

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

are given in the next contribution by R. N. Salaman entitled "Notes on the Jewish problem."

There are two papers on the negro question by two of our most prominent writers on statistics, Professor W. F. Willeox and Dr. F. L. Hoffman. The first discusses the distribution of negroes in the United States, and the second deals with negro-white intermixture and is mainly concerned with the unhappy results of marriages between whites and blacks.

Then follows the opening address of the section on practical eugenics given by Major Leonard Darwin on "The field of eugenic reform." This address is general in scope and characteristically judicious and conservative. After advocating the curtailment of the propagation of the feeble-minded, neuropathic and habitually criminal elements of the community, and discussing the relative merits and feasibility of segregation and sterilization, the author turns his attention to the problem of increasing the amount of superior inheritance in the general population. This can not be so well accomplished, he thinks, by encouraging parenthood in a relatively few of the exceptionally well endowed, as by raising the general level of the whole people. Genius he regards (I believe rightly) as the fortunate product of a number of hereditary factors, and if the general level of native intellect could be raised, "the factors needed for the production of a man of genius would exist in greater numbers." In common with probably most eugenicists, Major Darwin recognizes that the present differential birth-rate is tending to breed out the brains of the race. As a counteractive, "there ought to be a great moral campaign against the selfish regard for personal comfort and social advancement, for these aims must, in a measure, be sacrificed on the altar of family life if racial progress is to be insured." He speaks of the encouragement of parenthood by "economic methods," but he offers no economic recipe for increasing parenthood of a desirable kind.

In dealing with the multiplication of inferior types, Major Darwin is inevitably led to consider that troublesome stratum of low-grade humanity lying just above the level of mental defectives, but which we can not deal with by the drastic methods which can be applied to the mentally and morally irresponsible. Major Darwin has no definite remedy for this situation. "I hardly know what to suggest," he says, "in the case of those who, in spite of this [financial] pressure persist in procreation in evil surroundings; and perhaps for the present we should concentrate our attention on the attempt to secure general approval of the desire to lessen the output of children under such circumstances."

I have wondered why Mr. Darwin has made no mention of birth control in relation to this difficulty, especially since he has elsewhere discussed it in con-

nection with this very topic. Perhaps, being a visitor in a somewhat puritanical country, and in the city of Anthony Comstock, he may have been restrained by his regard for the proprieties of the occasion from entering upon a subject surrounded by so much prejudice.

A short paper by Dr. Raymond Pearl on "Population growth" is followed by a more extended discussion by Professor E. M. East on the limits imposed by the productivity of the soil to population increase. Then follows a discussion by S. J. Holmes and J. C. Goff on the selective elimination of male infants as indicative of the action of natural selection during the period of infancy. Mr. O. E. Koegel points out the bad effects, both socially and eugenically, of common law marriages, and Dr. H. H. Laughlin describes the present status of eugenical sterilization in the United States. Dr. William McDougall summarizes the investigations on the relation of native ability and social status, and, in an earlier part of the volume, he contributes a short paper advocating a system of pecuniary rewards for superior types of parents. Dr. L. I. Dublin makes a plea for education for motherhood as a means of counteracting the present dysgenic influence of the higher learning.

Space forbids comment on or even mention of several other contributions to this volume, although some of them contain facts and discussions of real value. Both volumes of the *Proceedings* are issued in attractive form, and they are both indispensable to the students of eugenics.

S. J. HOLMES

SPECIAL ARTICLES

MULTIPLE SEEDED BURS OF XANTHIUM

FROM time to time observations are made which suggest that individual plants among the *Compositae* may possibly revert to remote ancestral floral conditions. Several methods of development of the composite type of inflorescence are conceivable, involving spicate or umbellate types in the ancestry. Through whatever source the present capitulum has been derived, it was undoubtedly originally many flowered, a condition persisting in the great majority of species to-day. In certain regions of this vast assemblage of plants there is a marked tendency to reduction in the number of florets in the head. This tendency reaches its highest expression in such genera as *Xanthium* and *Ambrosia*, in which the florets are reduced to two and one, respectively. A morphological study of the inflorescence of *Xanthium* shows that it is to be considered a reduced structure.¹

¹ Farr, C. H., "The origin of the inflorescences of *Xanthium*," *Bot. Gaz.*, 59:136-148, 1915.