the mistakes of the last twenty-two years be avoided by the victorious nations? Many groups both in and out of government circles are working on aspects of this problem.

Because of the importance of science and specialized learning for problems of post-war adjustment and the need for representatives of the various disciplines better to understand each other, the American Academy of Arts and Sciences is devoting its regular monthly meetings, November through May, to the subject of "Analysis of Post-War Problems and Procedures." The meetings are held at the Boston house of the academy under the chairmanship of its president, Harlow Shapley. The academy has approximately 800 members elected from a wide variety of professional fields. It especially represents competences in the natural and social sciences and in engineering and affairs.

Alfred North Whitehead, professor emeritus of philosophy, Harvard University, opened the series in November with a paper entitled, "Statesmanship and Specialized Learning."

The meeting on December 10th was concerned with problems of communication and transportation in a post-war world. Igor I. Sikorsky, engineering manager of United Aircraft Manufacturing Corporation, spoke on "The Air Transportation of the Future." Walter S. Lemmon, president of the World Wide Broadcasting Foundation, spoke on "Radio as a New Force in the Post-War World." A forum on December 15th followed this meeting and was led by Douglas H. Schneider, program manager of Station WRUL, and Joseph S. Newell, professor of aeronautical structural engineering at the Massachusetts Institute of Technology.

The meeting on January 14th was addressed by Zechariah Chafee, Jr., Langdell professor of law at Harvard University, on the subject of "International Utopias."

The February meeting will be in the hands of geographers. Professor Clarence Jones, of Clark University, will consider the economic geography of Latin America in relation to the war and to post-war problems, and Professor Samuel Van Valkenburg, also of the Clark geography department, will discuss the significance of the Netherlands East Indies in the present conflict.

At the March meeting anthropologists and social psychologists will consider ways in which these sciences may be of help in implementing the ideals of post-war democracy.

HUDSON HOAGLAND,
*Recording Secretary*
AMERICAN ACADEMY OF ARTS AND SCIENCES

## THE JAMES RIVER DRAINAGE AREA

THERE is now being compiled, under the chairmanship of Dr. Marcellus H. Stow, professor of geology at Washington and Lee University and president-elect of the Virginia Academy of Science, a monograph on the James River drainage area. The river, of so much romantic appeal, thus forms the unifying feature around which will be correlated an imposing body of scientific, sociological and historical research. Of Virginia's 100 counties, forty-two are either wholly or in part within the James River drainage basin. All branches of science are represented within the area and most of the universities, colleges and research institutions of the state are there located.

Dr. Stow will write the editorial preface of the monograph, to be called "The James River—Past, Present, Future," and will also cooperate with Joseph K. Roberts, professor of geology at the University of Virginia, and E. C. H. Lammers, assistant professor of geology at Washington and Lee, in preparing the chapter on "Geology." Other chapters and those who have accepted invitations to write them are as follows: "The James River Region as a Thoroughfare before the Coming of White Men," Austin H. Clark, curator of echinoderms, Smithsonian Institution; "Development of Transportation in the James River Area," L. S. Evans, assistant to vice-president, Chesapeake and Ohio Railway, and John J. Forrer, maintenance engineer, Virginia Department of Highways; "Recreation in the James River Region," Robert F. Nelson, public relations counsel, Virginia State Chamber of Commerce; "Agriculture," A. W. Drinkard, Jr., director, Virginia Agricultural Experiment Station; "Astronomy, Mathematics, Physics," T. McN. Simpson, dean of Randolph-Macon College; "Botany," Ivey F. Lewis, dean of the University of Virginia; "Entomology," G. T. French, entomologist, Virginia Department of Agriculture; "Fish and Marine Invertebrates," Donald Davis, professor of biology, College of William and Mary, C. L. Newcombe, professor of biology, College of William and Mary, and Theodore Fearnow, wildlife technician, U. S. Forest Service; "Reptiles and Amphibians," Paul Burch, professor of biology, Radford State Teachers College, and Robert P. Carroll, associate professor of biology, Virginia Military Institute; "Birds," James J. Murray, Lexington; "Mammals," Talbott E. Clarke, wildlife technician, U. S. Forest Service; "Inorganic Chemistry," William G. Guy, professor of chemistry, College of William and Mary; "Education and Psychology," Dabney S. Lancaster, state superintendent of public instruction; "Engineering," Carter Hanes, associate professor of engineering, Virginia Military Institute; "Forestry," Chapin Jones, professor of forestry, Uni-

versity of Virginia; "Medical Sciences," H. J. Warthen, Richmond; "Industry in the James River Area," L. S. Evans, assistant to vice-president, Chesapeake and Ohio Railway; and "Conservation of Natural Resources," Henry B. Ward, emeritus professor of zoology, University of Illinois. The chapter on "Organic Chemistry" has not yet been assigned.

The monograph, to be approximately 600 pages, is expected to be published by the Virginia Academy of Science by the fall of 1942. Obviously it will be an incomplete work, but it should call attention to needed fields of investigation in the region and thereby serve as a stimulus for a serious long-term statewide undertaking to which scientists and others of various interests can contribute. It might also prove to be an example of what might be done elsewhere.

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# SCIENTIFIC BOOKS

## BOOKS ON GEOLOGY

NEW EDITIONS OF STANDARD TEXTS

*Outlines of Physical Geology.* By CHESTER R. LONGWELL, ADOLPH KNOPF and RICHARD F. FLINT. Second edition. 381 + ix pages. 281 figs. + frontispiece. John Wiley and Sons. 1941. $2.75.

*Outlines of Historical Geology.* By CHARLES SCHUCHERT and CARL O. DUNBAR. Fourth edition. 291 + ix pages. 176 figs., 6 plates + frontispiece. John Wiley and Sons. 1941. $2.50.

*Outlines of Geology.* By LONGWELL, KNOPF, FLINT, SCHUCHERT and DUNBAR. Second edition. A combination of the two preceding books, bound into a single volume. John Wiley and Sons. 1941. $4.00.

*Introduction to Geology.* By E. B. BRANSON and W. A. TARR. Second edition. 482 + ix pages. 447 figs. McGraw-Hill Book Company. 1941. $3.75.

*Introduction to Physical Geology.* By WILLIAM J. MILLER. Fourth edition. 465 + xi pages. 397 figs. + frontispiece. D. Van Nostrand Company. 1941. $3.25.

*Field Geology.* By FREDERIC H. LAHEE. Fourth edition. 851 + xxxii pages. 589 figs., 1 plate. McGraw-Hill Book Company. 1941. $5.00.

HERE is abundant evidence of the vitality of geological science and the eagerness of textbook writers in this field to provide the student and field worker with the best possible tools for their work. Advances in method and doctrine, chiefly the result of emphasis upon quantitative as contrasted with qualitative analysis of geological problems, have been numerous in the last few years and many of the repercussions of this progress are reflected in these new editions of standard treatises. Improved pedagogical techniques are also apparent, as well as a considerable improvement in illustrative material, involving both the frequent use of aerial photographs and more skilful drafting of block diagrams and other line drawings.

The "Outlines" of physical and historical geology, by the Yale geologists and paleontologists, contain many significant changes from the preceding editions published respectively seven and four years ago. As they now stand they are even better suited than before to meet the needs of the interested layman who wants an introduction to earth science without formal instruction, and at the same time they will serve even more satisfactorily as textbooks for elementary courses on the college level. The number of technical terms has been reduced to what is now in all probability the irreducible minimum. Considerable attention is paid to the numerous practical aspects of geology, including its application in engineering projects such as dams, aqueducts and tunnels. In presenting the history of the earth and its inhabitants, eras rather than periods are used as the units for treatment, and the record of changes in the physical features of the earth is presented in its entirety before the pageant of life is considered.

The "Branson and Tarr" has similarly been streamlined by simplification of treatment and terms so that the new edition is even more suitable than the old for instruction of students who do not plan to become geologists, while at the same time it will serve admirably as the basis for the first steps in the training of professional workers in the field of earth science. Improvements in the illustrations are especially notable, both because of additions and substitutions and as a result of better paper and printing.

In comparison with the earlier third edition of Miller's textbook, the fourth edition, now in hand, embodies numerous minor changes, but the general style and method of treatment remain the same. Many improvements in the illustrations are apparent and the statistical material pertaining to economic geology has been brought up to date.

The new edition of Lahee's widely used manual, when compared with the earlier edition published in 1931, provides a very accurate measure of the progress of geology during the decade. New material on such subjects as mass movements, varves, lensing strata, permeability of sedimentary rocks, petrofabrics, electrical logging, subsurface correlation by radioactivity