Book Reviews

Visual Aids in Geology

John Wiley & Sons are preparing a set of approximately 250 Kodachrome slides to illustrate the revised edition of the *Textbook of geology*, Part I: *Physical geology*, by the Yale authors, Chester R. Longwell, Adolph Knopf, and Richard Foster Flint. The new edition is due August 15, but it is expected that the visual material may be ready even earlier.

Most of the photographs were taken by O. E. Childs, assistant professor of geology at Colgate University, who has already prepared a set of color illustrations on general geology, as well as on historical geology, for Educators Visual Aid Service at Ann Arbor, Michigan. To secure photographs that will adequately cover so vast a subject, Childs traveled from Maritime Canada to California and from Montana to Georgia. Not content with ground shots alone, he took to the air in several parts of the country to provide broader vistas of landforms and shorelines which cannot ordinarily be encompassed from a single vantage point on the ground. Supplementing Childs' collection of photographs are pictures taken by the authors and by a few other geologists who have had exceptional opportunities to photograph special features like Parícutin.

At this date the selection of views is neither final nor complete, but gaps are being rapidly filled in. Some subjects in geology are notoriously difficult to illustrate, and in the preliminary set of photographs the authors and publisher have not yet mastered the problem of balance, which baffles every teacher and textbook writer in the field. Only a few diagrams will be included, but the text itself is the proper medium for diagrammatic material, and color slides may appropriately exploit the field in which the text is helpless, namely, in giving the most realistic impression possible of what landforms, structures, geologic agents in action, rocks, and minerals actually look like in nature.

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Visual Aids in Biology

General biology. (3rd ed.) J. W. Mavor. New York: Macmillan, 1947. Pp. x + 986. (Illustrated.) $5.50.

Laboratory exercises in general biology. (3rd ed.) J. W. Mavor. New York: Macmillan, 1947. Pp. xiv + 333. $3.25.

Slidefilm series to accompany general biology. New York: Macmillan. $15.00.

This college text has proven its usefulness during the life of the previous two editions. The third edition has been enlarged to the point where it is hoped the author will not expand further. There has been a growing tendency in texts at nearly any educational level to approach the content of an encyclopedia. These are excellent for the advanced student but of questionable value to the initiate. Mavor's text has an excellent balance between the quantity and choice of subject material and the overall amount of time that any one college subject can be expected to demand of its students.

The volume is divided into 6 parts and contains, in addition, an appendix of classification. Part 1 deals with the nature of life, beginning with the much-heralded scientific method and devoting most of its 7 chapters to protoplasm, cells, and cellular physiology. Part 2 is devoted to plant life, which it covers in 10 chapters. Part 3 introduces the invertebrates in 8 chapters, and it is to be noted that Dr. Mavor places emphasis upon a few of the phyla—notably the protozoa, the coelenterates, the flatworms, the roundworms, the segmented worms, and the arthropods. All others, including the molluscs, are briefly treated in a single chapter. In Part 4 (10 chapters) we find a discussion of the anatomy and physiology of frog and man. Part 5, on development and heredity, appears in 3 chapters, and Part 6, on the organic world and its evolution, ends the text portion with 6 chapters ranging through ecology, the history of life on the earth, the theory of evolution, the evidences for, and the mechanisms of, organic evolution, and early man.

Dr. Mavor has followed sound teaching policy in the construction of his book. From the student's standpoint, his clarity of style, the black-faced type for important words, the careful organization, the summary topical outline, and the questions at the end of each chapter make it highly desirable both as a source of information and a book easily studied. The diagrams and figures are excellent, and the text has been well illustrated with many photographs. The content is essentially orthodox. Controversial issues which often worry students are left to the instructor, as well they might be in an elementary text.

Published with the text and correlated with it is Dr. Mavor's *Laboratory exercises in general biology.* It is a good laboratory manual as manuals go, but I rather suspect that most of us prefer to run our laboratories according to our own notions and are therefore not as dependent upon laboratory outlines as we are upon a good solid textbook.

Last but not least, Dr. Mavor and the Macmillan Company have pioneered in furnishing 35-mm film strips as visual teaching aids. Teachers will be glad to know that publishers are aware of the need of well-correlated visual material to accompany textbooks. This present approach appears to be experimental, for only three "slidefilms" are available, one on the alternation of generation of plants, one on plant physiology, and one on life through the ages, which is mostly animal in its treatment. These vary in length but present, with titles, about 50 frames.