

SCIENTIFIC SERIALS

Verhandlungen der k.k. zoologisch-botanischen Gesellschaft in Wien (vol. i. 1878).—This volume is in every respect equal to its predecessors, both for variety as well as scientific interest of its contents. The papers which deserve special praise are: Lichenological excursions in the Tyrol, by F. Arnold.—On the metamorphosis of several species of *Tipulidæ*, by Th. Beling.—Remarks on the metamorphosis of insects in the spirit of the theory of descent, by Dr. Fr. Brauer.—Researches on *Phytoptocididæ*, by Dr. Franz Löw.—Notes on some new *Cecidomyidæ*, by the same.—On some new exotic *Hesperidæ*, by H. B. Möschler.—Ennumeratio Ichneumonidum, exhibens species in alpinis Tirolia captas, by Aug. E. Holmgren.—Other papers of interest are: On the mollusc-fauna of Galicia, by J. Król.—Ornithological notes, by P. Hanf.—On the birds of Ecuador, by A. von Pelzeln.—On ear-shaped grass panicles, by E. Hackel.—On the fungi of Carniola, by Wilhelm Voss.—Note on a new mollusc, by M. Folin.—On some new *Cucujidæ* in the Royal Museum at Berlin, by Edmund Reitter.—Researches on *Lycetidæ*, by the same.—Analytical classification of the species in the genera *Sphindus* and *Aspidophorus*, by the same.—On the influence of changes in the conditions of vegetation upon the forms of the organs of plants, by Otto Stapf.—On a remarkable form of *Lenticels*, by the same.—On some species of the *Chalcididæ* genus *Eurytoma*, obtained by artificial breeding, by Dr. G. Mayr.—On the flora of Fiume, by A. M. Smith.

SOCIETIES AND ACADEMIES

LONDON

Royal Microscopical Society, October 9.—H. J. Slack, president, in the chair.—This was the first meeting of the present session. Numerous presents were announced and acknowledged, and Major Festing and John Borland were elected Fellows of the Society.—The president called attention to a specimen of the perforating proboscis of a moth which had been received from Colombo, and compared its structure with that of a species which had been the subject of discussion at a former meeting.—An interesting paper was read by Prof. Owen upon certain fossils found in the middle Purbeck, to which he had given the name of *Granicones*, and which, after careful comparative examination, he had decided to be the dermal scutes of a lacertian closely resembling the now existent Australian species, *Moloch destructor*. He pointed out that the remains found in these rocks were chiefly those of marsupials, and that in the mesozoic strata both animals, plants, and shells had now their only living representatives at the antipodes.—Communications were read from Col. Woodward on the modification of the illuminator for balsam-mounted objects, also from the American Microscopical Congress recommending the adoption of the 1/107 millimetre as the standard for microscopical measurements.—A discussion ensued, in the course of which it was suggested that much advantage would arise to microscopists from the more careful adherence on the part of makers to the Society's standard screw, and also greater uniformity as to size of tube, eye-pieces, and other mechanical details.

PARIS

Academy of Sciences, October 7.—M. Fizeau in the chair.—The following papers were read:—On the irreducible covariants of the quantic of the seventh order, by Prof Sylvester.—Observations on M. Gruey's recent communication on a gyroscopic apparatus, by M. Hirn. He considers the new apparatus presents a special case of phenomena analysed in his own memoir on the gyroscope.—On a singular case of heating of a bar of iron, by M. Hirn. A workman holding a cylindrical iron bar (about 1 m. long and 0.08 in diameter) on another piece so as to be struck with a hammer on the free end, said he felt the bar at each stroke greatly heated and then as quickly cooled. M. Hirn verified this with surprise. He estimated at 35° the sudden variation of temperature. For best observation one should come very near the bar and seize the iron about 0.01 m. from the end struck (a position requiring some faith in the address of the workman!). M. Hirn thinks the phenomenon quite subjective, i.e., one of sensation. In certain conditions, sonorous vibrations affecting the sensitive nerves, may cause at the periphery of the body a sensation

of heat, just as, e.g., pressure or a blow on the eyes may awaken in these organs the sensation of light. This view he gives with reserve, and desires physicists to test a bar, in such circumstances, with a Melloni thermometer.—Observations on M. Bouillaud's note inserted in last week's *Comptes Rendus*, by M. du Moncel.—Discovery of two small planets at Clinton (New York), by Mr. Peters.—Second letter of Mr. Watson on the discovery of intra-Mercurial planets. M. Mouchez thought that while the American observations have rendered very probable, or almost certain, the existence of intra-Mercurial planets, they have not sensibly improved the knowledge of their orbit.—Two remarks on the general relation between pressure and temperature, determined by M. Levy, by Herr Weber.—On the manner in which is distributed, among its points of application, the weight of a hard body placed on a polished, horizontal, and elastic ground; identity of this mode of distribution for a plane and horizontal supporting base with that of an electric charge in equilibrium in a thin plate of the same form, by M. Boussinesq.—On the resolution, in whole numbers, of the equation (1) $ax^4 + by^4 = cz^2$, by M. Desboves.—On a new gyroscopic pendulum, by M. Gruey.—Revision of the flora of the Malouines (Falkland Isles), by M. Crie. At present there are about 394 species (Hooker enumerated 368). The compositæ count more individuals than all the twenty-seven other families of dicotyledons combined. The graminæ occupy the second place. As in most arctic flora, the most numerous are the cryptogams. Algae have nearly 100 representatives. The author adds nine new species of muscinæ to those described by Hooker.—Researches on the urea of organs, by M. Picard. During digestion, urea is formed in the muscles, the brain, and the liver; these have all more of the substance than an equal weight of blood. During fasting, urea seems to be formed only in the brain and the muscles.—Note on M. Perez' work on the buzzing of insects, by M. Jousset de Bellesme. This is the substance of a paper read to the French Association in August, and giving much the same results as those of M. Perez, communicated to the Academy in September.—On *Trichodonopsis paradoxa* (Clap), by M. Schneider.—Structure and botanical affinities of the cordaites, by M. Renault. The order of Cordaites is more nearly related to the Cycadæ than any other family of Gymnosperms, and the Cycadæ, including Sigillarineæ, must have reached an immense development at the coal epoch.—On the atmosphere of planetary bodies and the terrestrial atmosphere in particular; remarks on Mr. Sterry-Hunt's recent paper, by M. Meunier.

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