

the theory of Archigenesis. For if not through Archigenesis, whence shall we derive this protoplasmic covering of the deepest sea-bottom?

Either the Monera were once for all, at the beginning of organic life on the earth, produced by Archigenesis—and hence—since Monera exist still to-day—they must have reproduced in a direct line unchanged for many million years; or, in the course of the earth's history, they have been produced by recurring acts of Archigenesis, and in this case there is no reason why this process should not occur at the present time. The latter view presents the fewest difficulties and exceptions to Prof. Haeckel. In any case the Monera still living at the present day point out to us the way to a correct understanding of the Origin of Life, and clear away the greatest difficulties which the hypothesis of Archigenesis previously presented.

E. R. L.

### SCIENTIFIC SERIALS

THE report of the meeting of Swiss Naturalists (*Schweizerische Naturforschende Gesellschaft*) in Solothurn on the 23-25 August, 1869, opens with an admirable presidential address on the progress of scientific investigation in Switzerland, by Prof. Lang. The reports of the sections contain numerous short notices of memoirs read, but among these are some of greater length and importance, such as a report by Dr. Hengi on his experiments in the culture of *Saturnia Yama-maya* and *S. mylitta*, a notice by M. F. Hermann on the use of Saussure's hair-hygrometer for scientific observations, a paper on creosote and other products by Prof. Völkel, a communication on fluorescence by Prof. Hagenbach, and a paper (printed in full) by Dr. von Fellenberg, containing analyses of some nephrites and jadeites, including a stone implement of the latter mineral from Möhringen-Steinberg, which he regarded as having been imported from the east. From his analyses of nephrites from different localities, it appears that they contain silica and magnesia in equal equivalents, but that the proportion of each of these to the lime varies as 7, 7½, 8, 9 : 3. Hence he regards them as forming not a definite mineral species, but a group of silicates of magnesia and lime formed by the metamorphosis of rocks of similar composition. He does not consider the nephrites allied to the amphiboles and augites. The memoirs include a report by Prof. Pictet de la Rive on the present state of the question as to the limits of the Jurassic and Cretaceous periods, a notice of which has already appeared in NATURE; an account of the Miocene Flora of Spitzbergen, by Prof. Oswald Heer; and a report on the investigation and preservation of the erratic blocks in Switzerland, by MM. A. Favre and L. Soret. An amusing account of the festal doings of the Society concludes the volume.

FROM the Natural History Society of Stralsund (Neu-Vorpommern) and Rügen, we have received the second annual part of their *Mittheilungen* containing the proceedings of the society for the year 1869. It contains a life and list of the works of Prof. A. E. Legnitz, by Prof. von Feilitzsch; a description of the Island of Gottland, with a notice of the birds inhabiting it, by M. L. Holtz, unfortunately disfigured by some very absurd misprints; a notice on the proper heat of plants, by Dr. J. Romer, containing details of experiments made with *Phlo-dendron pinnatifidum* Schott, from which it appears that the proper heat of this plant is much higher than stated by C. H. Schulz; and a paper (illustrated) on the itch-mites of fowls by Prof. Finsterberg. In the last-mentioned paper the author describes a species of mite inhabiting the feet of fowls, for which he proposes the formation of a new genus, *Knemidokoptes* (recte *Cnemidocoptes*). He names the species *K. viviparus*, as it produces living young.

THE last part of the *Archives Néerlandaises des Sciences Exactes et Naturelles à Harlem* for 1870 contains the following papers:—J. A. Groshaus on the Specific Heats of Solids and Liquids, which is a continuation of his former papers published in the same journal, in which he confirms Kopp's results in obtaining a constant when the specific heat of every substance is multiplied with its atomic weight, the constant being 6.3 to 6.5.—C. K. Hoffmann and H. Weijenbergh, jr., on the position of Chiromys (The Aye-Aye of Madagascar) in the natural classification. This is an elaborate memoir which was crowned by the society in 1869, and treats of all the characters in detail, their final decision

being to make the following classification: Mammalia, Order ii. Quadrumana, Sub-order ii. Prosimiæ, Families: 1, Lemurini; 2, Nycticebini; 3, Macrotrarsi; 4, Microtrarsi. The fourth family is distinguished by the tarsal bones more or less elongated (*allongés*), and by difference in the dentary systems, especially in the character of the incisor teeth. In common with Macrotrarsi they have the tail, long large eyes directed in front, and large ears, and they feed chiefly on insects. Of this family two genera are given; *Microcebus* Geoff. and *Chiromys* Cuv., two species of the first one found in Madagascar, and one of the second, the common Aye-Aye.—M. G. F. W. Baehr gives a note on the Results of the Mathematical Study of the Movements of the Eye.—M. H. H. von Zouteveen on the Petrified Forest of Cairo, and by the same author on the Synthesis of Sulphocyanate of Ammonium.—M. Van der Willigen on Holtz's Electrical Machine.—M. A. C. Oudemans, jr., on the Volumetric Estimation of Iron by Hyposulphite of Sodium.—M. H. Weijenbergh, jr., on Parthenogenesis among the Lepidoptera.—M. C. Ritsema on the Origin and Development of *Periphyllus testudo* v.d.H.; and lastly a report on the Purification of the Air of Hospitals by the Combustion of the Organic Germs, by MM. J. van Genns and L. H. von Baumhauer. This is the report of an investigation undertaken at the instance of the Dutch Government to determine if the apparatus devised by M. Woestyn, of Paris, completely destroy all vital properties in the germs. They report that the apparatus contains nothing new, and that it does not effect its purpose any better than the ordinary methods in use.

### SOCIETIES AND ACADEMIES

#### LONDON

Royal Society, January 19.—“Modification of Wheatstone's Bridge to find the Resistance of a Galvanometer Coil from a single deflection of its own needle,” by Prof. Sir William Thomson, F.R.S. In any useful arrangement in which a galvanometer or electrometer and a galvanic element or battery are connected, through whatever trains or network of conductors, let the galvanometer and battery be interchanged. Another arrangement is obtained which will probably be useful for a very different, although reciprocally related object. Hence, as soon as I learned from Mr. Mance his admirable method of measuring the internal resistance of a galvanic element (that described in the first of his two preceding papers), it occurred to me that the reciprocal arrangement would afford a means of finding the resistance of a galvanometer-coil, from a single deflection of its own needle, by a galvanic element of unknown resistance. The resulting method proves to be of such extreme simplicity that it would be incredible that it had not occurred to any one before, were it not that I fail to find any trace of it published in books or papers; and that personal inquiries of the best informed electricians of this country have shown that, in this country at least, it is a novelty. It consists simply in making the galvanometer-coil one of the four conductors of a Wheatstone's bridge, and adjusting, as usual, to get the zero of current when the bridge contact is made, with only this difference, that the test of the zero is not by a galvanometer in the bridge showing no deflection, but by the galvanometer itself, the resistance of whose coil is to be measured, showing an unchanged deflection. Neither diagram nor further explanation is necessary to make this understood to any one who knows Wheatstone's bridge.

Zoological Society, February 21.—Mr. Osbert Salvin, F.Z.S., in the chair. The Secretary announced the birth of a young Hippopotamus in the Society's Gardens, which had taken place that day, being the first occurrence of this event in England, although this animal had previously bred in some of the Continental Gardens.—Mr. Sclater exhibited and made remarks upon the tusk of an Indian elephant, which appeared to have been attacked by parasites.—The Secretary exhibited, on behalf of Mr. E. Ward, F.Z.S., a remarkably fine series of heads and horns of sheep and other wild animals, which had been collected in Ladakh by Mr. George Landseer.—A communication was read from Dr. W. Peters, F.M.Z.S., containing a note on the *Tania* from the Rhinoceros, in reference to a previous communication from Dr. Murie, to the society, upon the same subject.—A communication was read from Mr. J. H. Gurney, F.Z.S., containing remarks on certain species of Abyssinian birds.—A communication was read from Dr. J. Anderson, C.M.Z.S., containing notes on certain Indian reptiles belonging