Craniometry of Ambrym Island. **Wilfrid D. Hambly. (Fieldiana: Anthropology, Vol. 37, No. 1.) Chicago: Chicago Natural History Museum, 1946. Pp. viii + 150. (Illustrated.) $2.75.**

The material of Dr. Hambly's study consists of a series of 20 male and 11 female skulls, from Ambrym in the New Hebrides, which he treats with great thoroughness. He provides photographs, raw data, contour drawings, and tabulations of differences in mean measurements from other series, with their statistical controls, prefacing the above with general discussions of measuring technique, instruments, statistical methods, sex differences in crania, and sex ratios, and appending special sections on general racial differences in jaws and teeth and on interracial standard deviations. If Dr. Hambly seems to be taking a long run for a fairly short jump, this is perhaps not his fault, because the methods of physical anthropology lend themselves readily to overindulgence.

The significant part of the study is a metrical comparison, in order to determine the racial connections of the Ambrym Islanders, of the skulls with a group from New Britain and another from New Guinea, which indicates a resemblance, especially with the former. Dr. Hambly also compares the Ambrym skulls with East Africans (actually 55 crania from a single tribe), with pooled native Australians, and with pooled Polynesians (all groups except Easter Island, which is held to be too aberrant). Because of the relative number of average measurements which do not differ to a markedly significant degree in a statistical sense ($6 \times$ probable error), he concludes that the Ambrym skulls have a relationship with the "Australoid" and "Negroid" types, and even with Polynesians. But this research is unconvincing because the series used for comparison are chosen or made up in very dubious fashion. Also, no really workable conclusions are provided, although much has been written on the subject of Melanesian and Oceanic relationships. Above all, in spite of his obviously conscientious reading of the literature, Dr. Hambly does not even mention the question of pygmies or Negritos in Melanesia, for which the New Hebrides may be the critical area, and which is so important to the racial history of the Pacific, of the Negro family, and of mankind in general. Speiser dealt with the matter at some length in a paper on Espiritu Santo, and Hambly's own photographs, both of living Ambrymese and of crania, themselves suggest the point.

W. W. HOWELLS

University of Wisconsin

Colloid chemistry: theoretical and applied. **Vol. VI: *General principles and specific industries; synthetic polymers and plastics.*** **Jerome Alexander. (Ed.) New York: Reinhold, 1946. Pp. vii + 1215. (Illustrated.) $20.00.**

The 71 papers in this volume are "devoted mainly to applications of colloid chemistry involved in the processes and the products of industry, or of value to technology and technologists. Including a few theoretical papers, they fall into two groups: 38 papers dealing with specific industries or industrial operations; 32 papers centering about synthetic resins and plastics. A general article on nuclear fission and atomic energy is also included."

The first group of papers is led by Harkins' "The Surfaces of Solids and Liquids and the Films That Form Upon Them. Part II: Solids and Adsorption at the Surface of Solids or Liquids." Also included in this group are articles by various authors, written primarily from the viewpoint of the industrial colloid chemist and covering the following subjects (titles abbreviated): Strength and Failure in Brittle Solids; Mass Spectrometer; X-ray Spectrometer; Electron Microscopy; Dichroic Polarizers and Applications; Clay Minerals and Clay Films; Catalysis; Surface Active Compounds; Adhesives; Soybean Lecithin; Insecticides; Electrical Precipitation; Dispersions of Finely Divided Solids; Thixotropy; Rubber Latex; Synthetic Rubber; Carbon Black; Colloidal Graphite; Soil Stabilization; Flotation; Drilling Fluids; Colloidal Factors in the Petroleum Industry; The Technology of Resolving Petroleum Emulsions; Lubricating Greases; Colloidal Behavior in Metals and Alloys; Electrodeposition of Metals; Surface Treatment in Fusion Welding, Pressure Welding, Brazing, and Soldering; Physical Chemistry of Dyeing; Colloidal Factors in Laundering; Phycocolloids; Luminescent Paints; The Skin and Its Technological Hazards; Solid/Liquid Separations; Centrifugals as Applied to Colloids; Adsorption from Solution by Activated Carbon; Vapor Adsorbent Carbons; and Water-soluble Lignin.

The second, more homogeneous part of the book deals with the various classes of synthetic polymers and plastics, each group being treated in one of about 30 separate articles, from nitrocellulose, viscose, and acrylic resins to nylon, silicons, and ion exchange resins.

Because of the nature of the book, the articles are very heterogeneous as to viewpoint, length, thoroughness, completeness, and competency and literary skill of the authors. Short and rather superficial sketches without adequate references to the literature alternate with carefully written articles with extensive lists of carefully selected references. Examples of the latter group are: the above-mentioned article by Harkins, Valko's "Physical Chemistry of Dyeing," and last but not least the monograph-like (108 pp.) review on "Phycocolloids: Useful Seaweed Polysaccharides," by C. K. Tseng.

The wealth of information contained in this volume makes it a necessary addition not only to the chemical libraries of colleges, universities, and larger industrial laboratories, but also to the bookshelves of any small firm dealing with industrial colloids.

The print of the book, although clear, is too small for prolonged reading. The lack of alphabetic arrangement of the references of some of the papers is a distinct disadvantage.

It is hoped that the editor may find an opportunity to compile a much needed General Index for all the volumes of his *Colloid chemistry* and to incorporate it in the next volume which he may publish.

KARL SOLLNER

University of Minnesota