

SOCIETIES AND ACADEMIES

LONDON

Entomological Society, July 7.—J. W. Dunning, M.A., vice-president, in the chair.—Mr. Jenner Weir, on behalf of Mr. J. W. Douglas, exhibited a female specimen of *Noctua c-nigrum*.—Mr. McLachlan exhibited a piece of sugar-cane from Queensland much eaten by some undetermined lepidopterous larvæ, of which specimens were shown. Mr. W. L. Distant was able to state that this was a quite distinct larva from that infesting sugar-canes in Madras, of which he had lately received specimens.—Miss Ormerod exhibited specimens of various sugarcane borers from British Guiana, and read notes thereon.—Mr. Distant exhibited a specimen of the larva of *Hepialus vivescens*, the so-called vegetable caterpillar of New Zealand. The spores of *Cordiceps robertsii*, falling on this caterpillar, become parasitic, destroying it, and growing therefrom in the form which has caused many erroneous statements to be made.—Mr. Billups exhibited a larva of *Plusia chrysitis* and some specimens of an ichneumon (*Paxylloma sp.*) that was parasitic thereon.—Mr. Phipson exhibited a remarkable variety of *Pyramis cardui*.—A note was read from Mr. Sidney Churchill of Teheran on *Argas persicas*.—Mr. Roland Trimen communicated notes on the pairing of a butterfly with a moth, and on a supposed female of *Dorylus helvolus*, Linn.—Messrs. Godman and Salvin communicated a paper entitled "A list of Diurnal Lepidoptera collected in the Sierra Nevada of Santa Marta, Columbia, and the vicinity."

VIENNA

Imperial Academy of Sciences, May 13.—On the theory of Volta's fundamental experiment, by Prof. Exner.

June 3.—On a method of indicating the variations of volume of the heart, by Prof. Knoll.—The variation of molecular weight and molecular refractive power (second part), by Dr. Janovsky.—On preliminary determination of the orbit of the planet (178) Belisana, by Herr Rüling.

June 10.—Preliminary communication on the spermogonia of *Æcidiumycetes*, by Prof. Rothoy.—On electrical ring-figures and their change of form by the magnet, by Prof. Reitlinger and Dr. Wächter.—On the magnetisability of iron at high temperatures, by Prof. Wassmuth.—On the development of gases from metals, by Prof. Suess.—On the path of the comets 1843 I and 1880a, by Herr Weiss.—On so-called chemical repulsion, by Dr. Lecher.

June 17.—Contributions to an investigation of the phylogeny of plant-species, by Prof. v. Ettingshausen.—Optical notices, by Prof. v. Lang.—On the localisation of functions in the periphery of the human brain, by Prof. Exner.

PARIS

Academy of Sciences, July 19.—M. Edm. Becquerel in the chair.—The following papers were read:—Researches on the organic alkalis, by M. Berthelot. This relates to ethylamine and trimethylamine, their heat of combustion, &c.—Modifications of respiratory movements by muscular exercise, by M. Marey. The respiratory curves obtained from young soldiers with a (so-called) *pneumograph* show that after a gymnastic course they breathe about twice as much air as before; the number of respirations is reduced from twenty to twelve per minute, but their amplitude is more than quadrupled. At the outset the respiration is considerably modified by running (600 m. in about four minutes), but after from four or five months' exercise this running has no perceptible effect.—On strengthening the immunity of Algerian sheep against splenic fever by preventive inoculations; influence of inoculation of the mother on the receptivity of the fœtus, by M. Chauveau. Direct contact of the animal organism with the bacteridian elements is not necessary to its ulterior sterilisation. Preventive inoculations act on the humours proper, which are rendered sterile and sterilising, either by removal of substances necessary to bacteridian proliferation, or rather by addition of matters adverse to this proliferation.—On the construction of the dam of Gileppe, Belgium, by M. de Lesseps.—Ephemerides of comet *b* 1880 (Schäberle), by M. Bigourdan.—Reply to a remark of Mr. Sylvester's concerning the lessons on the theory of numbers of Dirichlet, by M. Dedekind.—On the cause of the fugitive spectra observed by M. Trouvelot on the solar limb, by M. Tacchini. He has often observed such spectra (attributed by M. Trouvelot to solar disturbances) on passage of swallows and other birds across the sun. In simultaneous ob-

servations on three days, by Prof. Ricco, at Palermo (where birds are very rare), no such spectra were recorded; and M. Tacchini finds, as one might expect, that they become less frequent as the sun rises in the sky.—On atmospheric electricity, by M. Mascart. His observations at the College of France are made with a Thomson quadrant electrometer, the deflections of the needle being transmitted to a pencil. The two pairs of quadrants are kept at equal potentials of contrary sign by two poles of a battery which communicates with the ground; the needle is connected with a vessel letting flow a continuous stream of water into the outer air. Generally the potential of the air, always positive, is found much higher and more uniform by night than by day. From 9 p.m. to 3 a.m. it varies little, falls at daybreak, reaches a minimum about 3 p.m., then rises rapidly to a maximum about 9 p.m. (It is commonly thought there are two maxima, morning and evening; and two minima, one in the day, the other at night. M. Mascart considers insulation has been too much neglected.)—On the alternative currents and the electromotive force of the electric arc, by M. Joubert. When the current intensity is nil there is no difference of potential between the carbons, but the difference quickly reaches 40 to 50 volts, which is preserved nearly constant till the current is again very weak. The final fall is very sudden. The difference of potential remains the same during the period of the current, though the mean intensity of this be largely varied.—On a new air-thermometer, by M. Witz. This is a sort of Leslie's thermometer, with one air-globe kept at constant temperature by means of a thermal regulator of special form.—On some fluorised combinations of uranium with the alkaline metals, by M. Ditte.—On the atomic weight and the principal properties of glucium, by MM. Nilson and Petterson. The atomic weight is 13.65 if the earth is equal to Gl_2O_3 .—On some combinations belonging to the group of creatines and creatinines, by M. Duvillier.—Action of chloride of ethyl on ethylamines, by MM. Duvillier and Buisine.—Action of electrolysis on benzene, by M. Renard. A new body named isobenzoglycol, $C_6H_8(OH)$, is obtained.—On a peculiar alteration of butchermeat, by M. Poincaré. He has found cylindrical pointed elements, with cuticles crossed by lines which seem outlines of cells, and granulated. He thinks they may be phases or metamorphoses of tœnioides, causing tœnia in some eaters of raw meat.—On the production of charbon by pasturages, by M. Poincaré. The disease was traced in one case to the grass of a meadow being constantly wet with a liquid of marshy look; in this were found numerous bacteria like those in the blood, and injection of it into a guinea pig produced charbon.—Observations on the origin of fibrillæ in the bundles of connective tissue, by M. Laulané.—On the Echinida of the tertiary strata of Belgium, by M. Cotteau.

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