fere with the Dutch quinine industry. The actual facts appear to warrant the following statement.

Heretofore Amsterdam has been the headquarters of an industry which has assured the supply of this world-wide remedy for malaria. By royal decree the management of this quinine industry was transferred to Bandoeng, Java, on May 14, 1940.

We have been warned, although the warning was scarcely necessary, to have no communication with our former associates in Amsterdam for fear such correspondence might be diverted to Nazi ends.

Java is now the center of the world's quinine industry, where ample production is assured of both cinchona bark and manufactured quinine. The latter is produced at the Bandoengsche Kininefabriek, the largest quinine factory in existence. There is thus no danger of a quinine shortage anywhere in the world.

The quinine industry, now centralized in the Netherlands East Indies, is completely Dutch and completely determined that Holland's plight shall not be turned to Nazi advantage. That attitude also actuates those connected either with the sale of Dutch quinine here or with the research and educational program of that industry.

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SCIENTIFIC BOOKS

REGIONAL PHYSIOGRAPHY

The Physiographic Provinces of North America. By WALLACE W. ATWOOD. xvi + 536 pp. 281 figures with large-scale map of the land forms of the United States. Boston: Ginn and Company. 1940. $4.80.

THE National Geographic Society in 1895 published ten Monographs by Powell (3), Shaler, Russell, Willis, Hayes, Diller, Davis and Gilbert. One year later these were bound together and published by the American Book Company under the title "The Physiography of the United States." In 1898, Ginn and Company published "Physical Geography," an elementary text by William Morris Davis. Thus was launched the modern science of geomorphology and of the regional study of the physiography of the United States.

Davis's "Physical Geography" was written with the belief that the work of rivers and streams could be taught effectively to students in elementary grades. His book had wide popularity, but later texts were so elaborated that they could be taught adequately only by specially trained teachers. This fact and the competition of general science has lost to physiography a distinct field in elementary education. As a separate science it finds but a precarious footing at the university level.

However, the interest in regional physiography has grown through the years and a number of college teachers have prepared notes for courses in this field. A recent count showed that thirty-seven universities list such regional studies, although there is no general agreement as to just what should be covered or where the course should be placed, either by the geologist or the geographer.

Bowman's fine text, "Forest Physiography," 1911, was written to serve as a background for Yale students in forestry. N. M. Fenneman's classic report to the Association of American Geographers, "Physiographic Divisions of the United States," appeared in final form in 1928. His "Physiography of the Western United States," 1931, and "Physiography of the Eastern United States," 1938, both volumes technical and encyclopedic in character, are indispensable for advanced and graduate work. Loomis's brief but interesting elementary text, "Physiography of the United States," was published in 1937. Thus the scope and field of service for any new text in regional physiography becomes a matter of concern, since its wide use will type the training of geologists and geographers.

Dr. Atwood's new text, "The Physiographic Provinces of North America," 1940, is the embodiment of his favorite course as a teacher of physiography in Chicago, Harvard and Clark Universities, and he has brought to the volume his genius for making teaching books, so often shown in the field of geography. Ginn and Company has turned out a fine example of book making. The volume has a color plate and colored maps and in a pocket a large-scale (25 × 40 inches) map of land forms of the United States by Erwin Raisz.

The text assumes an elementary knowledge of geology as a prerequisite, but it is not overburdened with technical terms. It presents the physiographic provinces of North America as the broad basic background for further scientific studies either in geography or geology. It will be read with interest by all who wish to understand the influence of the physical environment upon the history, life and development of the people of North America.

Beginning with a discussion of the regional idea in geography, the chapters follow consecutively and from east to west: the Atlantic and Gulf Coastal Plain; the Appalachian Highlands, New England, Acadian and Southwestern Divisions; The Laurentian Upland; The Central Lowlands; Interior Highlands; Great Plains; Rocky Mountains; Cordilleran Plateaus; and Pacific

Borderlands. A significant list of topographic maps to be consulted is placed at the end of each chapter, together with selected references for additional reading. A laboratory manual to accompany the volume is in preparation.

As would be expected from Dr. Atwood's long study of the region, one of the most important chapters of the book is that on the Rocky Mountains. Here he presents again his belief in the essential unity and late development of the "Rocky Mountain peneplain." While rightly emphasizing the opportunities for the superimposition of rivers from plains of basin filling, as an origin for many canyons in the Rockies, he does not exclude the older idea of antecedent streams for some of the gorges.

The volume is a modernized text in which the landscape is often described as seen from the air, and it is illustrated with superb pictures, especially those taken from aeroplane by Dr. Barnum Brown over the Western United States and by Bradford Washburn in Alaska. Perhaps the most effective teaching device of the book, however, is the number of strip structure-surface diagrams, executed by Dr. Raisz, illustrating cross sections of the physiography of the various provinces. With but few lines, surface and underlying structures are surprisingly well indicated.

Dr. Atwood's volume is an excellent teaching book and it should expand the number of students and of courses offered in the basic study of the physiographic regions of the North American Continent.

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PLANT PHYSIOLOGY

Plant Physiology. By BERNARD S. MEYER and DONALD B. ANDERSON. New York: D. Van Nostrand Company, Inc. 1939. $4.50.

THIS book is undoubtedly the outgrowth of a rich experience in the teaching of plant physiology at two prominent American universities and must be classed among the best of the text-books dealing with the various phases of this subject. The thirty-seven chapters of the book are arranged in logical sequence. Prominence has been given in the first few chapters to a discussion of the important properties of solutions and colloidal systems and thus at the outset providing the student with a fundamental background for a better understanding of the biological processes involved in the complex living system. Although no attempt is made to discriminate sharply between the purely physical and the purely chemical characteristics of the subject-matter, the first eighteen chapters deal primarily with the physical phases of plant processes, while the following fourteen chapters are devoted largely to the factors and principles involved in the chemical aspects of plant life. The last five chapters, which deal with the factors involved in growth and movement, are rather brief (perhaps too brief) but may be adequate for the purpose intended. The discussion questions, suggestions for collateral reading and selected bibliographies at the ends of the several chapters have been selected with discrimination and if properly used should develop in the student accurate reasoning, a keen perception of principles involved in physico-chemical processes and an understanding and appreciation of plant physiological material in general. The text material presented is based almost exclusively upon data selected from original sources, and in this a prominent place is given to the discussion of modern developments in plant physiology, without, however, neglecting the older concepts. The book is thoroughly up-to-date, but not particularly historical in its emphasis, a feature which, when the book is used as a class text, affords the instructor excellent opportunity to enrich the discussion of the subjects presented by amplifying the authors' presentation. The text material is presented in a manner so clear and definite that a minimum of efforts is required to understand the authors' meaning, which is never in doubt. A strong feature of this book, as a college text, is a minimum of controversial material and the honest attempt at evaluation of such conflicting evidence as is presented. When theoretical discussions are presented, they are duly stated as such to differentiate them from the purely factual scientific material.

The book is admirably adapted for use with large classes of undergraduates where adequate attention to the individual student by the instructor is only a remote possibility, nor is it too elementary to be exceedingly helpful to the appreciative graduate student in this field. It is a most welcome addition to the growing list of American text-books on this subject and fills a long-felt need for a comprehensive, thoroughly up-to-date college text-book of plant physiology.

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REPORTS

PHILANTHROPIC FOUNDATIONS[1]

THE Carnegie Corporation was specifically chartered for the advancement and diffusion of knowledge and understanding, and these words pretty accurately set forth the broad purposes of any non-specialized

[1] Concluding part of the report of Dr. Frederick P. Keppel, president of the Carnegie Corporation, New York, for the year ending September 30, 1940.