modern techniques clearly recognizable as analysis such as activation analysis and electron-probe microanalysis, to methods that fit only a broad definition of the field of analysis, such as critical constant determinations. The articles are primarily aimed to show "*how* a method or technique works, not *why* it works." Nevertheless, many of the articles contain basic information on the principles underlying the methods and will serve as an immediate guide as to the applicability of the procedures.

Often a critical step in the efficient solution of an analytical problem is the choice of the best approach in view of the personnel and facilities available. This encyclopedia should perform an important function in alerting the industrial analytical chemist to a wide range of possible attacks on his problems. The editors and authors are to be commended for an important contribution to the literature of analytical chemistry.

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Sharks and Swimmers

The formation of the Shark Research Panel of the American Institute of Biological Sciences in June 1958 has stimulated research on elasmobranch biology and the shark hazard problem. Since then several books of varying quality on sharks and shark attacks have appeared which are intended to inform swimmers and divers about the dangers. David H. Davies, who was killed in an automobile accident late in 1965, authored one of the better of such books, **About Sharks and Shark Attack** (Hobbs, Dorman, New York, 1966. 237 pp., illus. $6.95). In six years of research on the sharks of South Africa, during which he gathered original information, he found only 83 instances of unprovoked attacks, an indication that, though they must be regarded as an ever-present hazard for swimmers, their frequency is not great.

The first of the 10 chapters gives general background information on sharks, discussing their anatomy, classification, evolution, reproduction, physiology, migration, and habits. The remainder of the book discusses the shark-attack problem in the waters of South Africa, where, among 24 kinds of sharks, only six are dangerous. They are the Zambezi shark, *Carcharinus leucas*; the ragged-tooth, *Carcharias taurus*; the tiger shark, *Galeocerdo cuvieri*; the blue pointer, *Carcharodon carcharias*; the mako, *Isurus glaucus*; the hammerhead, *Sphyrna*. Detailed documentation of 19 attacks, largely investigated by the author, is given, including color illustrations of massive wounds of the victims. (These gruesome photographs seem to me to be suitable for a medical journal but out of place in this book, which is written for the general public.) Anti-shark-attack measures used in South Africa to protect swimmers are discussed and illustrated. These include mechanical barriers, protective shark nets, meshing, beach patrols, and reduction of the shark population by fishing. A chapter is devoted to advice to swimmers and divers on the kind of action to take in the event of an attack or to help avoid attack. Mention is made of further research in progress on the biology of sharks and on anti-shark-attack measures, such as barriers and electric, sonic, and chemical repellents.

This book was written by a man with a broad scientific background and is quite dependable. I recommend it highly.

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Human Maladies

In **History and Geography of the Most Important Diseases** (Hafner, New York, 1965. 224 pp., illus. $5.50), Erwin H. Ackerknecht, formerly professor at the University of Wisconsin and now at the University of Zurich, provides an English version of his work published in German by Enke Verlag in 1963. The book was originally prepared because the pertinent literature was either partially outdated or out of reach; and, for the first time, it brings together this complex story in a highly condensed yet critical form. The presentation is clear and matter-of-fact in tone. No concessions are made to a "popular" audience; but the text should be very interesting reading to those who appreciate the importance of the subject. It will also be useful as a reference work, providing brief accounts of particular diseases. Laymen may need a medical dictionary or other aids at some points in the narrative, but such supplementary reading will do no harm. Typographical errors appear here and there, the most serious of which result in a garbling of parts of George Rosen's preface.

Despite brevity, the study is a comprehensive one covering some 38 diseases as now recognized. The author first sets up eight classes, such as acute communicable, deficiency, and "chronic diseases of unknown origin" —the latter a difficult category to handle. Under each heading, from three to 20 entities are discussed; and this is done, wherever possible, in terms of symptoms, history, geography, and the growth of understanding. The range of Ackerknecht's knowledge revealed here is remarkable. Historical statements are usually quite specific, and this is also true of the geographic, except for references to so vague a location as "South America."

Quite naturally, more space is given to diseases which have been widespread and often fatal—particularly those now subject to some control—than to less serious or less well-known ones. One may raise questions as to why some particular disease entity, or group of related entities, is or is not brought into the picture. The omission of heart and vascular ailments is striking, and no explanation for it is offered. But the author necessarily gives us his own judgment as to what types of illness were most "characteristic" of a given category in his nosology; and most readers will accept the classification and examples chosen as providing a meaningful panorama of diseases.

The author draws interesting conclusions from his sweeping survey, and it is in this connection that historians may differ at some points. He says, for example, that diseases "seem to be caused always by . . . infection, wear and tear, and new growth." True as this usually is, one wonders whether the statement can be applied, for example, to the food deficiencies (avitaminoses). Questions can be raised also about the view that the "predominance" of major diseases had little or no influence on a given society at a given time. Can it be proved one way or the other, for example, that combined malnutrition, malaria, and hookworm infection had nothing to do with the so-called "laziness" of workers in the southern states of the U.S.A.? On the other hand, this view offers a desirable correction to exaggerated claims that whole cultures declined