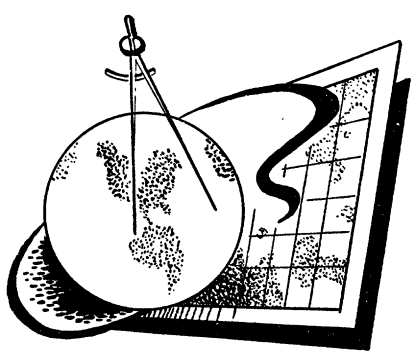
tence in job performance relating the test scores to the success or failure records, and finally discarding those tests which have proved low in prediction value. In the Air Force program several hundred tests were worked through these five steps and only the best twenty or so were used in the final selection batteries. There were two main groups of tests used: (1) The AAF Qualifying Examination (in place of the earlier requirement of two years of college), which was given to more than a million men, and (2) Special Abilities, given to more than a half million in making selections for bombardier, flight engineer, navigator or pilot training.

It is interesting and illustrative of the material presented in Col. Flanagan's Report to note (pp. 82 ff.) that when step IV was applied to more than 1,000 men assigned to pilot preflight schools only 23 percent succeeded in becoming rated pilots, whereas if only the upper half had been admitted, as rated by their scores on the tests being tried out, 75 percent, on the same criteria, would have been rated successful. When the matured selective techniques were used the failure rate dropped so low that fewer training fields were required.

The aviation psychologists were able to develop objective measures of flying skill, aerial measures of navigation proficiency, rating methods for flexible gunnery, and proficiency tests for flight engineers, bombardiers, and radar observers. Their success in screening and selection proved so valuable that they were set to work on the content of training courses and methods of training, and the development of new training devices and equipment. Finally, in the latter part of the war, they initiated a number of testing methods and procedures concerned with individual reactions to combat. As an illustration of the important role that social science can play in human affairs, and of scientific method in social science, this introductory-summary volume and the series of reports it represents may be strongly recommended. Considered from the standpoint of variety of measurements, types of tests, and size of test samples and populations examined, these data from the AAF Psychology Program constitute the largest mass of psychological measurement materials ever gathered in any experimental or applied psychological project. This report and later volumes in the series will long retain their importance in the field of aviation psychology.

Yale University W. R. MILES



General cartography. (2nd ed.) Erwin Raisz. New York-London: McGraw-Hill, 1948. Pp. xv + 354. (Illustrated.) $6.00.

General cartography is a thoroughly revised edition of the book which appeared a decade ago under the same title. It contains a wealth of valuable information and will become one of the indispensable reference books of the cartographer's library.

The quickest way to obtain an idea of the scope of the book is to examine its table of contents: I—The History of Maps, II—Scales and Projections, III—Representation of the Earth's Pattern on Maps, IV—Lettering, Composition and Drafting of Maps, V—Surveying on the ground and from the air, VI—Official and Professional Maps, VII—Cartographic Specialities, VIII—Scientific Maps.

Each of the eight parts listed is composed of four chapters, making 32 in all. This division of the text makes the volume readily adaptable to use in a majority of college courses. There is also an appendix offering instructions for preserving and cataloguing maps, laboratory and field exercises for student assignment, a series of useful tables, and a bibliography of easily available references.

General cartography holds the distinction of being the only book covering the field of modern cartography by an American author. It is up to date, well illustrated, and authoritative. The task of gathering and assembling the material for this volume obviously has required many years of careful research. The finished work is a credit to the author.

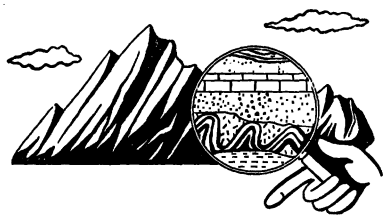
As might be expected in view of Dr. Raisz's extensive study of the history of maps, the book contains an excellent treatment of early map making. With the aid of four fully annotated time charts, the author traces the history of cartography from 600 B. C. down to the present. The reader will find descriptions and illustrations of the charts of the Marshall Islanders, the clay tablet maps of the Babylonians, and the early maps of the Greek, Egyptian, Chinese, and Roman cartographers, including the Ptolemy maps and portolan charts. The achievements of the Dutch, French, German, English and Italian cartographers, the work of the National Surveys, and the growth of American cartography are all fully reported. The four chapters dealing with the history of maps are valuable reading for all cartographers.

The main body of the text is devoted to methods and techniques employed in modern cartography. Unfortunately the author has attempted to cover everything and consequently has failed to give adequate attention to many of the basic elements of the subject. This situation is understandable when one realizes the magnitude of the assignment but it is nevertheless regrettable. Important topics such as relief presentation, map composition, map reproduction, and projections are treated briefly. In the opinion of the reviewer the book would serve more effectively as a text if it gave more attention to how to plan and execute cartographic jobs and less attention to what has been done in the field and by whom. Every page contains interesting and useful information, but much of this is not directly applicable to teaching the subject.

No review of Dr. Raisz's latest book would be complete without mention of the chapters dealing with the application of cartographic and related techniques to the presentation of statistical information. Many excellent methods of putting life into inert masses of figures have been described and illustrated. Statisticians, economists, and geographers will do well to study these chapters carefully.

General cartography is the work of a scientist and artist. It is a contribution to the subject of cartography and will play an important role in the development of the science.

WALLACE W. ATWOOD, JR.
Research and Development Board



Sedimentary rocks. F. J. Pettijohn. New York: Harper, 1949. Pp. xv + 526. (Illustrated.) $7.50.

Sedimentary rocks, by F. J. Pettijohn, comes at an opportune time, 10 years after the last comprehensive volume on sedimentation was published by Twenhofel. Pettijohn's treatise is essentially a study of the products of sedimentation rather than its processes. The book begins by summarizing the general nature of sedimentary rocks and discussing their principal attributes: texture, mineral and chemical composition, structure, and color. A chapter on classification follows, and then the principal types of sedimentary rocks are described in considerable detail. The work concludes with a discussion of the processes of weathering, transportation, deposition, and diagenesis.

The general approach is well balanced and attention is focused on the more important aspects of sedimentation. Minor controversial features are dismissed with brief discussions or reference to pertinent literature. The 700 citations to previous literature are well chosen and up to date. Pettijohn's general appraisal of other authors' work is good, but he places more reliance on the validity of some inferences he cites than this reviewer would. The volume contains many tables on the chemical and mineralogical composition of sedimentary rocks. The illustrations are well chosen and include many graphs showing quantitative relationships of properties of sediments to one another. The index is moderately good.

This book is so worthwhile that any attempt to point out its weak parts is likely to overemphasize them with respect to the work as a whole. The discussion of black shale, ocean and lacustrine deposits, and the fundamental physical and chemical processes affecting sediments seems to be less effectively treated than other subjects; but on the other hand the discussion of glacial sediments, abrasion of particles, quantitative aspects of sedimentation, and applications of laboratory studies to the interpretation of sediments is extremely stimulating. The section on geosynclinal sedimentation is particularly interesting.

Pettijohn has proposed a new classification of sedimentary rocks, partly descriptive and partly genetic. Geologists may have mixed feeling over some of the names that are recommended. For example, to call a quartzose sandstone an "orthoquartzite" is likely to cause confusion, because of the well-established usage of the term "quartzite" in metamorphic geology. On the other hand, the designation of the term "graywacke" for an indurated feldspathic sand with a clay or chlorite matrix seems quite useful.

This volume, according to the author, is designed as a text for senior and graduate students. It is also a handy book for the mature worker and altogether represents a distinct contribution to geology.

PARKER D. TRASK
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Geology and paleontology. (Fiat Review of German Science, 1939–1946.) Ludwig Rüger, et al. Berlin: Office of Military Government for Germany, 1948. Pp. 246. (Illustrated.)

This volume is one of a series which, in the words of its sponsors, is intended to "present a complete and concise account of the investigations and advances of a fundamental scientific nature made by German scientists in the fields of biology, chemistry, mathematics, medicine, physics and sciences of the earth during the period May 1939 to May 1946." The series will include reviews of work on 44 subjects within these fields; some subjects, such as inorganic chemistry and applied mathematics, require five or six volumes.

Besides the present volume, the earth sciences are represented in the series by four volumes devoted to geography, one to mineralogy, and two to petrography.

The following have contributed reviews to Part I of the work (general geology): L. Rüger (geologic chronology; interior of the earth, vulcanism); D. Schachner-Korn (structural geology); K. H. Scheumann (petrotectonics of the Variscan and pre-Variscan crystallines on the northern border of the Bohemian Massif and in the Sudeten); A. Strigel (tectogenesis of the European and North African Variscan [Hercynian]); W. Carle (post-Variscan tectonics in central Europe); A. Bentz (salt domes, petroleum geology); W. Schott (recent deep-sea sediments); E. Stach (coal petrography); E. Blanck (weathering); and H. E. Stremme (soil science).

To Part II (formations) the following contributed: M. Schwarzbach (Cambrian); G. Solle (Devonian); A. Strigel (Carboniferous, Permian); W. Schott (Triassic, Weissjura); K. Hoffmann (Lias and Dogger); O. Seitz (Cretaceous); A. Schad (Tertiary of northwest Germany); E. Wirth (Tertiary of the upper Rhine Valley); and E. Ebers (Quaternary geology of the Northern Alps).

The third and last section, paleontology, is constituted as follows: H. Hiltermann (micropaleontology); M.