

From the introductory statements this diminution may, however, be merely temporary, and need not necessarily indicate a permanent falling off in the supply of fur-seal pelts.

In respect to skins used solely for rugs or ornamental purposes, very few words must suffice. In Messrs. Culverwell, Brooks, and Co.'s list for October of this year appear 100 South American guanaco skins (from which the beautiful orange carriage-rugs are made), 24 tiger, and 266 leopard skins, while Messrs. Lampson's January list gives 184 tiger and 557 leopard skins (inclusive of snow-leopard and "leopard-cat").

The leopard skins range in price from 10s. or less to 34s. (55s. for snow-leopard), while tiger skins vary from 2l. to 60l. each.

Imperfect and sketchy as this review of recent London fur sales necessarily is, it serves to give some idea of the enormous—we may almost say appalling—number of wild animals annually slaughtered for the sake of their pelts. What, however, it does not—and cannot—give is the effect that this continuous slaughter is having on the numbers of the various species of fur-bearing animals throughout the world.

This is what naturalists want to know from the point of view of zoology, and it is also what the fur trade community ought to desire to know from the point of view of their own and the world's interest. Of late years furs have become increasingly fashionable, with a corresponding appreciation in price; but as to whether this increased demand is having any serious effect on the numbers of fur-bearing animals in general we appear, except in the case of a few species, such as the sea-otter, the beaver, the West African guereza, and the fur-seals, to be in a state of utter and hopeless ignorance.

R. LYDEKKER.

#### UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

OXFORD.—The new statute, the object of which is to exempt candidates for honours in mathematics or in natural science from Greek in Responsions, was brought before Congregation on Tuesday, November 29. The changes proposed in the statute were in strict accordance with the resolutions passed by Congregation in Hilary Term, 1904, except in one small detail. Candidates for honours in mathematics or in natural science have two courses open to them under the proposed statute. They may offer the subjects required by the present regulations, viz. Greek, Latin, arithmetic, and elementary algebra or Euclid, or in place of Greek they may substitute French or German, together with a mathematical or scientific subject to be prescribed by the board of studies for Responsions. Candidates who had not offered Greek would be allowed to substitute an additional knowledge of the subject-matter of the Bible for that part of the examination in Holy Scripture which involves a knowledge of the Greek text of the Gospels. The statute was lost by 200 votes to 164.

Dr. William Osler, F.R.S., regius professor of medicine, has been elected to a studentship at Christ Church.

A NEW professorship of applied chemistry has been established at Trinity College, Dublin. Mr. Emil Alphonse Werner, assistant to the professor of chemistry, has been appointed as the first occupant of the new chair.

We learn from *Science* that Park College, near Kansas City, has received an additional endowment of 20,000l., of which 5000l. has been given by Dr. D. K. Pearson; and that at a recent meeting of the trustees of Columbia University gifts amounting to about 9400l. were announced by the trustees. Among these was the sum of 3000l. from General Horace W. Carpenter.

THE Minister of Public Instruction for Austria has issued a decree concerning the admission to the universities of students from the Realschulen, according to which those wishing to be on the same footing as candidates from the Gymnasia are required to pass an additional examination, held twice a year, in Greek, Latin, and philosophy. Candidates may prepare for this examination either by private study or by courses held at certain secondary schools.

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It would do much good if everyone spoke their minds on the subject of free libraries as straightforwardly as did the Countess of Jersey last Saturday afternoon. When laying the foundation stone of a library which the generosity of Mr. Carnegie is providing for Hanwell, she touched on the great usefulness of books of reference, especially with regard to the particular life-work of the reader. In fact, one would judge that novels would find but a small place on the shelves if Lady Jersey were to choose all the books, for she very sensibly pointed out that the best volumes of fiction can now be bought for a few pence, and that more expensive books and those more difficult to get should form the bulk of a public library.

At the winter session of the General Medical Council last week a report was considered from the Education Committee on the proposals for a school certificate submitted to the council recently by the Board of Education. After discussion it was decided to inform the Board of Education (1) that any well considered plan which would tend to a diminution in the number of examinations in preliminary subjects of education, and to a unification of standard of those which remain, would meet with the hearty approval of the Medical Council. (2) That if the standard of the examination contemplated in the scheme were such as to be generally accepted for matriculation by the universities, the council would be prepared to recognise it as qualifying for entrance on a course of professional study. (3) That, pending the general adoption of a uniform system of unification of educational tests, the council would welcome the establishment under the Board of Education of a central board for the purpose of classifying examinations according to standard and arranging for the mutual recognition of certificates; and, further, that they regard the establishment of such a board as highly desirable from an educational point of view.

#### SOCIETIES AND ACADEMIES.

LONDON.

**Entomological Society**, November 2.—Prof. E. B. Poulton, F.R.S., president, in the chair.—Mr. J. E. Collin exhibited a specimen of *Platyphora lubbocki*, Verr., a species of Phoridae parasitic upon ants. No specimen has been recorded since the one originally bred by the present Lord Avebury in 1875, and described for him by Mr. G. H. Verrall in the *Journal* of the Linnean Society for 1877.—Mr. P. J. Barraud exhibited an aberrant *Epinephele jurtina* (*janira*), ♂, taken by him this year in the New Forest, in which the usual apical spots were absent from the fore-wings, giving the specimen a curious appearance, noticeable even when flying.—Mr. J. Edwards sent for exhibition three specimens of *Bagous lutosus*, Gyll., one found by himself on Wretham Heath, Norfolk, on August 4, 1900—the first authentic British example—and two taken in the same locality by Mr. Thouless on May 22, 1903; also *Bagous glabrirostris*, Herbst., from Camber, Sussex, for comparison.—Dr. T. A. Chapman exhibited bred specimens of *Hastula* (*Epagoge*, Hb.?) *hyerana*, Mill., from larvæ taken at Hyères last March, and said the fact that the pale forms only have hitherto been known, whereas of those bred nearly half are dark, suggests either that really very few specimens are in collections—which is the most probable case—or that melanism is now affecting the species.—Mr. W. J. Kaye exhibited specimens of the moths *Castnia fonscolombi* and *Protambulyx ganascus* showing protective and warning coloration of the two species.—Mr. H. W. Andrews exhibited specimens of *Eristalis cryptarum*, F., and *Didea alneti*, Fln., two species of uncommon Syrphidae from the New Forest.—Mr. Edward Harris exhibited a brood of *Hemerophila abruptaria* reared by him this season, together with the parents, a dark male and a normal female, showing considerable variation.—Mr. Gervase F. Mathew, R.N., exhibited some beautiful and interesting examples of *Leucania favicolor*, Barrett, including the varieties described by Barrett in the current volume of the *Entomologist's Monthly Magazine* (p. 61), and, more recently, by Tutt in the *Entomologist's Record* for this year. He also exhibited a series of twenty-four *Campptogramma fluviata*, the descendants of a wild pair



captured on September 22, 1903, showing a wide range of colour variation.—The **President** exhibited a photograph taken by Mr. A. H. Hamm to illustrate the protective flower selection of *Pieris rapae*. He also exhibited four specimens of *Conorrhinus megistus*, Burm., the large South American Reduviid which is well known to attack man; these were brought back by W. J. Burchell in the year 1828, and still have the original labels affixed to them.

**Geological Society, November 9.**—Dr. J. E. Marr, F.R.S., president, in the chair.—Mr. E. T. **Newton**, in exhibiting, by permission of the director of H.M. Geological Survey, a specimen of *Fayolia* near to *Fayolia grandis*, found by Dr. L. Moysey, of Nottingham, in the Coal-measures of Ilkeston (Derbyshire), pointed out that *Fayolia* was first described by Profs. Renault and Zeiller in 1884, in their monograph on the "Houiller de Commentry." In 1894 Mr. Seward described the first British specimen, from Northumberland, in the Leeds *Naturalist*, but thought that it was not a plant. There was some resemblance to certain spiral egg-cases of Elasmobranchs, but Dr. Günther was unwilling to accept the Northumberland fossil as the egg-case of a fish. Mr. Kidston had not yet seen the specimen now exhibited, but from a sketch he recognised its relation to *Fayolia*. At present there was still uncertainty as to the exact nature of this fossil.—Notes on Upper Jurassic Ammonites, with special reference to specimens in the University Museum, Oxford, ii.: Miss Maud **Healey**. This paper gives a re-description of the types of *Cardioceras vertebrata*, Sow., *C. scarbrugense*, Y. and B., *C. cordatum*, Sow., and *C. excavatum*, Sow., and their varieties. Four varieties of the first, nine of the second, three of the third and fourth are defined, and a description is given of a new species of *Cardioceras* belonging to the same group. Notes on species allied to the group and on others which have been wrongly confused with it are added. These species are so closely connected by innumerable transitional forms that their limits cannot be definitely fixed. The term "species" is therefore used as equivalent to Prof. J. W. Gregory's *circulus*: "It includes a number of 'forms,' which vary along lines radiating outward from a central type."—Sarsen-stones in a clay-pit: Rev. E. C. **Spicer**. Near to Bradenham, midway between High Wycombe and Prince's Risborough, certain clay-pits yield a clay for brick-making, in which are embedded large angular sarsen-stones, white saccharoidal sandstones with a siliceous cement.—On the occurrence of *Elephas meridionalis* at Dewlish (Dorset). Second communication: human agency suggested: Rev. Osmond **Fisher**. This paper is in continuation of one published by the author in 1888. The site in which the elephant-remains were found is a narrow trench, examined to a depth of 12 feet in places, with nearly vertical sides, a smooth, chalk bottom, and an abrupt end. It was not a fault or a stream-course, and it was partly filled with fine dust-like sand which may have been wind-borne. The trench cuts diagonally across the scarp; and, even if it could be accounted for by natural agencies, it is difficult to explain how it happened that so many elephants fell into it. The author points out that in Africa elephants are caught by the natives in pitfalls of similar character constructed on the tracks leading to watercourses. This trench is in a corresponding position with regard to a stream, and it is suggested as possible that the trench may have been of human origin. There is, however, no conclusive evidence elsewhere that man was contemporary with *Elephas meridionalis*, which is characteristic of the Pliocene age.

**Royal Astronomical Society, November 11.**—Prof. H. H. Turner, president, in the chair.—The long-period terms in the lunar theory: P. H. **Cowell**.—Determination of selenographical positions from measurement of lunar photographs: S. A. **Saunders**. This was the author's third communication on the subject, and in it he discussed the measures, made by Mr. J. A. Hardcastle, of four negatives taken at the Paris Observatory. The methods employed were explained, and a comparison was given with the results of other determinations, showing that a considerable increase in accuracy had been obtained.—The magnetic disturbances, 1882 to 1903, as recorded at the Royal Observatory, Greenwich, and their association with sun-spots:

E. W. **Maunder**. From the examination and tabulation of the more considerable disturbances recorded, it had been found that disturbances succeeded each other at intervals corresponding to a synodical rotation of the sun. This occurred with too great frequency and regularity to be the result of chance coincidence, and it was concluded that the magnetic influence radiates from very restricted areas on the sun's surface, certain streams reaching the earth with each solar rotation. The relation of the magnetic disturbances with sun-spots was discussed, and it was pointed out that the theory threw light on the cause of the long straight rays, seen proceeding from the corona at some solar eclipses, and which sometimes reach a distance of several degrees.—Determination of the apex of the solar motion in space, and of the constant of precession, from a comparison of Groombridge's catalogue (1810) with modern Greenwich observations: F. W. **Dyson** and W. G. **Thackeray**.—The discussion on a paper by Dr. Rambaut on a very sensitive method of determining the errors of a pivot, with special reference to the pivot errors of the Radcliffe transit circle, was deferred, and other papers were taken as read.

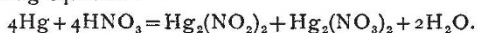
**Mineralogical Society, November 15.**—Prof. H. A. Miers, F.R.S., president, in the chair.—Dr. J. W. **Evans** described two new forms of quartz-wedge by means of which approximate quantitative estimations can be readily made of the double refraction of minerals in small grains or in rock-sections.—Mr. J. **Currie** contributed a note on some new localities in Scotland and the Færøes of gyrolite and tobermorite, and Mr. C. R. **Lindsey** one on the occurrence of microscopic crystals of brookite with anatase in the Cleveland ironstone.—Mr. R. H. **Solly** exhibited and described various minerals from the Lengenbach quarry, Binnenthal. Three of these were new, viz. marrite and bowmanite, of which the chemical composition has not yet been determined, and lengenbachite, which has been shown by Dr. Hutchinson to be a sulpharsenite of lead containing some copper and antimony, and having a specific gravity of 5.8. Marrite occurs in small lead-grey crystals resembling modified cubes, and lengenbachite in thin lead-grey blade-shaped crystals, some as long as 40 mm., showing a highly perfect cleavage. Marrite crystallises in the oblique system with  $a : b : c = 0.57634 : 1 : 0.47389$  and  $\beta = 88^\circ 45'$ , while lengenbachite is probably anorthic. Bowmanite occurs in small honey-yellow rhombohedral crystals with  $111 : 100 = 53^\circ 50'$ . It has a highly perfect cleavage parallel to 100, and a specific gravity of about 3.2. The author also described twinned crystals of seligmannite dispersed over large crystals of dufrénoysite and baumhauerite, and curious highly modified crystals of blende showing a thin metallic lead-grey coating.—Mr. H. L. **Bowman** described crystals of a mineral from Cornwall which had been sent to him for determination by Mr. F. H. Butler. They were found to be bertrandite, a mineral new to the British Isles.—Mr. G. F. **Herbert Smith** exhibited a slightly modified form of the hand refractometer which he had previously described.—Mr. H. **Hilton** contributed notes on some applications of the gnomonic projection to crystallography, and on the construction of crystallographic projections.

**Zoological Society, November 15.**—Dr. W. T. Blanford, F.R.S., vice-president, in the chair.—The mammals collected by Mr. E. Seimund in Fernando Po: Oldfield **Thomas**, F.R.S. Twenty-four species, of which two were new, were enumerated and remarked upon. Mr. Oldfield Thomas also exhibited some skulls and a piece of skin, and gave an account, of a new species of pig from the forests of Central Africa.—The crowned cranes of the genus *Balearica*, and a new species obtained on the White Nile by Lady William Cecil: Dr. P. Chalmers **Mitchell**.—The mouse-hares of the genus *Ochotona* inhabiting the Palæarctic region: J. Lewis **Bonhote**. These numbered sixteen species, one of which was described as new.—Twelve new species of earthworms from the north island of New Zealand: Prof. W. Blaxland **Benham**.

**Chemical Society, November 16.**—Prof. W. A. Tilden, F.R.S., president, in the chair.—The following papers were contributed:—The isomerism of the amidines of the naphthalene series (fifth communication on anhydro-bases): R. **Meldola** and J. H. **Lane**. When 2:4-dinitroaceto- $\alpha$ -naphthalide is reduced (1) by tin and hydrochloric acid, and



(2) by iron and hydrochloric acid, two isomeric amidamidines are produced, the former giving rise to that having the  $\alpha$ -NH constitution, and the latter to the  $\beta$ -compound. This difference in action is explained by assuming that in presence of iron the two nitro-groups are fractionally reduced while with tin both are reduced simultaneously.—Theory of the production of mercurous nitrite and of its conversion into various mercury nitrates: P. C. RAY. Mercurous nitrite is the first product of the action of nitric acid (containing nitrous acid) on mercury. This is converted into nitrate by the nitric acid, and finally, under suitable conditions, there ensues an accumulation of nitrite owing to the occurrence of the reaction represented by the following equation:—



—Amidechloroiodides: G. D. LANDER and H. E. LAWS. Benzoylaniline imidechloride reacts with hydrogen iodide furnishing an amidechloroiodide to which the constitution Ph.CCII.NHPH is provisionally assigned.—A new synthesis of isocapro lactone and certain derivatives: D. T. JONES and G. TATTERSALL. The lactone was obtained by the interaction of magnesium methyl iodide with ethyl lactate.—The influence of substitution in the nucleus on the rate of oxidation of the side-chain, part ii., oxidation of the halogen derivatives of toluene: J. B. COHEN and J. MILLER. The authors have studied the behaviour of the dichloro-, chlorobromo-, and dibromo-derivatives, and the comparative oxidisability of these compounds is discussed.—The halogen derivatives of naphthacenequinone: S. S. PICKLES and C. WEIZMANN.—The constitution of pyrazolidone derivatives:  $\beta$ -phenylazoisovaleric acid and  $s$ - $\beta$ -phenylhydrazidobutyric acid: B. PRENTICE.—Preliminary notice of some condensations of phenanthraquinone with ketonic compounds: F. R. JAPP and J. WOOD.—The decomposition of ethylene iodide under the influence of the iodide ion: A. SIATOR.—The spectrum generally attributed to chlorophyll, and its relation to the spectrum of living green tissues: W. N. HARTLEY. The author confirms his previous observations on the difference in the absorption spectra of alcoholic extracts of (a) fresh green leaves and (b) dried green leaves.—Studies on comparative cryoscopy, part ii., the aromatic acids in phenol solution: P. W. ROBERTSON. The influence of various substituents on the molecular association of aromatic acids is discussed.—Isomeric change of diacylanilides into acylaminoketones. Transformation of dibenzoylamino benzophenone into 1-benzoylamino-2,4-dibenzoylbenzene: F. D. CHATTAWAY and W. H. LEWIS.

Royal Meteorological Society, November 16.—Capt. D. Wilson-Barker, president, in the chair.—Meteorological observing in the Antarctic: Lieut. Charles ROYDS, R.N.—Decrease of fog in London during recent years: F. J. BRODIE. The author had discussed the number of days of fog reported at Brixton, the London station of the Meteorological Office, for the thirty-three years 1871-1903, and found that the mean annual number of fog days was 55, of which 45 occurred in the winter half of the year, and only 10 in the summer half. December is the foggiest month with 9.5, the next being November with 8.5, January with 8.2, and October with 7.8. The clearest months are July with 0.4, June with 0.6, and May with 0.8. The greatest number of fog days was 86 in 1886 and 83 in 1887, and the least 13 in 1900 and 26 in 1903. Dividing the thirty-three years into three periods of eleven years each, the author showed that the mean for 1871-1881 was 55, for 1882-1892 it was 69, while for 1893-1903 it was only 41, there being thus a very marked decrease in the number of days with fog during the last eleven years.—Hurricane in Fiji, January 21-22, 1904: R. L. HOLMES.

## PARIS.

Academy of Sciences, November 21.—M. Mascart in the chair.—On the changes in dimensions and volume that the organs and tissues of plants undergo under the influence of desiccation: M. BERTHELOT. The length of the stem is not greatly affected, but the lateral dimensions, and therefore the capacity, diminishes to a considerable extent during drying.—Remarks on the necessity of studying the variations of dimensions and volume of organs and parts of living or extinct beings in anthropological and palæontological work: M. BERTHELOT.—On a general theorem con-

cerning algebraic surfaces of linear connection superior to unity: Emile PICARD.—On the removal of moisture from the air blown into the Isabella blast furnace, near Pittsburgh, by freezing: Alfred PICARD and M. HEURTEAU. The efficiency of a blast furnace is dependent to a considerable extent on the amount of moisture in the air supplied to the furnace. An account is given of a plant for removing this moisture by passing the air through a refrigerating chamber cooled to about  $-10^\circ$  C. The results obtained show a surprising economy of fuel, the saving in the coke used amounting to 20 per cent.—On the constitution of ricinine: L. MAQUENNE and L. PHILIPPE. The authors have shown in a previous communication that ricinine is converted by the successive action of caustic potash and hydrochloric acid into a methyloxypyridone. In the present paper a detailed study of this substance is given.—New experiments on the photographic registration of the action of the  $n$ -rays on a small electric spark: R. BLONDOT. A refinement of the method given in a previous paper, and an investigation of the possible sources of error. The photographic negatives obtained are regarded by the author as establishing beyond cavil the action of the  $n$ -rays on the electric spark.—On continued algebraic fractions: R. de MONTESSEU DE BAILLORE.—The generalisation of a theorem of Weierstrass: Maurice FRÉCHET.—Fourier's series and Taylor's series on its circle of convergence: P. FATOU.—On the chemical composition of the radio-active gaseous mixtures given off from the water of some thermal springs. The presence of helium: Ch. MOUREU. The gases evolved from twelve different springs were analysed, and the figures given for the amounts of carbon dioxide, oxygen, nitrogen, and gases of the argon group.—The influence of the nature of the anode on the electrolytic oxidation of potassium ferrocyanide: André BROCHET and Joseph PETIT. The nature of the metal used as the anode has a very considerable effect on the electrolytic oxidation of potassium ferrocyanide, the yields varying from 75 per cent. in the case of copper to nil in the case of metals forming a soluble anode.—On the complexity of dissolved sulphates: Albert COLSON. On the assumption that the lowering of the freezing point of a solution of sulphuric acid is due to the single molecule  $\text{H}_2\text{SO}_4$ , the author draws the conclusion that the sulphates of the bivalent metals in aqueous solution are present as double molecules.—The stimulating and paralysing influence of certain bodies in the production of rust: L. LINDET.—On the purification of solutions of vanadate of soda; observations relating to the methods of double decomposition for the industrial separation of metals: M. HERRENSCHMIDT. An explanation of the use of vanadic acid in preference to sulphuric acid in the separation of silica and vanadic acid.—The action of iodine and yellow oxide of mercury on unsaturated acids. The separation of isomers: J. BOUGAULT. The results obtained depend upon the position of the ethylene linkage in the molecule. Acids with the  $\beta\gamma$  linking fix hypiodous acid in a very stable manner, giving rise to iodolactones.—Researches on the action of hydrobromic and hydrochloric acids on triacetin. Formation of some new halogen derivatives of triacetin: R. de la ACÉÑA.—The addition of hydrogen to some aromatic ketones by means of reduced nickel. A new method of synthesis of aromatic hydrocarbons: Georges DARZENS. With nickel reduced from its oxide at a temperature of  $300^\circ$  C., and working the Sabatier and Senderens reaction at  $190^\circ$  C. to  $195^\circ$  C., aromatic ketones of the formula  $\text{C}_6\text{H}_5\text{CO-R}$  are reduced to hydrocarbons of the type  $\text{C}_6\text{H}_5\text{CH}_2\text{-R}$ , without the production of any appreciable amount of the hexahydro-derivative. If, on the other hand, the nickel is reduced at the lowest possible temperature, so that it is very active, the addition product makes its appearance. Details are given of the application of this reaction to several ketones, and the method appears to be a general one for the production of hydrocarbons.—The action of pyridine and quinoline bases on bromosuccinic and dibromosuccinic esters: Louis DUBREUIL.—The theory of colouring matters: Jules SCHMIDLIN.—On trehalase, its general presence in fungi: Em. Bourquelot and H. HÉRISSEY. Trehalase appears to be an enzyme generally present in fungi, the times of its appearance and disappearance being possibly in close relation with the utilisation of trehalose or the storage of the latter in the form of reserve material.—On the measurement and the laws of variation of the energy shown by the



ergograph according to the frequency of the contractions and the weight raised: Charles **Henry** and Mlle. **J. Joteyko**.—On the law of variation of weight of *Penicillium glaucum* as a function of its age: Mlle. **W. Stefanowska**. The results are expressed graphically, and show that the evolution of the weight of these fungi as a function of the time presents two well marked phases: a phase of rapid ascent up to the period of fructification, and a phase of decrease appearing suddenly after fructification.—Transformations of the new secreting apparatus in Conifers: **G. Chauveaud**.—On vegetation in atmospheres rich in carbon dioxide: **E. Demoussy**. With one exception, there is a marked advantage in supplying plants with an additional amount of carbonic acid, the average increase in the weight of the aerial parts of the plant being 60 per cent. greater in the case of the artificial atmosphere.—On the experimental production of radishes with starchy reserves: **Marin Moliard**.—*Solanum Commersoni* and its variations in relation to the origin of the cultivated potato: **Edouard Heckel**.—A new theory of phototropism: **Georges Bohn**.—On the geology of the Salzkammergut: **Émile Haug** and **Maurice Lugeon**.—On the mountain chains to the south of the Guadalquivir: **Robert Douvillé**.—The tension of carbonic acid in the sea and on the reciprocal influence of the carbonic acid of the sea and that of the atmosphere: **August Krogh**. From a study of the equilibrium between sea-water and the carbonic acid of the air, the conclusion is drawn that the proportion of carbon dioxide in the air tends to increase, the sea, by absorbing the gas, opposing this tendency.—The measurement of the sensitiveness of taste in men and women: **N. Vaschide**.—The elimination of sulphur and of phosphorus, the demineralisation of the organism, and the magnitude of the average molecule elaborated in persons suffering from skin diseases: **A. Desgrez** and **J. Aygnac**.—On the relations between Surra and Mbori: **MM. Vallée** and **Panisset**.—Remarks by **M. Laveran** on the preceding communication.

## DIARY OF SOCIETIES.

### THURSDAY, DECEMBER 1.

ROYAL SOCIETY, at 4.30.—The Ascent of Water in Trees: **Dr. A. J. Ewart**.—On the Presence of Tyrosinases in the Skins of some Pigmented Vertebrates: **Miss F. M. Durham**.—On the Structure and Affinities of the Fossil Plants from the Palaeozoic Rocks. V.—On a New Type of Sphenophyllaceous Cone (*Sphenophyllum fertile*) from the Lower Coal Measures: **Dr. D. H. Scott, F.R.S.**—On Chemical Combination and Toxic Action as Exemplified in Hæmolytic Sera: **Prof. R. Muir** and **C. H. Browning**.—Histological Studies on Cerebral Localisation. Part II.: **Dr. A. W. Campbell**.  
CHEMICAL SOCIETY, at 8.—The Nitrites of the Alkali Metals and Metals of the Alkaline Earths, and their Decomposition by Heat: **P. C. Ray**.  
RÖNTGEN SOCIETY, at 8.15.—The Perspective Nature of X-Ray Projection: **Dr. W. Cotton**.—The New Ultra-violet Glass recently produced by **Messrs. Schott and Genossen**, of Jena: **J. H. Gardiner**. Both will be illustrated by the Epidiascope.  
LINNEAN SOCIETY, at 8.—Proteid Digestion in Animals and Plants: **Prof. Sidney H. Vines, F.R.S.**

### FRIDAY, DECEMBER 2.

AERONAUTICAL SOCIETY, at 8.—The Aeronautical Exhibits at the St. Louis Exhibition: the President, **Major B. Baden-Powell**.—Kites, Kite-flying and Aeroplanes: **W. H. Dines**.—The Work of the International Aeronautical Commission: **Dr. M. H. Hergesell**.—Captive Balloon Photography: **Griffith Brewer**.  
GEOLOGISTS' ASSOCIATION, at 8.—On the Superficial Deposits of Central and Parts of Southern England: **Dr. A. E. Salter**.  
INSTITUTION OF CIVIL ENGINEERS, at 8.—Midland Railway, West Riding Lines: The Construction of Contract No. 1: **R. T. McCallum**.

### MONDAY, DECEMBER 5.

SOCIETY OF ARTS, at 8.—Musical Wind Instruments: **D. J. Blaikley**. (Cantor Lecture II.—Brass Instruments.)  
SOCIETY OF CHEMICAL INDUSTRY, at 8.—(1) Raschig's Theory of the Lead Chamber Process; (2) Theory of the Action of Metals on Nitric Acid: **Dr. E. Divers, F.R.S.**—A Rapid and Accurate Method for the Estimation of Phosphorus in Iron Ores: **L. J. Davies**.—Fluorescope for Comparing Substances under the Influence of Radium Rays: **C. S. S. Webster**.  
VICTORIA INSTITUTE, at 4.30.—The Right Way in Psychology: **Rev. F. Storrs Turner**.

### TUESDAY, DECEMBER 6.

ANTHROPOLOGICAL INSTITUTE, at 8.—Exhibition of a Slate Adze and Other Objects: **Rev. R. Ashington Bullen**.—Lantern Illustrations of Native Types from South India: **Edgar Thurston**.  
INSTITUTION OF CIVIL ENGINEERS, at 8.—Distribution of Electrical Energy (Discussion): **J. F. C. Snell**.—On the Construction of a Concrete Railway-Viaduct: **A. Wood-Hill** and **E. D. Pain**.

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### WEDNESDAY, DECEMBER 7.

SOCIETY OF ARTS, at 8.—The International Exhibition at St. Louis: **W. F. Reid**.  
SOCIETY OF PUBLIC ANALYSTS, at 8.  
GEOLOGICAL SOCIETY, at 8.—The Chemical and Mineralogical Evidence as to the Origin of the Dolomites of Southern Tyrol: **Dr. E. W. Skeats**.—Certain Genera and Species of Lytoceeratidæ: **S. S. Buckman**.  
ENTOMOLOGICAL SOCIETY, at 8.—On *Erebria bejarensis* and *Erebria stygna* in Spain, with an Exhibition of Specimens: **Dr. Thomas A. Chapman**.

### THURSDAY, DECEMBER 8.

ROYAL SOCIETY, at 4.30.—*Probable Papers*:—Memoir on the Theory of Partitions of Numbers. Part III: **Major P. A. MacMahon, F.R.S.**—Note on a Means of Producing a High-voltage Continuous or "Pertinacious" Current: **Sir Oliver Lodge, F.R.S.**—The Role of Diffusion during Catalysis by Colloidal Metals and Similar Substances: **Dr. H. J. S. Sand**.—The Effect of Liquid Air Temperatures on the Mechanical and other Properties of Iron and its Alloys: **Sir James Dewar, F.R.S.**, and **R. A. Hadfield**.  
CIVIL AND MECHANICAL ENGINEERS' SOCIETY, at 8.—Notes on Portland Cement: **H. E. Bellamy**.  
INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—Hydrodynamical and Electromagnetic Investigations regarding the Magnetic-Flux Distribution in Toothed-Core Armatures: **Prof. H. S. Hele-Shaw, F.R.S.**, **Dr. A. Hay**, and **P. H. Powell**. (Conclusion of Discussion).—Studies in Magnetic Testing: **G. F. C. Searle**.  
SOCIETY OF ARTS, at 4.30.—Buma: **Sir Frederic Fryer, K.C.S.I.**  
MATHEMATICAL SOCIETY, at 5.30.—On Groups of Order  $p^2 q^2$ : **Prof. W. Burnside**.—On the Linear Differential Equation of the Second Order: **Prof. A. C. Dixon**.—On a Deficient Multinomial Expansion: **Major P. A. MacMahon**.

### FRIDAY, DECEMBER 9.

EPIDEMIOLOGICAL SOCIETY, at 8.30.—Ticks and Tick-transmitted Diseases: **Dr. Nuttall, F.R.S.**  
MALACOLOGICAL SOCIETY, at 8.—Description of a new species of Trachiopsis from British New Guinea: **H. B. Preston**.—A Correction in Nomenclature: **E. A. Smith**.—Notes on the American Cyclostomatidæ and their Opercula: **W. H. Dall**.—Note on the Dates of Publication of the Various Parts of Moquin-Tandon's "Hist. Moll. terr. fuv. de France": **J. W. Taylor**.  
ROYAL ASTRONOMICAL SOCIETY, at 5.  
PHYSICAL SOCIETY, at 8.—On a Rapid Method of Approximate Harmonic Analysis: **Prof. S. P. Thompson, F.R.S.**—A High-Frequency Alternator: **W. Duddell**.—Exhibition of Experiments to show the Retardation of the Signalling Current on 3500 miles of the Pacific Cable between Vancouver and Fanning Island.—Exhibit of Ayrton-Mather Galvanometers, Universal Shunts, and Electro-tatic Instruments.

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