active investigator in the field, will undoubtedly be welcomed by German-speaking cytogeneticists. For any one whose German is less than fluent, however, the book is likely to prove tough going. The print is crowded, there are numerous abbreviations and the organization of the material into chapters and subchapters does not always appear to be logical. Nevertheless, the effort is worth making, because the author’s emphasis on the clinical manifestations of abnormal chromosome constitutions is a topic that will undoubtedly become increasingly important; and much pertinent data have been abstracted from the literature up to the end of 1965.

The book is divided into three parts. The first deals with the human karyotype and includes descriptions of the techniques used in its analysis.

The second, and by far the longest, section bears the heading ‘The Phenotype’. The first abnormality to be considered is trisomy D(13-15). Eight patients observed by the author himself are described and data on more than 30 reported cases are summarized. In addition, 4 cases are described which showed some of the abnormalities of trisomy (13-15), but which did not have this particular type of chromosomal abnormality. This is followed by considerations of mosaicism, duplications and deficiencies, double aneuploidy, and translocations involving the large acrocentric chromosomes. The second chapter in this part of the book deals with trisomy 18; the arrangement of the material is similar to that on trisomy (13-15). The next chapter deals with aberrations of other autosomes which, with the possible exception of the ‘cri-du-chat’ syndrome, cannot so far be associated with definite clinical entities. The last chapter in this section is devoted to the cytogenetics and clinical description of mongolism.

The last part of the book deals with the possible relation between chromosomal aberrations and their phenotypic manifestation. The author’s view is entirely orthodox. ‘It is not the visible change in the karyotype, but the resultant change in the genotype which causes the phenotypic effect’ (p. 229, reviewer’s translation). There is, of course, little genetic evidence for this assumption, and so the ever-ready hypothesis of ‘genic balance’ has to be invoked.

Now that the major chromosomal abnormalities in man have been delineated, the discovery of their causal relation to pathogenesis provides a new challenge to cytogeneticists. The merit of the present book is that it contains a large amount of data which provide a necessary basis for this type of analysis.

**Ursula Mittwoch**

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The racial origin of the Australian Aborigines has been debated for nearly a hundred years. Some investigators have suggested from physical data as well as language studies that the Aborigines are practically uniformly homogeneous throughout the whole continent, while others have found somatological evidence to suggest three major phases of immigration from Asia: (1) the Tasmanoid, a branch of Oceanic Negrito as the first wave; (2) the Murrayan, an archaic Caucasoid people who were considered to be related to the Ainu (a remnant of a group with a Neolithic culture in Japan); and (3) the Carpentarian type of Northern Australia, possibly related to aboriginal peoples in India and Ceylon, as the final major migration.

Professor Yamaguchi has compared 13 measurements, 11 indices, and 18 non-metrical cranial characteristics from 426 Aboriginal, 263 Ainu, 107 Jomon (another primitive group in Japan), and 258 modern Japanese crania. In a smaller collection of post-cranial skeletons 19 measurements and 8 indices were compared. Some Aboriginal crania showed characteristics defined as Australoid, such as a narrow cranial vault, protruding supraciliary arches, and marked prognathism, while in others these characteristics were weak or the vault was well expanded, as in some of the prehistoric Ainu skulls of Japan. The latter type was most frequently seen in the Murray basin area of South Australia. However, most of the Aboriginal skulls were found to show a normal frequency distribution in structure between the two extremes and to be homogeneously distributed geographically throughout the whole continent.

Penrose’s size and shape distance formulae were used to indicate that the Ainu, Jomon, and Japanese skeletons make a distinct cluster almost equidistant from the Aborigines. Distance analyses were also made of published cranial measurements from other Asiatic and Oceanic populations. These revealed four primary, almost equidistant, population clusters: (1) Ainu, Jomon, and Maori, being rather closer to (2) Japanese and Dayak, than the other groups, (3) Hindu, the primitive Veddas of Ceylon, and the Dravidian-speaking proto-Australoid peoples of India and (4) the Australian Aborigines, including the Murray basin group and Melanesians from New Britain and New Caledonia. A fifth group, the Tasmanians, were equally isolated from the other groups. There were, however, traces of clustering of a few characteristics of the less Australoid Aboriginal and earlier Ainu skulls and of Aboriginal and Jomon postcranial skeletons. This may indicate contact between these groups at the Upper Paleolithic or Mesolithic stage of their development rather than later on at the Neolithic stage as had previously been suggested. This study indicates that the Australian Aborigines must have been completely isolated from neighbouring populations for a long period.

The statistical analyses are thorough to the extent that some associations are tested by two different statistical procedures. This monograph is an important contribution to the palaeo-anthropology of Eastern Asia and Oceania.

J. G. Parish