## SOCIETIES AND ACADEMIES

### LONDON

Zoological Society, May 19.—Dr. E. Hamilton, vice-president, in the chair.—Mr. Sclater exhibited a skin of the new Japanese Stork (*Ciconia boyciana*), and read an extract from a letter recived from M. Taczanowski, relating to its occurrence in the Amoor territory.—Letters were read from Dr. W. Peters relating to the locality of *Poriodogaster grayi*, and from Dr. Hector containing a correction to his article on *Cnemiornis*, published in the Society's "Proceedings."—Prof. Newton exhibited and made remarks on two original letters, the property of Dr. J. B. Wilmot, written from Mauritius in 1628, and referring to the Dodo.—A communication was read from Mr. G. E. Dobson, containing an account of some experiments made on the respiration of certain species of Indian fresh-water fishes.—A communication was read from Mr. W. H. Hudson, containing an account of the habits of the Burrowing Owl (*Pholeoptynx cunicularia*) of the pampas of Buenos Ayres.—Two communications were read from Mr. W. C. McIntosh. The first of these was entitled "Contributions to our Knowledge of the British Annelida;" and the second contained the first portion of an account of the Annelida collected during the *Porcupine* expeditions of 1869 and 1870.—A communication was read from Dr. J. E. Gray, F.R.S., containing a list of the species of feline animals (*Felidæ*).—A second communication from Dr. Gray contained the description of a new species of Cat from Sarawak, proposed to be called *Felis badia*.—A communication was read from M. L. Taczanowski, entitled "Description d'une nouvelle espèce de *Mustela* du Pérou Central."

Geological Society, May 13.—John Evans, F.R.S., president, in the chair.—The following communications were read:—Note on some of the generic modifications of the Pleiosaurian pectoral girdle, by Harry G. Seeley, F.L.S. The restorations and interpretations of the Pleiosaurian pectoral girdle given by Conybeare, Hawkins, Owen, Huxley, Cope, and Phillips, were discussed and reasons given for dissenting from their views. The old genus *Pleiosaurus* was divided into two families, the Pleiosauridæ, containing the genus *Pleiosaurus*, and the Elasmosauridæ, with *Eretmosaurus*, *Colymbosaurus*, and *Muræosaurus*. A new type was taken for the genus *Pleiosaurus*, which showed distinct clavicles. *Eretmosaurus* has neither clavicle nor interclavicle, and the scapulæ, concave in front, are blended in the median line, and blended laterally with the coracoids. Its type is *Pleiosaurus rugosus* of the Lias. *Colymbosaurus* has for its type *Pleiosaurus megadeirus* of the Kimmeridge clay. It has no inter-clavicle, the scapulæ are prolonged forward in a wedge and backward, so as to meet the coracoids in the median line, and inclose two coraco-scapular foramina. *Muræosaurus* is founded on a new type from the Oxford clay. It has no interclavicle, but the scapulæ are prolonged forward to meet in the median line; they are not prolonged backward to meet the coracoids, hence but one coraco-scapular foramen is formed. A similar condition marks the pelvic girdle.—*Muræosaurus leedsii* Seeley, a Pleiosaurian from the Oxford clay (Part I.), by Harry G. Seeley, F.L.S. All parts of the animal, except teeth, ribs, and hind limbs, were described. The pre-maxillary bones extend bird-like between the nares to the frontals. The foramen parietale is between the parietal and frontal, and directed backward. The cerebral lobes of the brain have a chelonian form, are prolonged in olfactory nerves, like those of *Teleosaurus*, and have the optic lobes moderately developed. The exoccipital bones do not enter into the occipital condyle. The basisphenoid is perforated by the carotids, as in *Ichthyosaurus*. The hypoglossal nerve does not perforate the exoccipital bone. There are 44 cervical, 3 pectoral, 20 dorsal, 4 sacral, and the first 8 caudal vertebræ preserved.—On the remains of *Labyrinthodonta* from the Keuper Sandstone of Warwick, preserved in the Warwick Museum, by L. C. Miall. The author considered that *Labyrinthodon ventricosus* Owen is not a distinct species, and that *L. scutulatus* Owen has not been proved to be a Labyrinthodont. The species as identified by the author are as follows:—*Mastodonsaurus jægeri* Von Meyer, *M. pachygnathus* Owen, *Labyrinthodon leptognathus* Owen, *Diadetognathus* (g.n.) *varvicensis*, sp.n.

Chemical Society, April 16.—Prof. Odling, F.R.S., president, in the chair.—Dr. Corfield delivered his lecture On the sewage question from a chemical point of view. The lecturer, after remarking that he was going to consider the question of the value of chemical evidence on the sanitary view of the subject, compared the various systems for treating sewage, all of which might be reduced to two classes; the first, that of conservancy, where more or less of the solid matter was retained in the neighbourhood of habitations, and the other where the whole of the excretal matter was removed along with the foul water by means of sewers. He emphatically condemned the former as poisoning the wells in the neighbourhood and liable to give rise to disease, for it was a fact that the smallness of the death-rate at any large town was proportional to the efficiency of the means used for the removal of the sewage. He subsequently discussed the various methods of rendering sewage innocuous, showing that the only one of any value for this purpose was that of intermittent surface irrigation.

Royal Horticultural Society, May 13.—Scientific Committee. A. Grote, F.L.S., in the chair.—The Rev. M. J. Berkeley exhibited *Claviceps microcephala*, produced by the ergot of *Anthoxanthum*, which generally gave rise to *Claviceps purpurea*. The former species was rufous when fresh but purple when dry, and possibly the two species were not distinct.—Prof. Thiselton Dyer read the following extract from a letter from Dr. Thwaites to Dr. Hooker under date March 31:—"The leaf disease in our coffee is just now in abeyance in the estates I passed by on my way to Newera Eliya, but it is such a treacherous disease in the way of its appearance, and disappearance, and reappearance, that one cannot predict with any certainty what it is going or not going to do. There cannot be the least doubt that the disease at Tellicherry is the same as what our coffee estates are suffering from (*Hemileia vastatrix*)."—Col. Beddome had heard in India that the leaf disease existed in the Wynaad district (which included Tellicherry), and that it was the same as that of Ceylon.—The Rev. M. J. Berkeley reported that he had carefully examined the leaves of the diseased plants of *Daphne indica* exhibited by Mr. Smee, and that he failed to detect the presence of any organism, vegetable or animal, which could account for the diseased state of the tissues.—Prof. Thiselton Dyer read the following letter from Baron von Mueller:—"From Melbourne will be sent to you by this month's post a dried branch of *Correa lawrenciana*, with flowers as brilliantly red as any of the showiest varieties of *C. speciosa*. . . . In my recent journey to Mount Kosciusco from the west, I saw only plants of *C. lawrenciana* with red flowers, whereas on the southern brooks I saw always only the variety with the greenish flowers. Possibly the plant may prove hardy in Britain, as it ascends here to 4,000 feet." Prof. Thiselton Dyer also read the following communication from Mr. Jackson, Curator of the Kew Museum:—"The insects accompanying this were taken from a piece of a trunk of a copal tree (*Trachylobium hornemannianum* Heyne), recently received at the Kew Museum from Zanzibar through the Foreign Office. The wood was for the most part riddled through and through with insect borings, evidently the work of white ants. Mr. Frederick Smith, of the British Museum, to whom I sent some of the living insects, replied:—"The insect you have found in the copal wood is a species of white ant (*Termes*). It appears to belong to the modern genus *Eutermes*, and to be *E. lateralis* Walker. It is extremely interesting to see a living *Termes*, and it is the first time I have done so. There is a European species found in the warmer parts of France and Italy."

General Meeting.—J. A. Hardcastle in the chair.—The Rev. M. J. Berkeley commented on the effects of the late inclement weather. The crop of peas in the neighbourhood of London was practically destroyed. Messrs. Standish sent cuttings of various Japanese plants grown by them at Ascot which had escaped hitherto without injury, while many of the more commonly cultivated shrubs had suffered severely.

### PHILADELPHIA

Academy of Natural Sciences, Dec. 16, 1873.—Dr. Carson, vice-president, in the chair.—Remarks on Fossil Elephant Teeth. Prof. Leidy observed that the fossil elephant teeth, presented this evening by Mr. Richard Peters, were obtained by him in Mexico. In appearance the fossils resemble some others, obtained in New Mexico and Chihuahua, referred to in his recent work, "Contributions to the Extinct Vertebrate Fauna of the Western Territories." All appear to have pertained to the coarse-plated variety of molars referred to a species by Dr. Falconer with the name of *Elephas columbi*. Some of the specimens had been found in association with remains of the mastodon, the extinct and near relative of the elephant. The two genera were contemporaneous, and were repre-

© 1874 Nature Publishing Group

sented by many species during the middle and later Tertiary periods, but no remains of either have yet been discovered in the early Tertiary deposits. It is probable that both are successors from a common stock which existed at a period intermediate to that in which were formed the known Eocene and Miocene deposits. The molar teeth in the two genera differ in a striking manner, and so widely, that early observers thought those of the mastodon were adapted to a carnivorous habit. That the course of evolution was from the more simple to the more complicated type would appear to be confirmed in the fact that the temporary molars have proportionately shorter crowns and longer roots than in those of the permanent series.

BOSTON, U.S.

**Society of Natural History**, Dec. 3, 1873.—Prof. John McCrady read a paper on the food and reproductive organs of the oyster, with an account of a new parasite. This parasite apparently destroys, for the time at least, the fertility of the oyster, and to its abundance may perhaps be due the seasons of short spawn, often noticed by those engaged in the oyster culture. The parasite seems to be a new species belonging to the genus *Bucephalus* and may be called *Bucephalus cuculus*.—Prof. Alpheus Hyatt gave a description of his investigation for the past fourteen years upon the Ammonites of the Jurassic period, showing the connection of the forms in the family Arietidæ, and tracing them all to one species, *Amm. psilonotus* of Quenstedt.—Dr. H. A. Hagen read a paper on the origin of the so-called "Tailed Man," often described and pictured by the older authors. In an attempt to copy from a number of old works the figures of this fabulous creature, it gradually became evident that these figures were copies one from another, with slight changes, by the accumulation of which a "tailed man" was gradually constructed. The origin of all these figures is a poor representation of the "Wanderoo" (*Simia silenus* Linn.), given by the old knight, Bernhard von Breydenbach, in his "Voyage to Palestine" in 1486.

VIENNA

**Imperial Academy of Sciences**, Feb. 5.—Prof. Linnemann made some further contributions towards a knowledge of allyl compounds and acrylic acid. He finds that this acid is completely changed, by sulphuric acid and zinc, at moderate temperature, into propionic acid; also (contrary to present views), that allyl-alcohol, especially in acid solution, takes up hydrogen, and passes into propyl-alcohol.—Prof. Puschl, in a note on specific heat of carbon, offered an explanation of this being different (in the diamond) at different temperatures. He supposes, that for its internal radiation, at ordinary temperature (from the surfaces of the atoms), the diamond is much less opaque than a metal, and that it is more opaque the higher the temperature. Hence the diamond is radiated through by obscure heat, more abundantly the lower the temperature of the source of this; in other words, its opacity for obscure heat increases with the temperature of the source. The same will hold for other kinds of carbon, with this difference, that the opacity of the transparent diamond for a particular kind of direct heat must have a maximum which is not to be looked for in untransparent carbon. He desires that physicists, who have the opportunity, would test the diamond in reference to this point.—M. Puluj gave an account of experiments to determine the constant of friction of air as function of the temperature. According to the theory of gases (with the hypothesis of molecular shocks) the constant referred to must be proportional to the absolute temperature. The author finds it proportional to the $\frac{2}{3}$ power of the absolute temperature, or $\eta = \eta_0(1 + \alpha\theta)^{\frac{2}{3}}$; which comes nearer to the law than the older determinations by Maxwell and Meyer, and argues the correctness of the hypothesis named.

Feb. 12.—Prof. Dvôrák communicated a memoir on the conduction of sound in gases. He shows how the peculiar acoustical behaviour of hydrogen does not contradict theory, but may be simply explained through resonance. The *vis viva* which the same sounding body, with equal excursions in equal times, gives in different gases, is proportional to the root of the product of the density and expansive force of the gas.—Prof. Leitgeb presented a paper on the growth of *Fissidens*; it conforms to the laws of growth of other mosses.—M. Stefan communicated a memoir on the theory of magnetic forces. The first part treats on calculation of the magnetic force of electric currents; the second, the action of a magnet on an internal point; and the third, the theory of magnetic induction. It is shown, rom a series of experiments, that all kinds of iron and steel permit the same maximum of magnetisation, that the resistance of iron and nickel to magnetisation is at first very great, then decreases to a minimum, which is reached when the induced magnetic moment is a third of its maximum, and thereafter the resistance increases to an indefinite extent. From these data a formula is constructed for the magnetic molecular force.

PARIS

**Academy of Sciences**, May 18.—M. Bertrand in the chair. M. Chasles read a paper entitled "Questions relating to series of similar triangles subjected to three common conditions."—M. Serret presented a note accompanying the presentation of vol. vi. of Lagrange's works. The volume contained eleven memoirs on various astronomical subjects. On the magnetic bundles formed by separate laminæ, by M. Jamin.—M. Faye communicated a letter with a reply by M. E. Gautier, who maintains the old views of Galileo concerning the nature of sun-spots.—New apparatus for the transfusion of blood, proposed by M. Mathieu; a note by M. Bouley.—M. A. Ledieu presented the continuation of his thermodynamical researches entitled "General ideas on the mechanical interpretation of the physical and chemical properties of bodies."—Note on some thermometric observations during winter in the Alps, by Dr. Frankland.—On the influence of ferments on surgical maladies (second note), by M. A. Guérin.—On the combinations of arsenic with molybdic acid, by M. H. Debray.—Note on the employment of iron shot for replacing leaden shot in rinsing bottles, by M. Fordos.—On soluble starch, by M. Masculus. Starch is dissolved in acidulated boiling water, the acid neutralised, and the solution filtered and evaporated to a syruppy consistence. An abundant granular deposit is obtained, which is washed with cold water, and then with alcohol. This soluble starch gives all the reactions of natural starch, and is decomposed by diastase in the same manner, but with greater ease.—On the transmission of the irritation from one point to another in the leaves of *Drosera*, and on the part which the tracheæ appear to play in these plants, by M. M. Ziegler. The author concluded, that the tracheæ, or the fibres surrounding them, transmit the irritation from one hair to another, and that the movements of the hairs of the circumference of the leaves are not reflex movements induced by an irritation proceeding from a centre situated elsewhere than in the leaf.—On the concussion of bodies, by M. G. Darboux.—On the temperature of the sun, a note by M. J. Violle.—Studies on electric chronographs, and researches on the induction spark and on electro magnets, by M. M. Deprez.—On the motion of the air in pipes, by M. C. Bontemps.—M. F. A. Abel communicated his fourth memoir on the properties of explosive bodies.—Note on the decomposition of tungstate and of molybdate of sodium by sal-ammoniac, by M. F. Jean; these substances when boiled with solution of sal-ammoniac disengage ammonia, the liquid remaining acid.—On the constitution of clays, by M. T. Schlœsing.—On the identity of bromoxaform and of pentabrominated acetone, by M. E. Grimaux. The author's experiments show that methylic alcohol and methylic acetate are not attacked in the cold by bromine, but at 150°—170° the latter body is transformed into methylic bromide and bromacetic acids. The substance formed by the action of bromine upon the alkaline citrates is pentabrominated acetone, and the chlorinated bodies obtained by the action of chlorine on citric acid and citrates are chlorinated derivatives of acetone and not of methyl-acetic ether.—Experimental study on the influence of the injection of bile on the organism, by MM. V. Feltz and E. Ritter.—On the hind foot of the *Hyænodon parisiensis*, by M. G. Vasseur.

## CONTENTS



© 1874 Nature Publishing Group