³ By the Rev. R. Halifax.

⁴ By Miss Atkinson.

⁵ By the Rev. T. King.

⁶ Henry Witham, Esq. F.G.S.

⁷ “ Illustrations of the Geology of Yorkshire ; or a Description of the Strata and Organic Remains of the Yorkshire Coast, accompanied by a Map, Sections, and numerous Plates of fossil plants and animals ; by John Phillips, F.G.S.”—
1 vol. 4to.

is to be regretted that the additions to it have not been more numerous. Some useful accessions have been received from Cleveland¹, from Whitby², and from Ferrybridge³; but, extended as the Society now is, and numerous as are the fossils which might be procured in all parts of the county, the supply would doubtless have been greater, were the members aware how much is still wanting to complete the excellence of this part of the Museum.

The Council cannot conclude their account of the geological donations, without acknowledging the liberality of the Bristol Institution, and of the Geological Society of London, in allowing casts to be taken from some of the most remarkable organic remains in their possession. Casts have also been promised, of the fossil bones of Montmartre, by M. Cuvier, and of a highly valuable *saurian* specimen, by Mr. Chantrey.

IN MINERALOGY, the Museum has continued to receive the assistance of some liberal friends. The addition of the greatest amount is that which has been made to the North American collection⁴: the most remarkable individual minerals presented are the Gaylussite from Lagunilla,⁵ and the Chlorophæite, found near Felton in Northumberland, filling cavities in the basaltic dyke.⁶ An undescribed aluminous mineral in the Society's possession has been analysed,

¹ Presented by the Rev. Archdeacon Vernon.

² By Mr. Ripley, Sec. Whitby Lit. and Phil. Soc. ³ By the Rev. W. Richardson.

⁴ By Stapylton Stapylton, Esq.

⁵ Presented by Charles Empson, Esq. ⁶ By Wm. Hutton, Esq. F.G.S.

and its composition determined;¹ and the calamine of Malham has been chemically examined, and found to contain a portion of cadmium.²

The lists of ZOOLOGICAL donations exhibit an increase beyond any former year in the number of Birds, a large proportion of which were procured in North America by the same donor,³ whose travels have enriched so many other parts of the Museum. Some valuable additions have been made to the foreign Insects, whilst there have been so many accessions to the catalogue of native Shells, as leaves room to hope that before long an instructive arrangement of the British mollusca may be accomplished.

Such an arrangement of the BOTANICAL collections has been commenced, by incorporating together the extensive herbariums presented in 1827, classifying them according to the most improved modification of the natural system adopted in the great work of De Candolle, and accompanying the specimens with illustrative remarks. The Curator⁴ has presented a fasciculus containing the first order complete, as a specimen of the method which he has pursued. Among the donations to this department in the last year, is an extensive series of North American plants :⁵ a foundation has also been laid, by a present of rare seeds and nuts⁶, for

¹, ² By the President of the Society.

³ S. Stapylton, Esq.

⁴ The Rev. W. Hincks, F.L.S.

⁵ Presented by S. Stapylton, Esq.

⁶ From the Rev. W. Hincks.

a collection in an important branch of botanical science, to which those who visit distant countries would find it easy to contribute. Contributions of a still more material kind are to be looked for in the ensuing year. Great exertions have been used to prepare the GARDEN of the Institution for immediate use. No labour has been spared in forming the ground, which, when first opened, appeared to be nothing but a widely extended heap of rubbish and fragments of stone, but which now promises to furnish, on this picturesque and interesting site, a proper soil and space sufficient for the most essential objects of the Botanist ; and the Council trust that they may rely upon the liberality of those who are attached to such pursuits, to save the Society much of the expense which is still required to stock the garden with plants.

With these operations has been conjoined a constant attention to the object of exploring the REMNANTS OF THE ANCIENT ABBEY, with which the ground was every where intersected ; and so successfully have its foundations been traced, that the Antiquary may now not only form an idea of the extent, arrangement, and magnificence of this great establishment, but, by comparing its plan with that of other religious houses, of which similar remains have been found, may gain some insight into the general system of monastic architecture.

The progress of the excavations has placed in the Society's possession many additional relics of the taste and skill with which the structure has been decorated. The tracery of

several compartments in the remaining aisle has been recovered, and in part replaced ; and very recently there have been found, deposited together under the foundation of a wall, seven statues of the size of life, elaborately sculptured, and so well preserved, that the colours and gilding of the drapery may still be seen. At the moment of this interesting discovery, the Committee found themselves compelled, by the state of their funds, to desist from prosecuting these researches any further. The foundations of the Monastery, however, have been completely explored over the entire extent of the Society's ground, and beyond it, wherever it was practicable to follow them ; and an accurate plan of the whole has been transmitted for publication to the Society of Antiquaries, at whose request a descriptive memoir on the subject has been drawn up by the Curator of Antiquities¹ of this Institution. In addition to the plan, general views of the ruins, and drawings of the sculptures and other architectural details, have been furnished by the pencil of Mr. Nash ; and the work is so far completed, that it may be expected in the course of a month to be ready for delivery. As the expense of the excavations is to be in part defrayed out of the proceeds of this publication, the sale of it cannot be deferred ; and it is necessary that those members of the Society who wish to avail themselves of the advantageous terms on which it is in the first place offered to them, should not delay their application to the Secretaries.

The researches on the site of the Abbey, and the liberality of contributors, have added many COINS to the Society's cabinet,

¹ The Rev. C. Wellbeloved.

and several valuable donations, belonging to other subjects of ANTIQUARIAN interest, have been presented. Among the most curious of these are the brass symbol of Isis¹ found at Aldborough, the ancient Isurium; the arrow-heads of obsidian, used by the native Indians before the conquest of Mexico, and the images in baked earth from the ancient pyramids and temples of Otumba.²

The Council have the satisfaction of again reporting, that there have been numerous benefactions to the LIBRARY. The Curator,³ by a well directed liberality, has himself added to it many useful books of scientific reference. The Royal Society of Edinburgh, and the Society of Arts, have presented copies of their valuable Transactions, the Royal Asiatic Society, and the Literary and Antiquarian Society of Perth, have conferred a similar obligation. But among the many valuable works which distinguish this list of donations, there is one composed by a resident member of the Society⁴, which particularly deserves the notice of the Meeting. Too little attention has hitherto been paid in this country to the means of communicating the advantages of education to the blind, especially in scientific attainments; and in the work now alluded to, a successful attempt has been made to supply part of that defect, by publishing the diagrams of Euclid in a *tangible* form.

To the author of this book the Meetings have been indebted for many COMMUNICATIONS, in which scientific

¹ Presented by Dr. Murray.

² Presented by Capt. Colquhoun.

³ Eust. Strickland, Esq.

⁴ The Rev. W. Taylor.

ingenuity has been applied to practical objects ; and if an instance were wanted of the usefulness of philosophical enquiries, such an instance might be taken from the most recent of these communications, in which it has been shown, that by a very simple alteration in the usual methods of lighting houses by gas, the power of illumination may be doubled from the same supply. The Meeting will also duly appreciate the scientific zeal which has induced some of the members to unite, for the purpose of assisting the Royal Society of Edinburgh with materials for instituting a comparison between the states of the atmosphere in different places at the same time. The observations have been made in the open air, not only in summer but in the severest season of winter, for every hour of the day and night, and have been conducted with great care and precision. Papers and correspondence of increased variety and interest, as well on subjects of antiquarian enquiry as of natural history and experimental research¹, have been read at the monthly meetings. But of all the communications with which the Society has been favoured, that which it was most gratifying to receive, was the account of hieroglyphical inscriptions deciphered by one of the Secretaries² of the Leeds Philosophical Society ; since, independently of the high degree of interest attached to an illustration of the greatest literary discovery that ever has been made, such a contribution strongly shows the cordiality with which the members of the scientific Institutions in different parts of

¹ See the List of Communications, page 33.

² William Osburn, Esq. F.R.S.L.

Yorkshire, are disposed to unite in prosecuting their common objects; objects which may be in many respects materially advanced by mutual aid and friendly cooperation.¹

Having thus given a general view of the proceedings and progress of the Society, and having laid before the meeting a full and explicit statement of its pecuniary affairs, the Council, in concluding, must express their conviction, that the success and the character of the Institution justify the expense of the arrangements which have been made for its accommodation; and that its future prospects would have been injured, if the general design had been narrower, or its execution less perfect. They venture to hope that the public favour which has prospered it so far, will be so much further extended, as not to leave it in an embarrassed condition; and they trust, when the Annual Meeting assembles again within the walls of the NEW MUSEUM, it will be in their power to congratulate the Society on the enjoyment of all the advantages which it has acquired, unincumbered and complete.

¹ In addition to Mr. Phillips's Lectures, announced in page 18, a liberal offer was made on the day of the Annual Meeting, by E. S. George, Esq. F.L.S. Curator of the Leeds Phil. and Lit. Society, to deliver a course of four experimental lectures on some of the most interesting subjects of Chemical Science; the proceeds of the course to be applied to the establishment of the Society's laboratory. These lectures will be given during the Autumn, in the Theatre of the New Museum.

THE TREASURER'S ACCOUNT FOR 1828.

<i>Dr.</i>	<i>£. s. d.</i>	<i>Cr.</i>	<i>£. s. d.</i>
Received Admission money for 19 new members	95 0 0	Balance due to the Treasurer at the close of 1827	84 16 11
Received arrears of ditto from 5 members.....	25 0 0	Purchase and preparation of Specimens.....	16 19 6
Received Annual Subscriptions for 1828, from 157 members.....	157 0 0	Books and binding.....	47 16 2
Received arrears of ditto from 3 members.....	4 0 0	Printing and advertising.....	62 4 0
Received the Subscription and arrears of the Earl of Tyrconnel, at the advanced rate of £2 per annum.....	6 0 0	Stationery.....	6 10 0
Received Composition for Annual Subscriptions from one member.....	20 0 0	Cases and Furniture.....	21 6 6
Balance due to the Treasurer at the close of 1828	91 7 9	Rent, Salaries, and Wages :	
	<hr/>	Rent of the Society's Rooms.....	£36 15 0
	<u>£398 7 9</u>	Rent of part of the Manor Shore.....	2 0 0
		Keeper of the Museum.....	60 0 0
		Servant.....	20 0 0
		Law expenses relating to the ground.....	7 9 10
		Incidents.....	32 9 10
			<hr/>
			<u>£398 7 9</u>

Balance due to the Treasurer on the above Account.....	£91 7 9
Deduct arrears of Subscription and Admission money still due by Members 64 0 0	<hr/>
Balance against the Society.....	<u>£27 7 9</u>

JONN. GRAY, TREASURER.

YORKSHIRE MUSEUM.

SUBSCRIPTIONS TO THE BUILDING FUND,

FROM THE COMMENCEMENT OF THE UNDERTAKING TO DECEMBER 31ST, 1828.

	£.	s.		£.	s.
His Grace the Archbishop of York	100	0	Backhouse, Thomas, <i>York</i>	10	10
His Grace the Duke of Norfolk	50	0	Baines, H. J. <i>Bell Hall</i>	15	0
Earl Fitzwilliam	300	0	Barber, Cattle, and North, <i>York</i>	15	0
Earl of Egremont	100	0	Barnes, Rev. Theophilus, <i>Castleford</i>	5	0
Earl of Tyrconnel	21	0	Barstow, Thomas, <i>Naburn</i>	15	0
Viscount Morpeth	20	0	Bathurst, Rev. W. H. <i>Barwick</i>	10	10
Viscount Milton	50	0	Beckwith, Stephen, M.D. <i>York</i>	10	10
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Drawing and Description of a new compensation Balance-Wheel for a Watch, by the Rev. W. Taylor, Hon. Mem. Y.P.S.

Meteorological Register for every hour of the day and night, on the 15th of January, 1828 ; by several members of the Society.

MARCH 4th.—On the chemical composition of Lapis Lazuli, and the probable means of producing it artificially, by the Rev. W. V. Vernon, F.R.S. F.G.S. President Y.P.S.

Notice and transcript of an ancient inscription in Norwich Castle, by Samuel Woodward, Hon. Mem. Y.P.S.

APRIL 1st.—On the noises of Insects, and the means whereby they are produced, by John Phillips, F.G.S. Keeper of the Museum.

Drawing and description of the mould of a Celt, by S. Woodward, Hon. Mem. Y.P.S.

JULY 1st.—Notices of the Geology of Cleveland, by the Rev. Leveson V. Vernon.

OCT. 7th.—Notice respecting Cadmium in the Calamine of Malham, by the Rev. W. V. Vernon, F.R.S. &c.

On the natural history of *Urocerus juvenicus*, by John Phillips, F.G.S.

Meteorological Register for every hour of the day and night, on the 17th of July, 1828, by several members of the Society.

NOV. 4th.—On the Geology of the vicinity of Ferrybridge, by John Phillips, F.G.S.¹

Drawing and description of a peculiar method of generating curves, by the Rev. W. Taylor, Hon. Mem. Y.P.S.

DEC. 2nd.—On the attempts which have been made to decipher the characters found among the ruins of Persepolis, by the Rev. John Kenrick.

New experiments on the combustion of Coal-gas, by the Rev. W. Taylor, Hon. Mem. Y.P.S.

JAN. 6th, 1829—On the chemical composition of a new mineral from the neighbourhood of Scarborough, by the Rev. W. V. Vernon, F.R.S. &c.²

¹ See *Phil. Mag. and Annals*, *December*, 1828.

² See *Phil. Mag. and Annals*, *March*, 1829.

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1828.

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- H. Witham, Esq. 10 specimens of red zeolite, from Kilpatrick, on the Clyde.
- Rev. G. R. Leathes, *Shrop-* } Polished specimens of striped jasper,
ham Hall, Norfolk } and phosphate of manganese.
- Capt. Colquhoun. 15 specimens of obsidian, from Real del Monte, Mexico.

JULY.

- Charles Empson, Esq.
Newcastle. } Gaylussite from South America.
- Henry Wickham, Esq. } Specimen from the gold mines of Macugnaga at the foot of Monte Rosa.
- Mr. Wilkinson. Agate from Canada.

Mr. S. Woodward..... Magnetic iron sand, from Hunstanton
Cliff, Norfolk.

OCTOBER.

W. Danby, Esq..... Epidote, and sulphate of strontian.
John Bland, Esq..... 16 minerals from various localities.
P. Sandoz, Esq..... Crystallized carbonate of lime, in
opaque six-sided prisms, &c.

NOVEMBER.

John Bland, Esq..... 3 minerals.
Rev. W. Hincks..... 24 minerals, including tabular quartz,
capped quartz, and retinasphalt.

DECEMBER.

Stapylton Stapylton, Esq. } A collection of minerals from North
America, including tourmaline, bru-
cite, phosphate of lime, phosphate of
manganese, &c.

1829.

JANUARY.

John Bland, Esq..... 18 minerals from various localities.
W. J. Henwood, Esq..... Sulphuret of molybdenum, and stream
tin, from Cornwall.

GEOLOGY.

1828.

FEBRUARY.

- John Shaw, Esq. R. A. . . . Granite from Hay Tor.
Mr. S. Woodward 20 fossils from the crag of Suffolk, and
the diluvium of Norfolk.
Rev. E. Stillingfleet Fossil wood.

APRIL.

- Mr. S. Woodward 28 fossils from the chalk of Norwich.
R. I. Murchison, Esq. } 97 fossils from the crag of Suffolk, from
the green sand series in Sussex, and
various strata in Sutherland and other
parts of Scotland.

JULY.

- J. S. Crompton, Esq. 83 rocks and fossils collected by him-
self, in Egypt and the Levant.
Rev. W. Richardson } 63 fossil plants and bones from the
vicinity of Ferrybridge; fossil shells
from Dudley, &c.
Rev. L. V. Vernon 22 additional specimens in illustration
of the geology of Cleveland.
Rev. R. B. Cooke Fossils, &c. from the eastern part of
Yorkshire.
Rev. H. Hodgkinson Fossil plants from Timsbury, Somerset.

Rev. T. King.....	Fossil fish from Barrow on Soar.
Rev. W. Hincks.....	Silicified wood from Lough Neagh.
Hon. E. R. Petre.....	} Specimens of <i>axinus obscurus</i> , from the magnesian limestone at Stapleton Park.
W. Wright, Esq.....	
Rev. W. V. Vernon.....	12 specimens from the oolitic rocks at Stamford, Barnack, &c.
Mr. Rowntree.....	Fossil fern from Gristhorpe.
Mr. W. Holden.....	2 masses of fossil wood from the Isle of Portland.

OCTOBER.

John Bland, Esq.....	Specimens of <i>calamites decoratus</i> , from Whitehaven.
E. Gibson, Esq.....	Stalactites from Ægina.
Professor Necker.....	23 fossils from Switzerland.
Mr. H. Newmarch.....	Fossil plant, (<i>Sphænopteris artemi- siaefolia</i> , Sternberg,) from Newcastle.
W. Danby, Esq.....	46 rocks and fossils from Yorkshire, Herefordshire, Devonshire, &c.
H. Witham, Esq.....	72 lepidodendra, flicites, &c. from the Newcastle coal field.
Rev. R. Halifax.....	36 echinida, crinoïdea, ammonites, and other fossils, from Gloucestershire.
Mr. R. Ripley.....	11 fossils from the lias of Whitby, &c.
Rev. W. Richardson.....	7 fossil shells from the magnesian lime- stone near Ferrybridge.
Rev. S. Sharp.....	Alcyonite from Hertfordshire.
W. Wright, Esq.....	<i>Variolaria ficoïdes</i> , (Sternberg,) from the county of Durham.

- Anthony Thorpe, Esq. Spirifera Walcottii, and other fossils,
from the coast of Yorkshire.
- M. Gustave Wetzlar, }
Heidelberg. } Fossil crustaceous animal, (of the genus
Palinurus ?) from Germany.
- Hon. Mrs. L. V. Vernon. 18 rock specimens, from the Polar
Regions.
- R. Cattle, Esq. Imitative mass of lias from Scarborough.

NOVEMBER.

- W. Danby, Esq. Two masses of gypsum from Seaton
Carew, Durham.
- T. Meynell, Esq. 1 smaller specimen of ditto.
- Rev. L. V. Vernon. 86 additional specimens to illustrate the
geology of Cleveland.
- Rev. W. Hincks. 44 fossils from Blackdown, Cork, &c.
- H. Witham, Esq. 66 additional specimens of rocks from
various localities in Scotland.

DECEMBER.

- Stapylton Stapylton, Esq. } 123 geological specimens from North
America, including spiriferæ, mille-
poræ, &c.
- Miss Atkinson. 8 specimens of fossil fish, &c. from
Swanwich Bay, Dorsetshire.
- P. Murray, M. D. 47 fossils from the chalk of Norwich
and Cambridgeshire.
- Rev. J. Graham. 7 fossils from Speeton.
- Rev. W. V. Vernon. Tubiporite ? from Terrington.

1829.

JANUARY.

H. Witham, Esq.....	}	22 fossil fishes from Caithness.
		54 additional specimens of the rocks of Scotland.
J. Bland, Esq.....		4 geological specimens.
W. J. Henwood, Esq.....	}	A series of the "Elvans" of Cornwall, and other specimens illustrative of the geology of that county.
W. Hutton, Esq.....		Wood mineralized by iron.
H. Littledale, Esq.....		5 fossil shells from Craven.

ZOOLOGY.

MAMMALIA.

1828.

FEBRUARY.

- Mr. Joseph Backhouse.... Deformed skull of a rabbit.
Capt. O. V. Vernon, R.N. A squirrel.

APRIL.

- Mr. W. C. Hewitson..... Large bat, (*Vespertilio murinus*.)

JULY.

- P. W. Watson, Esq..... Pole cat, (*Mustela putorius*.)

OCTOBER.

- Rev. James Dalton..... Flying squirrel, (*Pteromys volucella*.)

DECEMBER.

- S. Stapylton, Esq..... } 4 species of squirrel, (viz. *Sciurus*
cinereus, *S. striatus*, *S. hudsonius*,
S. niger) and a Lynx, from North
America.
W. S. Burn, M.D..... 4 interesting osteological preparations.

BIRDS.

1828.

FEBRUARY.

- Mr. Joseph Backhouse. . . . Red headed smew, (*Mergus albella.*)
 Pair of rock larks, (*Alauda rupestris.*)
- Capt. O. V. Vernon, R. N. Flamingo, (*Phænicopterus ruber.*)
 Pelican.
- W. J. Charlton, Esq. Black cock and gray hen, (*Tetrao
 tetrix.*)
- Mr. W. Gray, jun. Kestrel, (*Falco tinnunculus.*)
 Merlin, f. (*Falco æsalon.*)
- Rev. W. V. Vernon. Plotus anhinga, from Para.
- The Zoological Fund. Skeleton and trachea of the wild swan.
 Rough-legged falcon, (*F. lagopus.*)

MARCH.

- The Zoological Fund. Another rough-legged falcon.
- Mr. W. Gray, jun. Merlin, m. (*Falco æsalon.*)

JULY.

- Mr. Ellison. { Guillemot, (*Uria troile.*)
 Razor-bill, (*Alca torda.*)
 Puffin, (*Alca arctica.*)
 Red-legged crow, (*Corvus graculus.*)
- Mr. Joseph Backhouse. . . . Nest of the Tailor-bird.
- P. W. Watson, Esq. Sheldrake, (*Anas tadorna.*)

OCTOBER.

- Capt. O. V. Vernon, R. N. Charadrius Jamaicensis, and two other
 foreign birds.

DECEMBER.

- | | | |
|--|---|---|
| Stapylton Stapylton, Esq.. | } | 27 birds from North America, viz. falco lagopus, f. cinerarius, strix bubo americanus, another owl, 2 species of heron, picus erythrocephalus, picus auratus, picus carolinæ ? oriolus phænicus, another oriole, blue robin, scarlet tanager, sturnus ludovicianus, emberiza cyanea, a titmouse, loxia curvirostra, charadrius pluvialis, another plover, corvus cristatus, and great crested kingfisher. |
| Mr. Henry Meech,
by S. Stapylton, Esq.. | } | Curlew, wood duck, and bittern, from North America. |

1829.

JANUARY.

- | | |
|-----------------------|--|
| Mr. H. Chapman..... | Hooded crow, (<i>Corvus cornix.</i>) |
| Mr. W. Gray, jun..... | Curlew, (<i>Scolopax arquata.</i>)
Loxia curvirostra. |

REPTILES.

1828.

DECEMBER.

- | | |
|----------------------------|---|
| Stapylton Stapylton, Esq.. | Rattle-snake, (<i>Crotalus horridus.</i>) |
|----------------------------|---|

FISHES.

1828.

JULY.

- | | |
|-------------------------|---|
| C. Empson, Esq..... | Syngnathus hippocampus. |
| Mr. Whitwell, Naburn... | Sea lamprey, (<i>Petromyzon marinus.</i>) |

CRUSTACEA.

1828.

JULY.

C. Empson, Esq..... 2 specimens of the American king crab,
(*Limulus polyphemus.*)

DECEMBER.

Stapylton Stapylton, Esq.. } 2 larger specimens of the king crab,
and a very large lobster, (*Astacus*
marinus,) from America.

1829.

JANUARY.

Mr. W. Bean..... 2 Pea crabs, (*Pinnotheres pisum.*)

INSECTA.

1828.

FEBRUARY.

T. Meynell, jun. Esq..... 30 foreign Insects.

JULY.

T. Meynell, jun. Esq..... 62 foreign Insects.

Mr. H. Chapman..... 2 pairs of *Polyommatus argus.*

OCTOBER.

Zoological Fund..... *Limenitis camilla,* &c.

Mr. Robert Harrison..... *Hipparchia polydama.*

Mrs. W. V. Vernon..... *Libellula varia.*

W. Middleton, Esq..... Specimens of *Urocerus juvenicus,* and of
the fir tree which they had perforated.

DECEMBER.

S. Stapyhton, Esq. Insects from North America.

CIRRIPEDA.

1828.

JULY.

A. Strickland, Esq. Otion Cuvieri, and cinaras vittatus.

OCTOBER.

W. Danby, Esq. Anatifa lævis, and a. sulcata.

MOLLUSCA.

1828.

FEBRUARY.

Mr. F. J. Copsie 28 foreign shells.

JULY.

A. Strickland, Esq. } 10 species of British shells, viz. pholas
parva and ph. crispata, corbula inæ-
quivalvis, venus verrucosa, pectuncu-
lus pilosus, avicula hirundo, pecten
lineatus, pileopsis hungarica, paludina
vivipara, and bulla lignaria.

APRIL.

W. Wright, Esq. Anodon cygneus.

JULY.

John Bland, Esq. 4 species of foreign shells, including
pteroceras chiragra, and fusus morio.

- Dr. Goldie Wood perforated by *teredo navalis*.
- J. S. Crompton, Esq. 2 marine shells from the sands of Upper Egypt.
- W. Danby, Esq. { 31 species of British shells, viz. *lutraria elliptica*, *sanguinolaria vespertina*, *pholas lamellata*, *ph. papyracea*, *teredo navalis*, *tellina donacina*, *t. solidula*, *venerupis virginea*, *cytherea lincta*, *c. ovata*, *venus gallina*, *v. fasciata*, *cardium lævigatum*, (jun.) *mytilus polymorphus*, *pectunculus pilosus*, *avicula hirundo*, *pecten obsoletus*, *p. varius*, *anomia ehippium*, *a. undulata*, *pileopsis hungarica*, *fissurella græca*, *emarginula fissura*, *trochus tenuis*, *t. magus*, *natica glaucina*, *cingula pullus*, *purpura lapillus*, *pleurotoma gracilis*, *bullia hydatis*.
- Branchial shield of *aplysia depilans*.
- Rev. W. Richardson *Cyclas rivicola*.
- Hon. and Rev. H. Howard 20 species of foreign shells.
- Mrs. Wright 20 species of foreign shells.
- Professor Necker *Melania Rolandri*.
- E. Gibson, Esq. 5 species of foreign shells.

NOVEMBER.

- Rev. W. Hincks { 4 species of British shells, viz. *patella Clealandi*, *ianthina communis*, *cypræa europæa*, and *rostellaria pes pelicani*.
- 5 species of foreign shells.

1829.

JANUARY.

- Mr. T. Allis..... } 11 species of British shells, viz.
 Sanguinolaria vespertina, venerupis
 sarniensis, cerithium costatum, tro-
 chus conicus, nerita lacuna, cingula
 ulvæ, c. striatula, c. interrupta, c.
 cimex, bulla obtusa, helix pomatia.
- S. B. Bruce, Esq..... 2 specimens of Venus Dione.

RADIARIA.

1828.

OCTOBER.

- Mrs. Wright..... Cidaris lucunter.

POLYPARIA.

1828.

FEBRUARY.

- Mrs. G. Bulmer..... Plumularia falcata.
 Flustra foliacea.
- Mr. F. J. Copsie..... } Isis hippuris, i. oculina, i. virginea.
 Caryophyllia fastigiata.
 Pocillopora damæcornis.
 Porites scabra.

MARCH.

- Mr. James Backhouse.... Caryophyllia sinuosa, and Astræa.

JULY.

- John Bland, Esq..... Caryophyllia carduus, and Millepora
 alcicornis.

BOTANY.

1828.

FEBRUARY.

- Mrs. W. V. Vernon..... A collection of British sea weeds.
Mrs. G. Bulmer..... A collection of sea weeds from the
Yorkshire coast.

APRIL.

- M. Colquhoun, Esq..... Seeds from the neighbourhood of Real
del Monte.

OCTOBER.

- Hon. Lady Turner..... A series of plants from the polar shores.
Miss Dixon..... Marine plants from the Yorkshire coast.

NOVEMBER.

- Rev. W. Hincks..... A collection of fruits and seeds.

DECEMBER.

- S. Stapylton Esq..... Dried plants from North America.
Mr. H. Baines..... A volume of mosses.

ANTIQUITIES.

I. COINS AND MEDALS.

1828-9.

Rev. W. V. Vernon.....		A styca of Æthelred. Scottish coin of Charles II.
Mr. Alderman Hearon....	3	Roman coins, <i>ar.</i> 3. 2 Roman coins, <i>æ.</i> 3. 2 Stycas. 4 Eng. <i>silver</i> , &c.
J. Bland, Esq.....	8	half-groats of Edward I. and II. 5 copper coins.
Rev. Archdeacon Eyre....	}	Valerianus, <i>æ.</i> 3. 2 English coins. 2 tokens, found on the north side of the Minster.
Rev. W. V. Vernon, and W. Wright, Esq.	}	Magnentius, <i>æ.</i> 2. and 32 coins and tokens; found on the Manor Shore.
Dr. Beckwith.....	One	Roman coin, <i>æ.</i> 3. 3 tokens.
Dr. Wasse.....	}	10 Roman coins, of the Cæsars, <i>æ.</i> 1. 8 Roman coins, <i>æ.</i> 2 and 3. 7 Roman coins, <i>ar.</i> 3. 15 English and other modern coins and tokens.
H. Bower, Esq.....	}	Trajanus, <i>æ.</i> 1. 2 gold foreign modern coins. 7 English, <i>silver</i> . 10 foreign coins and medals, <i>silver</i> . 15 foreign coins and tokens, copper.
Thomas Beatson, Esq....	Gordianus,	<i>æ.</i> 1.
Mr. S. Kenrick.....	6	English, <i>silver</i> , of Edw. and Eliz.

II. MISCELLANEOUS ANTIQUITIES, &c.

1828-9.

Mr. S. Woodward.....	} 24 impressions of monastic and other ancient seals. Model and coloured drawings of the mould of a celt.
Dr. Hull.....	
Mr. Johnson, <i>Pocklington</i> .	} A modern oriental M.S. on a silver plate, obtained at the capture of Rangoon.
Rev. W. V. Vernon.....	
Mr. F. J. Copsie.....	A small earthen Egyptian image.
Mrs. Best.....	A Lachrymatory, found at the Mount, near York.
Dr. Murray.....	Fragment of a symbol of Isis, found at Aldborough (Isurium.)

DONATIONS TO THE LIBRARY.

1828.

FEBRUARY.

- Dr. Goldie..... Monro on Fishes, folio.
- M. Stapylton, Esq. }
 (the Author.) } Letters on Prison Discipline, &c. 8vo.
- Whitby Lit. and Phil. Soc. Report of the Society for 1827.
- Dr. C. Wilkinson, }
 (the Author) } Logometric Scale of Chemical Equiva-
 lents.

MARCH.

- Rev. W. Taylor, }
 (the Author.) } Diagrams of Euclid, for the use of the
 Blind, 8vo.
- Mr. W. Gray, jun. Hatchett on Gold, 4to.
- M. J. A. De Luc, }
 (the Author.) } Mémoire sur les pierres Alpines 4to.
- Rev. J. Graham..... }
 } M.S. and printed translations of portions
 of Scripture into the Malayalam
 language.

APRIL.

- Eust. Strickland, Esq..... }
 } Smith's English Flora, 4 vols. 8vo.
 } Smith's Grammar of Botany, 8vo.
- Mr. Alderman Wilson.... Beauties of England and Wales,
 18 vols. 8vo.

- Royal Asiatic Society of Great Britain. } Transactions of the Society, vol. i. part 2 ; List of Members ; Rules ; Desiderata and Enquiries.
- Hull Lit. and Phil. Society Report of the Society for 1827.
- W. H. Benson, Esq.
(the Author) } Ichnography of Whitby Abbey, 8vo.
- JULY.*
- Mr. Alderman Smith..... Gerarde's Herbal, folio, 1636.
- Dr. Cayley..... Allan's Mineralogical Tables, 1st. edit. 8vo.
- Society of Arts, &c.
Adelphi, London. } Transactions of the Society, 45 vols. 8vo.
- Dr. Hutchinson, *Ripon*... Hutchinson on the Frog-fish of Surinam, 4to.
- Rev. J. Skinner
(the Author.) } M.S. Dissertation on a Roman Villa found at Wellow, Somerset.
5 Prints of Mosaic Pavements, found at the same place.
- W. Wright, Esq..... 2 Prints of Mosaic Pavements at Lyons.
- Rev. Dr. Buckland..... } Print of a portion of a jaw, with teeth, of the Mastodon Elephantinus from Ava.

OCTOBER.

- Mr. J. B. Giles..... Thompson's Memoir on Pentacrinus Europæus, 4to.
- Professor Necker
(the Author) } Mémoire sur les oiseaux des environs de Genève, 4to.
Lettre sur la Géologie, 8vo.
Discours sur l'histoire de la Géologie, 8vo.

- Gideon Mantell, Esq.
(the Author.) { The Fossils of the South Downs, or
Illustrations of the Geology of Sussex,
4to.
- Mr. F. J. Copsie..... { Plot's Natural History of Staffordshire,
folio, 1st edit. 1677, with M.S. addi-
tions.
- J. Britton, Esq..... Specimen of " Picturesque Antiquities
of English Cities."
- Dr. J. Harwood..... { On the Curative Influence of the South-
ern Coast, by W. Harwood, M.D.
8vo.
- Mr. W. Gray, jun..... Temminck Manuel d'Ornithologie, 8vo.
- Bristol Institution..... Report of the Institution for 1827.
- Perth Lit. and Antiq. Soc. Transactions of the Society, 8vo.
- Leeds Phil. and Lit. Soc.. { Report of the Society for 1827-8.
Account of a Mummy in the Museum
at Leeds, with an original drawing.

NOVEMBER.

- Mr. F. J. Copsie..... Leuwenhoeck Opera omnia, 4to. 1722.
- Mr. S. Woodward..... Specimen of a work on the Geology of
Norfolk.

DECEMBER.

- Rev. J. Kenrick..... { Plinii Historia Naturalis, ed. Harduini,
Paris, 1723, 3 vols. folio.
- Mr. J. Phillips..... { Ray's Wisdom of God in the Creation,
2 vols. 8vo.
Derham's Astro-theology, 8vo.
- Purchased by Subscription. Audubon's Birds of America, parts 5
to 9, inclusive, Atlas folio.

JANUARY, 1829.

W. J. Henwood, Esq. (the Author.)	} Observations on Steam-Engines, 8vo.
Royal Society of Edinburgh.	Transactions of the Society, vol. iv.—xi.
Eust. Strickland, Esq.....	Wood's Catalogue of Works on Natural History, 8vo.
Professor Griscom.....	Silliman's American Journal for 1828.

BOOKS PURCHASED.

Mohs' Mineralogy, by Haidinger, 3 vols. 12mo.
 Fleming's Natural History of British Animals, 8vo.
 Dillwyn's Catalogue of British Shells, 2 vols. 8vo.
 Selby's British Ornithology, 8vo.
 Harland's American Fauna, 8vo.

WORKS IN CONTINUATION.

Philosophical Transactions.
 Transactions of the Geological Society.
 Philosophical Magazine and Annals of Philosophy, *monthly*.
 Quarterly Journal of Science, edited at the Royal Institution.
 Jameson's Edinburgh Philosophical Journal, *quarterly*.
 Brewster's Edinburgh Journal of Science, *quarterly*.
 Cuvier's Animal Kingdom, by Griffiths.
 Zoological Journal.
 Sowerby's Genera of Recent and Fossil Shells.
 Sowerby's Mineral Conchology.
 Stephens's Illustrations of British Entomology.

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