

FROM the Indian papers it appears that the expedition despatched from British Burmah to Yunnan was to travel, not by any new route, but by the one which Major Sladen followed some six years ago. It was to start, in fact, from his point of departure, Bhamo, proceeding thence to Momein and Talifu. From the last-named city, once more subject to a Chinese governor, it will sail down the mighty Yangtse, with Shanghai for its final goal. The exploring party is commanded by Col. Horace Browne, one of the most distinguished officers of the Burmah Commission. Mr. Ney Elias is a member of the expedition, and Dr. John Anderson, who goes as scientific officer, with a small staff of Eurasian and native collectors, is already well known as a member of the former expedition to Bhamo and Yunnan. If the present party succeed in reaching Shanghai, they will be the first Europeans who, at least since the days of Marco Polo, have ever made their way through China from the West.

It is with somewhat mingled feelings that we have perused the Report of the "Botanical Locality Record Club" for 1873. Any addition to our knowledge of the geographical distribution of British plants is very valuable, and the Recorder and his correspondents have industriously compiled much useful and interesting observation. But what chance remains of the permanence of our rarer plants when their localities are published in this way? We are glad to find that one of the rarest and most interesting of British plants, the Lady's Slipper, *Cypripedium Calceolus*, has been found in several other localities in the woody magnesian-limestone denes of Durham, besides the original one of Castle Eden; the exact spots are wisely withheld.

MR. R. ROUTLEDGE, B.Sc., F.C.S., has been appointed to the Professorship of Natural Philosophy at the Bedford College, York Place. Lecture rooms and a chemical laboratory fitted with the requisite appliances for the practical teaching of physical science are in course of preparation; but pending the completion of these, arrangements have been made to commence the next session with an elementary course of experimental lectures on heat, in another apartment of the College.

SURGEON-MAJOR DAY, F.Z.S., Inspector of Fisheries in India, has recently issued a second report on the fisheries of India and Burmah, which treats of the sea fisheries of those countries, and of the principal customs affecting the supply of fish. The case of the fisheries in the East is entirely different from that in this country. In India, the chief subject of investigation is how to augment the working of the sea fisheries; in Great Britain, one of the main objects of the Legislature in the various inquiries that have been made has been to see if they were being overworked, and to devise means for their preservation and protection. Although certain customs exist which, if observed on a large scale, would seriously affect the fisheries of India, still the general facts seem to prove that there are not sufficient means for properly capturing and utilising the natural supplies of fish. One of the principal defects is the want of quick means of carriage of the fish to the inland towns; to secure a supply of fish in the interior, it is necessary to salt them, and a great impediment to the trade in salt fish is the Government tax on salt. On this point Dr. Day's remarks are very important. He says: "It may be well to decide whether it is humane or even prudent, in a sanitary point of view, to make the price of salt so excessively high that it cannot be used to preserve fish with, and thus compel the people to go without or consume it putrid or rotten. We read that 'in Bergen there are two large hospitals devoted exclusively to the treatment of patients suffering from a peculiar form of disease brought on by eating badly-cured fish; the disease is a mixture of leprosy and elephantiasis' (both common in Orissa). In Ireland, in 1645, we are told that the leprosy was driven out of Munster by the

English, the disease being due to the people eating foul salmon or those out of season. This was prohibited, and the prohibition enforced 'whereby hindering these barbarians against their will to feed on that poisonous meat; they were the cause of that woeful sickness which used so mightily to reign among them, but hath in time been almost abolished.' The collector of Ratnagiri states that the high duty on salt is undoubtedly a source of epidemics and other serious illnesses induced by eating imperfectly prepared fish. I think the foregoing extract sufficient to show that compelling a population to eat rotten fish may be a rather impolitic act."

THE Council of the Society for the Promotion of Scientific Industry, the head-quarters of which are at Manchester, has decided to give gold, silver, and bronze medals for excellence and novelty in the various classes of exhibits at the exhibition of implements, machines, and appliances for the economising of labour, which is to take place in Manchester in 1875. The arrangements for the Exhibition are progressing satisfactorily, and space has been secured by many high-class engineering and other firms.

THE tenth number of the third volume of the Bulletin of the Museum of Comparative Zoology consists of an article on the *Ophiuride* and *Astrophytide*, old and new, by Theodore Lyman, in continuation and rectification of previous memoirs on the same subject. Many new species are indicated, principally from the Philippine Islands, where they were collected by Dr. Semper, from whom they passed into the possession of the Museum of Comparative Zoology. The memoir is illustrated by seven plates, showing the anatomy of the *Ophiuride*, the growth of spines, hooks, and stumps, the formation of armed spines, &c., and the characters of the new species.

THE additions to the Zoological Society's Gardens during the past week include two Hardwicke's Mastigures (*Uromastix hardwickii*) from India, presented by Lieut. Col. C. S. Sturt; a Nicobar Pigeon (*Calenas nicobarica*) from the Nicobar Islands, presented by Capt. R. J. Wimberley; two Bonnet Monkeys (*Macacus radiatus*) from India, presented by Mr. L. Miller and Miss J. Watt; two Mazame Deer (*Cervus campestris*) from South America, purchased; a Paradise Whydah Bird (*Vidua paradisica*), a Pin-tailed Whydah Bird (*Vidua principalis*) from West Africa, received in exchange.

THE PRESENT CONDITION OF THE ROYAL SOCIETY

(Extracted from the President's Address at the Anniversary Meeting.)

IT has been represented to me that, the Royal Society being now, after eighteen years of temporary accommodation, settled in quarters of which we hope to retain undisturbed occupation for some generations to come, an account of the present position of the Society in respect of our more important possessions, foundations, and functions, and our relations to the Government, would not only be generally acceptable, but might even be required of me by that large and increasing class of Fellows who live far from our doors. This class now numbers as nearly as possible one half of the Society, few of whom can be even occasional attendants at our meetings; and if to this class of absentees be added the large number of residents within the metropolitan district whose avocations prevent their attending, it will not surprise you to hear that (as I have ascertained by careful inquiry) a very large proportion of our fellow members know little of the Society's proceedings beyond what appears in our periodical publications, nor of our collections, nor of the tenure under which we occupy our apartments under the Crown—and that many have never heard of the funds we administer, whether our own or those voted by Parliament in aid of scientific research, nor of the fund for relief of the necessitous, nor of the gratuitous services rendered by the Society to various departments of the Government.

Unlike the great Academies of the Continent, the Royal Society has never published an almanack or annuaire containing information upon its privileges, duties, constitution, and management. Particulars on these points are for the most part now accessible to the Fellows only by direct inquiry, or through the Council Minutes; and these, to non-resident Fellows, are practically inaccessible. In my own case, though I have long been a resident Fellow and had the honour of serving on your Councils for not a few years, it was not until I was placed in the position I now hold that I became aware of the number and magnitude of the Society's duties, or of the responsibility these impose on your officers.

It is upwards of a quarter of a century since an account of the foundations that then existed and the work the Society then carried on was published in Weld's valuable but too diffuse "History of the Royal Society." These have all been greatly modified or extended since that period; and many others have been added to them; so that the time has now arrived when a statement of the large funds applicable to scientific research which the Society distributes, the conditions under which these are to be applied for, and other particulars, might with advantage be published in a summary form and distributed to the Fellows annually.

Finance.—After the financial statement made by the auditors, you will, I am sure, conclude that there is no cause for apprehension in respect of the Society's funds or income; and when to this I add that the expenses of removal from the old house, including new furniture, amount to £,300^{l.}, and that the volume of Transactions for the present year will contain eighty-six plates, the largest number hitherto executed at the Society's cost within the same period, you will also conclude that there is no want of means for providing illustrations to papers communicated to us for publication.

The landed property of the Society, as stated in the printed balance-sheet now before you, consists of an estate at Acton, in the neighbourhood of London, and an estate at Mablethorpe, Lincolnshire, each yielding a good rental. The Acton estate, at present on lease to an agricultural tenant, is planned to be let as building land, for which it is favourably situated, and will thus become increasingly valuable.

The subject of the tenure under which the Society holds the apartments we now occupy was brought up on a question of insurance. That question has been satisfactorily settled by reference to the Treasury; but it may still be worth while briefly to state the facts which the Council considered as furnishing valid grounds for appealing against the requirement to insure, and for at the same time requesting an assurance that the permanence of our tenure is in no way weakened by our removal to this building. These are: that when the apartments in Somerset House were originally assigned to the Society by command of George III., they were granted "during the pleasure of the Crown, without payment of rent or any other pecuniary consideration whatever;" that the Society was not required to insure either in Somerset House or old Burlington House; that when the Society removed at the request of the Government from Somerset House and accepted temporary accommodation in Burlington House, it was under the written assurance of the Secretary of the Treasury, addressed to the President of the Society, that the claims of the Society to "permanent accommodation should not be thereby in any respect weakened;" that in the debates on the estimates in 1857, the Secretary of the Treasury stated, in his place in Parliament, that "the Society could not be turned out of Somerset House without its own consent," and that "it was entitled to rooms by royal grant."

To this appeal the Lords Commissioners returned a satisfactory answer; and their letter, dated October 27th last, assures us "that there is no intention on the part of the Treasury to alter the terms on which the Royal Society holds its appointments under the Crown; the conditions of the Society's tenure will therefore be the same as those on which it occupied rooms in Somerset House, and was subsequently transferred to Burlington House."

While feeling it my duty to lay these details before you, I must accompany them with the assurance that nothing has occurred during this correspondence to disturb the unbroken harmony that has existed between her Majesty's Government and the Royal Society, ever since our occupation of apartments under favour of the Crown.

On every occasion of change of quarters the Society has

received abundant proofs of the regard shown by the Government for its position, requirements, and continued prosperity; and there is, I am sure, every disposition on the part of the Government to recognise the fact that the privileges conferred on the Society are fully reciprocated by the multifarious aid and advice furnished by your Council in matters of the greatest importance to the well-being of the State.

The practice of electing Fellows of the so-called privileged class whose qualifications were limited to accident of lineage or political status, has been viewed with grave dissatisfaction by many, ever since the election of ordinary Fellows was limited to fifteen. The Council has in consequence felt it to be its duty to give most careful attention to the subject, which it referred to a committee, whose report has been adopted and embodied in a by-law.

The privileged class consisted, as you are aware, of certain royal personages, peers of the realm, and Privy Councillors (Statutes, Sect. iv. cap. 1); and they were balloted for at any meeting of the Society, after a week's notice on the part of any Fellow, without a suspended certificate, or other form whatever.

The committee reported that it was desirable to retain the power of electing, as a "privileged class," persons who, while precluded by public duties or otherwise from meeting the scientific requirements customary in the case of ordinary Fellows, possessed the power and had shown the wish to forward the ends of the Society, and recommended that the class should be limited to the princes of the blood royal and members of her Majesty's Privy Council. And with regard to the method of election, they recommended that a prince of the blood royal might be publicly proposed at any ordinary meeting, and balloted for at the next; that, with regard to a member of her Majesty's Privy Council, he might be proposed at any ordinary meeting by means of a certificate prepared in accordance with chap. 1. Sect. iii. of the Statutes, membership of the Privy Council being the only qualification stated—the certificate being, with the Society's permission, suspended in the meeting-room till the day of election, which should fall on the third ordinary meeting after suspension.

Having regard to the eminent services to the State which have been rendered by Privy Councillors, and to the fact that all peers who do render such services are habitually enrolled on the list of Privy Councillors, it was believed by the Council that the effect of thus limiting the privileged class would be that the doors of the Society would remain open to all such peers as desire and deserve admission, but who have not the ordinary qualifications for fellowship; while all such peers as might appear with claims which compete with those of ordinary candidates would prefer owing the fellowship to their qualifications rather than to their birth.

The Council hopes that by this means the so-called privileged class will be reinforced, and that statesmen who may have considered themselves ineligible through want of purely scientific qualifications, or who have hesitated to offer themselves from the fear of interfering with the scientific claims of others, will in future come forward and recruit our ranks.

A passing notice of the manner of proposing candidates for the ordinary class of fellowship may not be out of place. Theoretically this is done by a Fellow who is supposed to be a friend of the candidate, is versed in the science on which his claims are founded, and is satisfied of his fitness in all respects for fellowship. It is most desirable that the Fellow who proposes a candidate should take upon himself the whole duty and responsibility of preparing the certificate, should sign it first, and himself procure the signatures of other Fellows in whose judgment of the candidate's qualifications the Council and the Society may place implicit confidence. It is unsatisfactory to see attached to a candidate's certificate an ill-considered list of signatures, whether given from personal or from general knowledge; and the happily rare practice of soliciting signatures and support, directly or indirectly, by the candidate himself, cannot be too strongly deprecated. For obvious reasons the president, officers, and other members of the Council have hitherto during their periods of office abstained from proposing a candidate of the ordinary class, or from signing his certificate, but have not withdrawn their signatures from certificates sent in before they took office. The Council and officers will probably not feel the same objection to signing the certificates of candidates of the privileged class, as these will not be selected for ballot by the Council, but will be elected by the Society at large at their ordinary meetings.

In carrying on the business of the Society the Council is much indebted to committees appointed annually for special purposes, or to whom an occasional question is referred. The annual appointments include the Government Grant, the Library, the Sorce, and the Acton Estate committees. The temporary committees of the past year have been the Circumnavigation, the Transit of Venus Expeditions, the Arctic, the House, the Brixham Cave, the Privileged Classes, and the Davy Medal committees. Besides these there are two permanent committees, the Meteorological and the Scientific Relief, to which fresh members are appointed as vacancies occur. From these designations, it will be understood that some of the committees have been occupied with questions connected with the Government service, while others have devoted themselves exclusively to the business of the Society.

I shall now mention such of the labours of these committees as seem to be most worthy of your attention.

The Meteorological Committee of the Board of Trade, as it ought to be called, discharges in all respects the most arduous and responsible duties of any, controlling as it does the whole machinery of the British Government for the making, registering, and publishing of especially oceanic meteorological phenomena throughout the globe.

The primary purpose for which this and all similar offices were established was the acceleration of ocean passages for vessels by an accurate investigation of the prevalent winds and currents. In other words, their great object is to aid the seaman in what Capt. Basil Hall called "one of the chief points of his duty"—namely, "to know when to find a fair wind, and when to fall in with a favourable current." The first impulse to the formation of an office for this purpose was given by the late General Sir J. Burgoyne, who in 1852 started the idea of land observations to be carried out by the corps of Royal Engineers.

Shortly afterwards our Government corresponded with the United States Government on the subject of co-operating in a scheme for land observations, which was followed by a suggestion on the part of America that the operations should be extended to the sea.

The correspondence was referred to the Royal Society, which warmly approved the scheme of sea observations, but saw many difficulties in carrying out that for the land. The Brussels Conference followed in 1853, when representatives of most of the maritime nations assembled and adopted a uniform plan of action. Soon after this, Lord Cardwell, then President of the Board of Trade, established the Meteorological Department of that office, and placed the late Admiral Fitzroy at the head of it—the Royal Society, at the request of the Government, supplying copious and complete instructions for his guidance, which were drawn up mainly by Sir Edward Sabine. Admiral Fitzroy's zeal and his great labours are known to all; he worked out the system of verifying and lending instruments, planning surveys, registering observations, publishing results; and, lastly, himself originated the plan of predicting the weather, and establishing storm-signals at the sea-ports along the coast.

On Admiral Fitzroy's death in 1865 the Royal Society was again consulted as to the position and prospects of the office. Its report, which did not differ materially from that of 1855, was in 1866 referred to a committee, composed of a representative of the Board of Trade, of the Admiralty, and of the Royal Society. This committee supported the previously expressed views of the Society, and suggested the placing of the office under efficient scientific superintendence; upon which the Society, in the same year, was requested by the Government to undertake the superintendence of what had been the Meteorological Department of the Board of Trade. To this request the Council of the Society so far acceded as to nominate a committee of eight Fellows (subsequently increased to ten) to undertake the entire and absolute control of the office; and a parliamentary grant of 10,000*l.* per annum was provided to maintain it.

This is in brief a history of the connection between the Royal Society and the Meteorological Office on the one hand, and between the office and the Government on the other. It is a very anomalous position, and has been greatly misunderstood. It has led to the misconception on the part of some that the Society controlled the office, and by others that the Government (Board of Trade) controlled it, and by more that the annual grant of 10,000*l.* is made to it, in support of the Royal Society, or of its own objects, whereas the grant is paid direct to the director of the office as soon as voted. The Society's action is confined to the selection of the committee, which superintends the office, while the Board of Trade, leaving to the committee the details

of their operations, exercise only a general control. The labours of the committee are entirely gratuitous, and no part of the 10,000*l.* is touched by them or by the Royal Society.

I believe there is no parallel to such an organisation as this in any other department of the Government. It has its advantage in securing to the office absolute freedom from that disturbing element in the public offices, that their heads are chosen partly on political grounds and change with every Government, and its disadvantage in wanting the support of direct Government authority and prestige. Hitherto, owing to the care of the committee, which meets almost weekly, to the zeal and efficiency of the director (who is also secretary to the committee) and of the Marine Superintendent, it has worked well. Into its working it is not my purpose to enter; its efficiency and value are fully acknowledged by the public. No more practical proof of this can be cited than the general desire, supported by memorials presented to Parliament, for the restitution of the storm-signals, which were discontinued after Admiral Fitzroy's decease, on the ground of their trustworthiness having been called in question. It is no little testimony to the foresight of that zealous officer that they are not only now re-established and in full working order at 100 stations on the coast of Great Britain, but that the very warnings issued from Paris to the coast of France by the Government of that country are actually sent to Paris from the Meteorological Office in London. The same warnings are transmitted along the whole European coast, from Norway to Spain; and the system has been extended to Italy, Portugal, and Australia.

The Kew Observatory, which is used also as the central observatory of the Meteorological Committee, is supported by a grant from that committee, and by the munificence of our Fellow, Mr. Gassiot, who has settled on it a fund which produces 500*l.* a year for the carrying on of observations chiefly magnetical.

The Circumnavigation Committee.—The scientific results of the *Challenger* Expedition have far exceeded our most sanguine anticipations. The Temperature Survey of the Atlantic may, as Dr. Carpenter informs me, be truly characterised as the most important single contribution ever made to Terrestrial Physics, presenting as it does the whole thermal stratification of an oceanic area of about 15 million square miles and with an average depth of 15,000 feet. Nor are the results of the Pacific Survey less important. Some of these were laid before you at our meeting of the 26th inst. in Prof. Wyville Thomson's "Preliminary Notes on the Nature of the Sea-Bottom in the South Sea," which reveal the existence of hitherto unsuspected processes of aqueous metamorphism at great depths in the ocean, and throw an entirely new light upon the geological problem of the origin of "azoic" clays and schists.

Valuable papers on new and little known marine animals have been contributed to our Transactions and Proceedings by Mr. Willemoes-Suhm, Mr. Moseley, and other members of the civilian scientific staff of the *Challenger*; and a number of the Journal of the Linnean Society is devoted to the botanical observations and collections made by Mr. Moseley during the course of the voyage.

Transit-of-Venus Committee.—Upon the representation of your Council, her Majesty's Government has attached naturalists to two of the astronomical expeditions sent out from this country to observe the Transit of Venus. The stations selected were the two most inaccessible to ordinary cruisers, and at the same time most interesting in regard to their natural productions—namely, the island of Rodriguez in the Mauritius group, and Kerguelen's Land in the South Indian Ocean.

The objects and importance of these appointments were laid before the Government in the following statement:—

"It is an unexplained fact in the physical history of our globe that all known oceanic archipelagos distant from the great continents, with the sole exception of the Seychelles and of a solitary islet of the Mascarene group (which islet is Rodriguez), are of volcanic origin. According to the meagre accounts hitherto published, Rodriguez consists of granite overlaid with limestone and other recent rocks, in the caves of which have been found the remains of recently extinct birds of a very singular structure. These facts, taken together with what is known of the natural history of the volcanic islets of Mauritius and Bourbon to the west of Rodriguez and of the granitic archipelago of the Seychelles to the north of it, render an investigation of its natural products a matter of exceptional scientific interest, which, if properly carried out, cannot fail to be productive of most important results.

"As regards Kerguelen's Land, this large island (100 by 50 miles) was last visited in 1840, by the Antarctic Expedition under Sir James Ross, in mid-winter only, when it was found to contain a scanty flora of flowering plants, some of which belong to entirely new types, and an extraordinary profusion of marine animals and plants of the greatest interest, many of them being representatives of north-temperate and Arctic forms of life.

"H.M.S. *Challenger* will no doubt visit Kerguelen's Land, and collect largely; but it is evident that many years would be required to obtain even a fair representation of its marine products; and though we are not prepared to say that the scientific objects to be obtained by a naturalist's visit to Kerguelen's Land are of equal importance to those which Rodriguez will yield, we cannot but regard it as in every respect most desirable that the rare opportunity of sending a collector to Kerguelen's Land should not be lost."

I may further state as a matter of great scientific interest, that Rodriguez contains the remains of a gigantic species of land-tortoise allied to those still surviving in some other islands of the Mauritius group, and that the nearest allies of these are the gigantic tortoises of the Galapagos Islands in the opposite hemisphere of the globe, as one of our Fellows, Dr. Günther, has shown in a paper read last session to the Society. Very valuable collections of these fossils have been made by Mr. Newton, the Colonial Secretary of Mauritius, during a brief stay which he was enabled to make in Rodriguez; but the materials are far from sufficient for obtaining all the information we want.

In accordance with your Council's recommendation, the Treasury sanctioned the appointment of four naturalists—three to Rodriguez, and one to Kerguelen's Land. Those sent out to Rodriguez are:—Mr. I. B. Balfour, son of Prof. Balfour, of Edinburgh, F.R.S., who, besides being educated as a botanist, has worked as a field geologist in the Geological Survey of Scotland; he is charged with the duties of botanist and geologist; Mr. George Gulliver, son of one of our Fellows and a pupil of Prof. Rolleston, in Oxford, who goes out as naturalist; and Mr. H. H. Slater, who has had great experience as a cave explorer, and who will devote his attention especially to the collection of fossils.

The Kerguelen's Land duties are undertaken by the Rev. A. E. Eaton, M.A., a gentleman most favourably known as an entomologist, and who had made very important collections in Spitzbergen, which he visited for the purpose of studying its fauna and flora. These gentlemen had, by the last accounts, all proceeded to their destinations.

(To be continued.)

FRENCH ACADEMY OF SCIENCES.—ANNIVERSARY MEETING

THIS Anniversary took place on the 28th December, the president being M. Faye, who delivered an able address, giving some interesting details as to the history of the prizes offered for competition by the Academy.

One of the first ever offered was a sum of 4,000*l.* given by Philippe d'Orleans, then Regent of France, in 1716, to be awarded to the person or persons who should invent a method of determining longitude at sea. This handsome sum was not awarded to anyone up to 1793, when the Academy was suppressed, M. de Choiseul, French Ambassador to England, having made fruitless exertions on behalf of Harrison, the well-known chronometer maker, in 1763.

A circumstance connected with these old prizes is worth noting. La Condamine, about 100 years ago, offered a prize for an essay on the question "why so many differences of colour were noted between the male and female livery in quadrupeds as well as in birds." The question being deemed useless, the money was not accepted by the Academy.

In the last century almost all the prizes were won by Euler and Bernouilly, but now scarcely any of the prizes, amounting to 160*l.*, are awarded; sometimes nobody competes for them.

Although the distribution this year is both for 1872 and 1873, only two of the competitive prizes have been taken, one for 1873 by M. Mascart, professor in the Collège de France, for a paper on the modification which the light of the sun undergoes in consequence of the motion either of the sun or of the earth. M. Mascart failed to observe any modification, but the prize was given to him owing to the care and ingenuity displayed in his experiments. One prize was also won by M. Balbrain for a

paper on the reproduction of animals that present parthenogenetic phenomena.

The proceeds of the 4,000*l.* offered by M. Breaud to the person who should discover a cure for the cholera was divided between several partly successful essayists for 1872 and 1873, but it is not likely that the sum itself will ever be parted with by the Academy.

The prizes offered for general excellence or voluntary work on a certain subject have been a great deal more fortunate, so that the method adopted by the Royal Society promises better results than the old academical competitive system, even in Paris. The Plumly prize of 120*l.* for the best paper on the improvement of steam navigation was gained for 1872 by M. Zaurines, who has carefully investigated propulsion by the Archimedean screw; in 1873 by M. Bertin, for a paper on the best method of ventilating steamers.

The Lalande prize in astronomy has been gained for 1872 by the brothers Henry for the discovery of a number of small planets at the Paris Observatory, and in 1873 by M. Coggia, of the Observatory of Marseilles, for his discoveries among comets.

The Poncelet prize has been given for 1872 to M. Mannheim for the general excellence of his geometrical disquisitions, and in 1873 to Sir W. Thomson for his magnificent works on the mathematical theory of electricity and magnetism.

The Godard prize for 1872 has been awarded to Dr. Pettigrew for his work "On the Muscular Arrangements of the Bladder and Prostate, and the manner in which the Ureters and Urethra are closed."

The aggregate sum to be awarded yearly, exclusive of the Breaud prize, is 4,400*l.*, and the number of prizes nineteen, only a few being for subjects specially proposed by the Academy. The competition is open to all nations. The names of competitors must be placed in sealed envelopes, which are opened only in the case of those who succeed; but, except in the case of prizes given for general excellence, papers must be written either in Latin or in French.

SCIENTIFIC SERIALS

Jahrbuch der k.k. geologischen Reichsanstalt. Band xxiv. Nos. 1 and 2.—The first article in No. 1 is by Dr. A. Redtenbacher, and treats of the stratigraphical relations of the mesozoic formations as developed in the district of Gams, near Hiefau. The second paper, by Dr. C. Doelter, gives some account of the Siebenbürgischen metalliferous mountains. The district described lies south of the river Arranyos, between Offenbánya and Bistria, as far as the Maros. The formations developed in this district consist of (1) crystalline, metamorphic, and eruptive rocks (gneiss, crystalline limestone, granite, diorite, syenite); (2) jurassic and cretaceous (limestone, melaphyre and augite porphyry, sandstone, chalk, &c.); (3) Tertiary (comprising, besides various fossiliferous deposits, such igneous rocks as hornblende-andesite, augite-andesite, basalt); (4) alluvium. A sketch-map accompanies Dr. Doelter's communication.—Herr R. Hörnös contributes a paper entitled "Tertiary Studies," in which he gives an account of the mollusca met with in various Tertiary deposits (as at Kischeneff, Jenikale, &c.) A number of the species described are new to science. Four excellent plates illustrate the paper.—Dr. E. Mojsisovics, whose contributions to the *Jahrbuch* are both frequent and valuable, gives us a long paper on the Triassic period in the East Alps. He discusses the distribution of the Triassic fauna, and shows that the formation itself may be divided into zones, each characterised by certain well-marked species; further, he describes at length the nature of the deposits, and points out that the trias is characterised throughout by the constant presence of poorly fossiliferous limestone and dolomite and richly fossiliferous marl and calcareous marl.—The only geological paper in No. 2 is one by Dr. Guido Stache, On the palæozoic regions of the East Alps. The author describes in considerable detail the structure of the rock-masses forming the Alpine lands of Austria, and gives a coloured geological map of the regions described, and two plates of horizontal sections.—Amongst the mineralogical papers accompanying these numbers of the *Jahrbuch* may be noted one by Dr. Doelter, On the trachyte of the Siebenbürgischen metalliferous mountains, in which a number of analyses are given.—Herr Kalkowsky furnishes an account of the microscopy of the felsite and pechstein of Saxony.—A new mineral (Ludwigite) from Banat is described by T. Herak; and a