

of the experiments which led up to and established the epoch-making discovery of artificial parthenogenesis.

In lecture X., on heredity, the following subjects are discussed: the hereditary effects of the spermatozoon and eggs; Mendel's important experiments; the mutation theory of de Vries; the determination of sex; the relation of egg structure to heredity; the observations and experiments of Driesch and E. B. Wilson. It does not seem to Loeb 'that a discussion as to the relative influence of protoplasm and nucleus upon heredity will prove very fertile, but that it is necessary to transfer this problem as soon as possible from the field of histology to that of chemistry or physical chemistry.'

Lecture XI. is on regeneration. Here again the author has done a good deal of original investigation and in some parts, as on heteromorphosis and on the influence of the central nervous system, Loeb has done pioneer work. He discusses the subject from the point of view of Sachs's hypothesis of the formation of organs. Loeb here refers the reader to Morgan's writings on regeneration.

In his concluding remarks (lecture XII.) Loeb says among other things: "There is, therefore, no reason to predict that abiogenesis is impossible, and I believe that it can only help science if the younger investigators realize that experimental abiogenesis is the goal of biology. On the other hand, * * * it is not sufficient for this purpose to make proteins synthetically, or to produce in gelatine or other colloidal material round granules which have an external resemblance to living cells."

It is a very interesting book which instructs and at the same time stimulates the reader to independent thinking.

S. J. MELTZER.

ROCKEFELLER INSTITUTE.

SCIENTIFIC JOURNALS AND ARTICLES.

The American Naturalist for July contains but two articles, 'Adaptive Modifications of Occipital Condyles in Mammalia,' by Charles S. Mead, and 'Living and Fossil Species of *Comptonia*,' by Edward W. Berry. The former notes the general adaptations of the

condyles to permit the movement of the head, the special modifications for carnivorous habits and the arrangement of the condyles in different orders. The second paper is an attempt to work out the relations of such forms as may be referred to *Comptonia*, discusses the succession of forms and includes descriptions of the species admitted by the writer, with their synonymy.

The Museums Journal of Great Britain for June has 'Some Notes on a recent Trip to Greece and the Greek Islands,' by Robert F. Martin, an article on 'National Art Patriotism,' dealing with the purchase of a 'Venus and Cupid' ascribed to Velasquez for £45,000, secured for the National Gallery through the National Art Collections Fund, and an account of the 'New Natural History Museum for Salford.' The organization of the American Museum Association is noticed, and it should be said that the Museums Association of Great Britain cabled its best wishes for the successful inauguration and future progress of the sister society. There is a very considerable instalment of the British Museums Directory, which includes such national institutions as the British Museum, Victoria and Albert Museum and others.

THE leading article in the *Journal of Nervous and Mental Disease* for July is a paper by Dr. Waldemar Heinrich Groszmann on 'The Position of the Atypical Child.' Dr. Groszmann defines his terms very carefully, giving in tabular form a survey of the entire range of child variation. He emphasizes the fact that the atypical condition is a transitive one and tends to become permanent either in the direction of abnormality or of some degree of typicality. He finds it impossible to educate successfully such children in the ordinary public and private schools in conjunction with home environment, and believes that the solution of the problem lies in the institution where the environment can be controlled and adapted to the end in view. Dr. Archibald Church reports a case illustrating the neuritic type of progressive muscular atrophy with a marked heredity, and a second on syringomyelia with involvement of cranial nerves,

probably a syringobulbia. Both these papers are illustrated. Dr. Hugh T. Patrick publishes a brief supplementary report and correction to his paper on 'Hereditary Cerebellar Ataxia' in the March issue of the *Journal* for the year 1902. The meeting of the Boston Society of Psychiatry and Neurology for January 19, 1906, and that of the Chicago Neurological Society for November 23, 1905, are reported.

THE first three numbers of the *Philippine Journal of Science* contain several papers which will not appear elsewhere. Among these may be mentioned the completed series on the cocoanut, its growth, the production of oil from the nuts, and the insects attacking the trees, by Messrs. Copeland, Walker and Banks; the monograph on tropical ulcers and the paper on plague vaccination, by Dr. Strong; the preliminary discussion of beriberi, by Dr. Herzog; the first of a series treating of the geology of the Philippine Islands, by W. D. Smith, etc. There have also been published the results of the investigations carried on in Manila by Drs. Brinkerhoff and Tyzzer, but these latter have also been given to the public elsewhere in somewhat different form. The fourth number of the *Journal* will contain the first of a series of articles on the composition of a tropical forest, by H. N. Whitford, the subject being taken up from an ecological standpoint; and the fifth, the beginning of a number of papers on Philippine fibers and fiber substances, with especial reference to their availability for paper making, by George F. Richmond. In June there will also be published seven of the papers read at the third annual meeting of the Philippine Islands Medical Association, one of these being by Professor Kitasato, of Tokyo, on combating plague in Japan, another by Professor Shiga on bacillary dysentery, one by Dr. Strong on questions relating to the aggrèsins, one by Dr. Stitt on dengue fever, one by Dr. Craig on malaria, and a monograph by Dr. Musgrave on amoebic dysentery and its complications, the subject of liver abscess being especially discussed by the latter.

DISCUSSION AND CORRESPONDENCE.

APPEAL FOR AN AERO-PHYSICAL OBSERVATORY IN JAPAN.

It is well known that the progress of meteorology has seemed very slow. Within the past century the world has seen electricity, chemistry and other special branches of science emerge from their previous uncertain and indefinite condition, but dynamic meteorology is still wandering in fog and darkness. Thousands upon thousands of observations at the earth's surface have told us much, but still the fundamental mechanical problems have not yet been solved. Although the importance of the exploration of the upper atmosphere has been recognized ever since the days of Pascal, yet very little is known of this vast mysterious ocean of air. Meteorologists are now fully convinced that the atmospheric phenomena at the earth's surface depend, in great measure, upon the thermal and electrical, as well as the dynamic, conditions of the upper atmosphere. So long as this upper region remains unexplored, meteorology will not only be unable to enter into the group of exact sciences, but will fail to do its full service for the promotion of human welfare. Hence, a number of mountain observatories have been established in Europe and elsewhere, and many balloon and kite ascensions have been made for sounding the depths of the upper atmosphere. The balloon ascensions of Gay Lussac and Biot in 1804, of Barral and Bex in 1850, of Glaisher in 1862, and of Berson in 1894, furnished many important facts relative to the physics of the atmosphere. Since this last date, unmanned balloons, carrying only very light self-registering apparatus, have been brought to great perfection, and extreme heights of eleven or twelve miles have been reached that would otherwise have been inaccessible. By this mode of research Hermite, Besançon and Teisserenc de Bort in France, and Assmann, Berson and Hergesell in Germany, have done a great service to meteorology. Beginning with October, 1902, daily balloon and kite ascensions were made by Assmann and his associates at the Prussian Aeronautic Observatory, while Teisserenc de