answering the above questions, in so far as it can be regarded as consisting of 8 inbred populations and all possible F 1 crosses between these. The records available are extremely comprehensive and provide effective environmental control, thus compensating as far as possible for the lack of experimental randomization of error. Consequently, the population can be analysed as a dialled cross.

Great care has been taken in detailing the collection of the data and their reliability, and the general discussion pertinent to this results in an absorbing account of the history and sociological structure of Hawaii itself. The conclusions reached are: (1) First generation hybrids between races in man are intermediate in size, mortality, and morbidity between the parental groups. (2) At the present time, human populations do not represent co-adapted genetic combinations which are disrupted by outcrossing.

It is unfortunate, however, that the authors have not seen fit to describe in greater detail the statistical methods applied, and that many of the conclusions reached appear to be dominated by a personal controversy.

MICHAEL OAKES

Current Studies in Hemophilia. Proceedings of the 3rd Congress of the World Federation of Hemophilia. Paris, September 7–9, 1965. Edited by J. P. Soulier and F. Josso. (Pp. xiii + 226; 32 figures + 19 tables. S Fr. 42.) Basel, New York: S. Karger. 1966.

The first Session of the Congress was devoted to the detection of the heterozygous (female) carrier of the mutant X chromosome; 11 communications were received. Daughters of affected males are of necessity carriers, but daughters of carriers have an even chance of being carriers or normal. The papers presented dealt with attempts to identify the latter class of carrier by demonstrating a significant reduction of the blood-clotting factor deficient in affected males. Some participants believed that this could now be done. Communications in other Sessions included papers on the mutation rate and on genetic counselling.

G. I. C. INGRAM

Advances in Blood Gouping II. By Alexander S. Wiener and Maurice Shapiro. (Pp. xxiv + 454; illustrated. $12.50.) New York and London: Grune and Stratton. 1965.

This volume is mainly a collection of reprints of papers by the senior author; 52 contributions are grouped into 10 sections, of which the more significant are those dealing with blood groups of non-human primates, medico-legal aspects of blood grouping, erythroblastosis foetalis, and blood groups and disease. There are also useful sections on studies of individual blood groups. One advantage of having these papers presented as a collection is that the volume carries a subject index.

ARNOLD SORSBY

Les Chromosomes Humains (caryotype normal et variations pathologiques). By R. Turpin and J. Lejeune. (Pp. vii + 535; figures + tables. 54 F.) Paris: Gauthier-Villars. 1965.

This book, by the pioneers of French human cytogenetics, describes human chromosome anomalies as causes of maldevelopment and disease. The first fifth of the text is devoted to a brief historical introduction (by Turpin), to the description of techniques, and to a discussion of the normal chromosome complement (by Lejeune). The rest of the book consists in the main of two blocks, the autosomal anomalies (chapters 4–8, by Lejeune) and the sex chromosome errors (chapters 9, 12, and 14, by Turpin). There are two further general chapters (13 and 15). The authors attribute to the introduction of hypotonic treatment of cells a major role, on the technical side, in the development of chromosome studies. Theoretical consideration concerning the origin of Down's syndrome, and the results of studies of anomalies of sex development led to early chromosome studies of these conditions and to the discoveries of their chromosomal origin. Chapters 2 and 3 on techniques and the normal complement outline procedures of microscopy and of chromosome identification and classification. The subsequent two chapters with trisomy 21, both primary and interchange, with various biological parameters of Down's syndrome, and with the other two autosomal trisomies, of numbers 13 and 18, each chromosome being defined as that which causes the characteristic disorder. There follows a chapter on the syndromes with excessive or deficient chromosome material, one on autosomal interchanges and one on chromosome changes in leukaemia and cancer. Numerical sex chromosome anomalies are considered next under the two clinical headings of ovarian and testicular dysgenesis. In the former group are included triplo-X females, as well as the various syndromes with ovarian dysgenesis (Turner's syndrome, etc.). In the latter is discussed the syndrome of Klinefelter, including the chromatin-negative variety, and other related disorders with numerical sex chromosome changes. Structural anomalies of the X and Y chromosomes, and their clinical correlates and true and pseudo-hermaphroditism, are discussed in two chapters. A short chapter (by Turpin) is devoted to monozygotic twins discordant for autosomal or sex chromosomal complements. The two final chapters consider the origin and general effects of the sex chromosome anomalies (Turpin) and the biochemical dysfunctions found in subjects with chromosome changes, particularly with trisomy 21. This chapter is by H. Jerome.

This book is clearly written, well produced, and the standard of the illustrations, mainly karyotypes, is very high. There are almost a hundred pages of references which cover the field fully to the end of 1963 and, of necessity, less completely for 1964. Since the book was completed, there have unavoidably been a few changes as new knowledge has accumulated, particularly on autoradiography, on chromosome changes in spontaneous abortion, and on sex chromosome anomalies, but these