

The establishment of the biological institute marked a revolution in the teaching of biology, and in biological research. The institution was situated on the very edge of the sea, and the students had an opportunity to study the sea, and the creatures in it, as nature, and not some text-book writer, has made them.

Louis Agassiz, the famous Swiss naturalist and zoologist, who made Cambridge his home during the later years of his life, was the guiding star of the institution in the early years of its development. Himself one of the greatest scientists of modern times, with investigations in many branches of science to his credit, Professor Agassiz had long desired to establish a practical school of natural science, to be devoted especially to the study of marine zoology. Through the generosity of Mr. John Anderson, who gave to him the island of Penikese in Buzzard's Bay, together with an endowment of \$50,000, his ambition was realized. Professor Agassiz immediately set to work, opened the school, and began his studies in marine zoology. His program at the time seemed a revolutionary one. The students were told to discard the abstract text-books, and substitute for them a first-hand contact with the living forms of the sea. The institution, first known as the Anderson School of Natural History, later became the Marine Biological Institute.

Now the school has won a national and an international reputation. It has added a great deal to our store of knowledge; it has made us better acquainted with the life in the vast ocean depths. This year the institute has 146 students, 168 investigators and 25 instructors, drawn from universities and colleges all over the land, and all inspired with a common desire to add their contribution to human knowledge, no matter how small the individual contribution may be. That is the spirit which wins results in modern science.—The Boston Transcript.

SCIENTIFIC BOOKS

Eugenics, Genetics and the Family, being volume one of the Scientific Papers of the Second International Congress of Eugenics. Baltimore, Williams and Wilkins Company, 1923.

EUGENICS has diverse associations, and one of the most intimate of these is clearly with genetics and with that study which is being developed in Germany under the title of "Familienanthropologie." The Second International Congress of Eugenics was very fortunate in securing the cordial cooperation of many of the leading geneticists and students of human heredity, as well as anthropologists engaged in the study of family and social groups. Their papers are contained in the first volume of the Proceedings of the Congress. This volume also contains the five general addresses given by Henry Fairfield Osborn, Leonard

Darwin, C. B. Davenport, Lucien Ceunot and Lucien March.

As stated, the geneticists are well represented. Professor Jennings gives a paper in his usual clear style on the results of his studies of inheritance in unicellular organisms and Professor McClung on the evolution of the chromosome complex. Bridges and Muller, of the famous *Drosophila* group of Columbia, write on aberrations in chromosomes and mutation, respectively. Drs. Blakeslee and Belling tell about mutations in the number of chromosomes and its consequences. Professors G. H. Shull and R. R. Gates bring important data from the plant side, and Professors Whiting and Zeleny tell of their work on parthenogenesis and racial mutations, respectively. Mr. R. A. Fisher, of the Rothamsted Experiment Station in England, who is in the first rank of statistical analysts, treats statistically of the consequences of mutation for evolution. Heredity is treated generally by an Algerian zoologist, Legrand, and sex determination by Messrs. A. F. Shull, A. M. Banta and L. A. Brown. Then comes a series of papers relating especially to the genetics of mammals and man. These are introduced by a general statistical paper on mutation in man by Danforth; some papers on the influence of radium and alcohol on mammals by Bagg and MacDowell. Especial studies are given on the inheritance of particular traits, such as mental disorders by Drs. H. A. Cotton, Meyerson and Rosanoff; on tuberculosis by Dr. P. A. Lewis, on cancer by Loeb and Little, on eye defects by Dr. Lucien Howe, on twinning by R. A. Fisher, on finger prints by Professor Kristine Bonnevie (the only woman professor in Norway), on fecundity (in the hen) by C. C. Hurst, on musical traits by Seashore and Miss Stanton. This collection of papers by leading geneticists makes the volume indispensable for the student of genetics in general and human genetics in particular.

In the second part the general paper by Monsieur March on the consequences of war on the birth rate in France will be of great interest at the present time. Inbreeding is treated by Drs. Sewall Wright and Helen D. King from the experimental standpoint, and by Mrs. Ruth Moxcey Martin, Dr. Spinden and Professor W. A. Anderson from the observational standpoint. M. Etienne Rabaud compares the weight of the successive offspring of the same parents. Dr. Banker gives directions for an ideal family history. Dr. F. A. Woods discusses the conification of social groups and Miss Sarah L. Kimball tells of the Mayflower Pilgrims and their descendants. Senor J. J. Izquierdo gives an account of the genealogical history of the Izquierdo family, and Dr. Banker that of the Elihu Burritt group. Two of the descendants of John Humphrey Noyes tell of the Oneida Community experiment. Messrs. A. W. Butler, E. W. Ledbetter, A. H. Estabrook and Mrs. Wilhelmine E. Key de-

scribe some defective families, and Miss Elizabeth Green analyzes the traits of 150 adolescent runaway girls. Finally, mate selection is discussed and analyzed by Professor R. H. Johnson. The book contains also 24 plates, being photographs of the exhibits and giving important data concerning human chromosomes, inheritance of special traits and talents in man and other data of genetical and anthropological interest.

It seems difficult to imagine the accumulation in 450 pages of more concentrated excellence in the general matter treated than is to be found in the papers gathered here. It is clear that every contributor has given his best and has given the results of his own researches. Consequently the volume marks a decided advance in our knowledge of pure and applied eugenics.

CHAS. B. DAVENPORT

Eugenics in Race and State. Vol. II of the Proceedings of the Second International Congress of Eugenics. Williams & Wilkins Co., Baltimore, 1923.

THE two volumes which embody the proceedings of the Second International Congress of Eugenics held in New York in September, 1921, reflect perhaps as well as anything can the present status of the subject of eugenics. The reader who would gain an idea of the achievements, methods of inquiry, the imperfection of existing knowledge and the difficulties confronting the student in this field will find these volumes very instructive in more ways than one. The second volume entitled "Eugenics in Race and State," which is the subject of the present review, covers a wide range of topics. It includes fifty-five contributions—which are too many for adequate treatment, even in a bulky work of 472 pages.

A few of these contributions have only an indirect bearing on eugenics. Some are more or less obviously efforts for the occasion. Others consist of general and theoretical discussions of the type with which every student of the subject is only too familiar. This is perhaps unavoidable in the proceedings of a large general congress on eugenics. The captious critic might find opportunity for diversion were he disposed to pounce upon every contributor who afforded him an opening. But aside from faults which are almost inevitable in such a collection, the second volume of the proceedings, like the first, contains a large amount of valuable information and many useful suggestions and discussions. Much of the investigation in this field can not boast of the precision which is attained in genetics, whose recent emergence from chaos enables its devotees to look with something of condescension, if not scorn, upon the groping efforts of the eugenicist.

The first contribution to the volume is by the well-known author of "Les Sélections Sociales," G. Vacher de Lapouge, who argues for the persistence of European races in a state of relative purity despite the frequent intermixture that apparently threatens to obliterate all racial barriers. This is followed by several other discussions of the mixture of racial stocks. Dr. J. A. Mjoen, perhaps the leading figure in the eugenics movement in Norway, presents a suggestive paper on "Harmonic and disharmonic race-crossings," in which evidence is cited for the conclusion that crossing brings about many disharmonies of constitution and that the mingling of distinct races of man should not be encouraged in the light of our present knowledge. He is careful to state that "we must not draw conclusions from one race-crossing to another. Each race must be examined in relation to another race." In view of the extensive migration of peoples now going on in the world, there are few questions in eugenics of greater importance and of more immediate concern than the one discussed in Dr. Mjoen's paper. One statement made by the author deserves to be especially emphasized: "Our opponents generally say that we should wait to take eugenic measures in *general* and steps against race-crossings *especially* until we have more knowledge. I admit that we need and shall seek more knowledge, *much* more knowledge! But—as our experience up to date points decidedly in one direction it will be safer to turn the matter around and say: *Until we have acquired sufficient knowledge be careful!*" In this, as in other matters of eugenic procedure, advantage is often taken of our lack of precise knowledge to advocate a *laissez faire* policy, but, as I have elsewhere contended in agreement with the statement just quoted, the proper logical application of the argument from ignorance of the effects of racial mixture is to counsel caution, and to warn peoples of the danger of taking a step in the dark.

There are two papers on racial amalgamation in Hawaii and one by M. Fishberg on intermarriage between Jews and Christians. In the latter, attention is called to the following racial trends among the Jews: The increasing intermarriage of the Jews with members of other sects; the increasing proportion of marriages between Jews and Christians, "the less devoted they are to the separative rituals of their religion"; the higher proportion of mixed marriages among Jews who are successful in financial, scientific, literary or artistic endeavors; and the small number of children resulting from mixed marriages. "The Jews are not only robbed of the exceptionally able and talented through intermarriage. Wherever it is carried very far, the Jews are more or less completely absorbed by the Christians around them." Interesting facts concerning the vital statistics of the Jews