

Hellmann makes up for its slenderness by means of a short biography of Hadley, and several helpful and interesting notes. The reprints are published by Messrs. A. Asher and Co.

THE *Journal of Botany* reprints some very interesting extracts from Mr. T. Kirk's presidential address to the Wellington (New Zealand) Philosophical Society, on the displacement of native by introduced species of plants. Next to man, the chief agents in this destructive work in New Zealand are sheep and rabbits, but the black rat has also had his share. "Some districts are eaten almost bare by these close feeders, little being left except the tough bases of *Poa caspitosa* and the wiry ligneous stems of *Mühlhenbeckia*, and similar plants; even the woolly leaves of some species of *Celmisia* are often closely cropped, the result being that the more delicate plants are all but extirpated over large areas." Introduced plants like *Silene anglica*, *Erigeron canadensis*, *Rumex obtusifolius* and *crispus*, *Bromus sterilis*, and *Holcus lanatus*, have almost driven out the original littoral vegetation in some districts. Even more destructive are the ravages caused by the parasites, animal and vegetable, which some of these strangers bring with them. Some idea of the extent of this invasion may be gathered from the fact that the first catalogue of naturalised plants in New Zealand, published in 1855, comprised forty-four species; while at the present time Mr. Kirk is himself acquainted with 304 species, while others put the number at 382.

WE have received the first number of vol. iii. of *Poggendorff's Biographisch-Literarisches Handwörterbuch der Exacten Wissenschaften* (J. A. Barth, Leipzig), which is to contain short biographical notices of mathematicians, astronomers, physicists, chemists, mineralogists, geologists, geographers, &c., living within the period 1858-1883. The first number extends from "d'Abancourt" to "Beilstein," and the whole volume will contain about fifteen numbers, appearing at intervals of six weeks (3s. each). The times preceding 1858 have already been dealt with in the first and second volumes (price 28s.), and any gaps which have been discovered since will be filled up in the present volume. A fourth volume is to cover the years from 1883 to 1900. The whole work will be a monument of careful compilation, and will do much to unify the world of science. The plan of the work is admirably designed. Short biographical notices are followed by a detailed enumeration of the papers and books contributed to scientific literature. Among the men of this first number, Sir G. B. Airy is *facile princeps* in the volume of his writings, as the four closely-printed columns of titles testify. There are many Arabian and other philosophers who are now seldom heard of, such as Abraham ibn Esra of Toledo, Al Marokeschi of Morocco, and Al Mahani of Khorasan, which this dictionary preserves from unmerited oblivion. Taken as a whole, the dictionary appears to be highly trustworthy, and the print and paper leave nothing to be desired.

IN the current number of the *Comptes rendus* there is an account, by M. H. Moissan, of some further experiments on the preparation of the diamond. With the view of obtaining the greatest possible pressure upon the solution of carbon in iron during solidification, the cooling with mercury or other metal was arranged in such a manner that small spheres from 5 mm. to 10 mm. in diameter were produced. These spheres gave specimens both of the black and transparent varieties of diamond, which, although very small (0.01 to 0.02 mm.), were remarkably regular and perfect in shape, agreeing exactly with the forms found in nature.

THE additions to the Zoological Society's Gardens during the past week include a Rhesus Monkey (*Macacus rhesus*, ♀) from India, presented by Mr. V. Lloyd; two Amaduvade Finches (*Estrelda amandava*) from India, a Paradise Whydah Bird

(*Vidua paradisica*) from West Africa, presented by Miss M. von Laer; a Raven (*Corvus corax*), British, presented by Mr. A. H. Cullingford; a Martinique Gallinule (*Zonornis martinicus*) from South America, presented by Mr. A. W. Arrowsmith; a Cape Viper (*Caucus rhombeatus*), a Puff Adder (*Vipera arietans*), a Cape Bucephalus (*Bucephalus capensis*), five Hoary Snakes (*Coronella cana*), a Ring-hals Snake (*Sepedon hamachates*), four Crossed Snakes (*Psammophis crucifer*), six Rufescent Snakes (*Leptodira rufescens*), three Rough-keeled Snakes (*Dasypeltis scabra*), four Rhomb-marked Snakes (*Psammophylax rhombeatus*), a Delaland's Lizard (*Nucras delalandii*), a Defenceless Lizard (*Agama inermis*) from South Africa, presented by Mr. J. E. Matcham; four Midwife Toads (*Alytes obstetricans*), South European, presented by Prof. Gustave Gilson; a Gentoo Penguin (*Pygosceles taniatus*) from the Falkland Islands, deposited; eight Amherst Pheasants (*Thaumalea amherstiae*), two Peacock Pheasants (*Polyplectron chinquis*), two Himalayan Monauls (*Lophophorus impeyanus*), bred in the Gardens.

OUR ASTRONOMICAL COLUMN.

THE PLANET SATURN.—In the *Astronomische Nachrichten*, No. 3365, Prof. Barnard comments upon the accounts of various new markings on the rings and body of this planet. In company with Profs. Burnham and Hough, he carefully examined Saturn with the 18½-inch refractor at Dearborn Observatory. The planet was in a good position for seeing, being on the meridian, and during the evening several difficult double-stars were accurately measured. In spite of this, no abnormal features could be discerned, either on the globe or on the rings. The recently reported observations of new divisions, ragged edges to the crape-ring, &c., were all invisible. In fact the planet appeared very similar to what Prof. Barnard usually saw with the 36-inch Lick, although the latter, with its larger aperture, made the identification of details less difficult.

NEW NEBULOSITY IN THE PLEIADES.—W. Stratonoff, in the *Astronomische Nachrichten*, No. 3366, describes the results of recent long-exposure photographs of the Pleiades, taken with a refractor of 13 inches aperture. Three photographs are mentioned, obtained with exposures of 9h. 54m., 17h. 36m., and 25h. The first two show most of the known nebulosity, but the third shows the existence of several new features. The chief of these is a long straight streak of nebulosity extending from $\alpha = 3h. 40^m. 7s.$, $\delta = +24^{\circ} 4'$ to $\alpha = 3h. 41^m. 9s.$, $\delta = +24^{\circ} 4'$, roughly about 20' north of Alcyone. The breadth of this is from 20" to 30"; it is almost parallel to the neighbouring line of nebulosity described by M. M. Henry, and has a very similar form.

Another slight nebulosity is visible on the plate near the star 18m., in the form of several filaments lying north and south, and varying in breadth from one to three minutes of arc.

NEW VARIABLE IN HERCULES.—Mr. T. D. Anderson, of Edinburgh, gives in the *Astronomische Nachrichten*, No. 3366, a description of his observations of a 9th magnitude star, leading to the discovery of its variability. This is the star B.D. + 27° 2772, whose position for 1855.0 is given as R.A. = 17h. 4m. 58.4s., Decl. + 27° 14' 3". The star could not be found in September 1895, using a 2¼-inch refractor, but in October of the same year it was easily seen with the same instrument. Taking two neighbouring stars of magnitude 8.8 and 9.6 for comparison, he found the variation in magnitude to be from 9.2 to below 10 in about a month. In July 1896 he again found the star to be invisible as in September 1895, although the neighbouring 9.6 magnitude star was easily seen again.

THE INSTITUTION OF MECHANICAL ENGINEERS.

THE annual summer meeting of the Institution of Mechanical Engineers was held last week in Belfast, commencing on Tuesday, July 28, and concluding on Friday, July 31. There were two sittings for the reading and discussion of papers, the following being a list of those presented:—