

Self-Culture, Intellectual, Moral, and Physical, a Vade-mecum for Young Men and Students" (Edinburgh: Edmonston and Douglas), contains many old and valuable truths forcibly expressed, and is calculated, we believe, to benefit the class for whom it is intended.—"Darwinism and Design; or, Creation by Evolution" (Hodder and Stoughton), is an attempt to show that although "Evolution is true, the Design argument remains unshaken;" that indeed "Evolution is the method of Creation."—"From January to December; a book for Children" (Longmans), is a miscellany consisting of stories, poems, papers on natural history, &c., arranged, for no reason that we can see, under the twelve months of the year. We fear even grown-up children will find the visits to Kew, the Zoological Gardens, and other papers, dull; besides, it is a great blunder to send forth a book like this without a single illustration.—"The Alps of Arabia; Travels in Egypt, Sinai, Arabia, and the Holy Land," by William Charles Vaughan (King and Co.), goes over well-trodden ground, and tells us nothing new; though those who contemplate a similar journey will find the book useful, fresh, and interesting.—"The Expanse of Heaven; a Series of Essays on the Wonders of the Firmament," by R. A. Proctor, B.A. (King and Co.), is sufficiently described by its title.

"GEOLOGICAL Sketch of the Province of Cadiz," by J. McPherson, is an abstract of a similar work written by the author in Spanish, and is printed at Cadiz. It is a valuable study of the subject, and is illustrated by well-executed maps and sections.

WE take the following from *Ocean Highways*:—Captain Heaviside, R.E., of the Great Trigonometrical Survey of India, is completing the work of Captain Basevi by forming a base station for the India pendulum operations, at the Kew Observatory. With this object he is now engaged in swinging Captain Kater's original convertible pendulum; and a re-measurement of its length will be undertaken probably at the Ordnance Survey Office at Southampton, by Colonel Clarke, the highest authority in England, and probably in Europe, as regards the measurement of standards.

THE Dublin College of Physicians, the *Lancet* says, has opened its portals to female aspirants for its degrees, a lady holding the M.D. of Zurich having been exempted from the first half of the examination for the L.K.Q.C.P. The College is also said to be willing to confer its midwifery diploma on all ladies who may, under certain regulations, apply for it.

WE have received an Italian publication by A. Manzone, on the fossils of Monte Titano in the republic of San Marino, their age and mode of origin. It is published at Florence by G. Barbèra.

THE principal papers in the last number of Petermann's *Mittheilungen* are, a Memoir of Colonel Eemel von Sydow a long account, by Prof. Nordenskiöld, of the Swedish Expedition to the North-east of Spitzbergen, from April 24 to June 15, of last year, an account of the Exploration of North-west Texas, by an expedition sent out in 1872 by the Texas Land and Copper Association, and a summary of the work of the *Challenger* Expedition in the North Atlantic. The last two are illustrated by well-executed maps.

THE additions to the Zoological Society Gardens during the past week include a Lioness (*Felis leo*) from Kattywar, presented by Mr. J. Humfrey, of the Bombay Staff Corps; three common Marmosets (*Hepale jacchus*) from S.E. Brazil, presented by Le Chevalier d'Albuquerque; a Crested Ground Parrakeet (*Calopsitta nove-hollandiæ*) from Australia, presented by Vice-Admiral Wallis Houston; and a Drill (*Cynocephalus cucophæus*) from W. Africa, purchased.

## SCIENTIFIC SERIALS

The *Monthly Microscopical Journal*, for this month, contains four papers, besides the notes, record of the progress of Microscopical Science and the Proceedings of the Royal Microscopical Society.—Mr. S. J. McIntire, in Notes on so-called *Acarellus*, discusses the point whether the specimens described and named *A. muscæ* and *A. pulicis*, by Mr. Tatem, are related to a form known by him as a parasite on *Obisium*, and elsewhere; and whether it is one of the early forms of *Gamasus*, as thought by Mr. Tatem and Dujardin, though not by himself.—A second paper by Mr. W. H. Dallinger and Dr. J. Drysdale, contains further researches into the life-history of the Monads. The importance of prolonged study of the same form is insisted on, and this shows that the method of multiplication is not, as generally supposed, entirely by fission, but sometimes by an absorption into one of two individuals, the resulting mass clearing like an ovum, and giving rise, somewhat as in *Gregarina*, to a multitude of new individuals. Sometimes more than two, as many as four or six, were observed to unite.—Prof. E. Hull describes the microscopic structure of a granitoid quartz-porphry from Galway, in which "the silica has consolidated into individual sub-crystalline grains before the other minerals, whereas in all true granites the silica has been the last to consolidate. The presence of aqueous (?) vapour during the consolidation of this rock is shown by the existence of numerous fluid cavities, and is another feature in which it resembles true granites."—Mr. G. W. Morehouse's paper on the structure of the scales of *Lepisma saccharina*, is reprinted from the *American Naturalist*.

*Poggendorff's Annalen der Physik und Chemie*, No. 8, 1873.—In this number, M. Riess criticises four different methods for determining the duration of discharge of a Leyden battery; that of Wheatstone, with rotating mirror; that of Lucas and Cazin, with rotating slitted disc; the electrical thermometer; and the electro-dynamometer. He shows, from experiments with the first two, that the light-duration of the spark consists of two time-parts; the discharge-time of the battery, and the duration of the after-glow of particles of metal present in the spark. These two parts vary, sometimes in the same direction, sometimes in opposite directions. Thus the duration of the discharge and the luminous duration of the discharge-spark stand in no fixed relation to each other.—In a paper on polarisation of electrodes in the voltaic arc, M. Herwig obtains results different from those of Grove on the same subject. His final mode of experiment was with a ball of pure silver as one electrode, and a plate of copper as the other; the ball being moved from point to point over the plate. Only the silver was here pulverised and any repeated action on what of it passed to the plate was prevented. M. Herwig found that the waste of silver was not even remotely equivalent to the quantity of hydrogen developed in the voltmeter.—Dr. Rink has a paper on the velocity of sound, in which he raises some objections to the conclusion to which M. Regnault was led by experiments with the gas and water pipes of Paris, viz., that the velocity of sound is dependent on its intensity, and that a weak wave is propagated less quickly than a strong one.—A lengthy article by M. Riecke treats of the magnetisation of soft iron. He gives experimental determinations of the functions of magnetisation for different kinds of iron (by which is meant the induced magnetic moment divided by the magnetising force).—In a note on the relations between capillary and electric phenomena, M. G. Lippmann describes a capillary electrometer and an electro-capillary motor (with illustrations). In the latter, two bundles of fine glass tubes, dipping in separate vessels of mercury, are moved up and down alternately through the changes of form the mercury surface undergoes from polarisation with a galvanic current; and this motion is converted into rotary by a system of levers.—M. Bergh proposes an application of solar heat as a motor force, —vaporising sulphurous acid contained in vessels on the roof of a workshop. He would add to the solar machine, Natterer's apparatus for condensing carbonic acid; the force thus stored up might be used when solar heat was deficient.—M. Leyser describes a new form of Holtz's machine; and among the remaining subjects treated in this number are, heat relations and decompositions in solution of mixed salts in water (Winckelmann), absorption of heat by pulverised carbon (Vierordt), determination of the relation of specific heat to the velocity of cooling of certain gases (Kohlrusch).