These symbols seem appropriate and in agreement with general rules, and since, as far as the writer is aware, no other sets of blood group symbols have been generally employed, he suggests that the above symbols be considered for general usage.

Perhaps the time is ripe for the establishment of a committee or an organization of some kind to formulate rules for an international system of human gene symbols. However, the current international situation does not make this seem feasible at the present time. A less ambitious program is to attempt agreement among investigators in this country. If this were achieved, much would have been accomplished.

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FEEDING BEHAVIOR OF A WATER SNAKE

ON June 4, 1941, in a swamp a mile northwest of Voorheesville, N. Y., I witnessed an interesting feeding procedure of the common water snake *Natrix s. sipedon* (Linnaeus). As I walked along the railroad tracks, at this point elevated about eight feet above the floor of the swamp, my attention was directed to a disturbance of the water in an isolated, shallow, muddy pool approximately two feet in diameter, 3 to 4 inches deep and about 25 feet distance. Cause for the disturbance was a water snake about three feet long. After partially concealing myself behind the base of an electric signal tower, I continued to view the proceedings from that vantage point—part of the time aided by 8× binoculars.

At short intervals the active reptile coiled, writhed and twisted its body vigorously as it moved round and round in the little pool, thus agitating the water but making no effort to leave the area. After a few seconds of this violent exertion it suddenly became quiet, usually with its head directed toward the periphery of the pool. Occasionally the snake crawled slowly about in the water apparently on the alert for small living forms that might have been dislodged from the bottom by its movements. Frequently the reptile struck at something in the debris surrounding its feeding place. This performance was repeated several times within the space of 20 minutes.

To the observer the energetic aquatic activities of the snake appeared to be *deliberate* and *purposeful* in that they served to free small animal forms from the mud and debris at least some of which fell prey to the reptile.

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SCIENTIFIC BOOKS

CHEMISTRY

A Practical Survey of Chemistry. By WALTER S. DYER. vii + 480 pp. 107 figs. New York: Henry Holt and Company. 1941. $2.80.

COLLEGE science has for many generations largely confined itself to exhaustive formalized courses in specific fields. Fundamental courses of this sort will always be required for training the specialist. Of late, however, there has arisen a demand for general scientific knowledge by the layman who never intends to specialize but who wishes to acquire an intelligent comprehension of scientific principles and facts.

One indication that this challenge is being recognized and answered is evidenced by the General Education Series of books, of which "A Practical Survey of Chemistry" is a new member. Dr. Malcolm S. MacLean, of Hampton Institute, and well known for his creative work as past director of the General College of the University of Minnesota, is editor of this series. In his preface to Dr. Dyer's text he states: "It is one of the first books in the field of the physical sciences in general education which offers a sound basis to the student. It will have the effect of diminishing the blindness and resistance of nonscience students to this study."

This book represents an excellent balance between theory and practice. The applications of chemistry to daily experience are so frequently and clearly presented throughout all the chapters as to make its perusal intensely interesting, even to the casual reader. Interest is further enhanced by the large and excellent selection of half-tones and line drawings. Yet fundamental chemical theory is introduced in support and explanation of facts. Certain chapters, such as those on the classification of the elements and atomic structure, are of necessity largely theoretical.

Dr. Dyer has skillfully chosen and coordinated his topics, ranging from the gas laws and the elements to plastics, foods and hormones. He supplements each chapter with a summary, review questions and a bibliography. Very recent developments of the science have not been overlooked.

In the effort to be practical scientific accuracy is occasionally sacrificed. We read of candy turning to sugar; of boiling an egg in a saturated solution of sugar; of the query "Why does a mixture of salt and ice get cold?" One wonders in reading the text to what extent it was sired by the pioneer book of Timm —once termed a pandemic text. Many of the cuts are taken from Timm. Frequently the order of subject-

matter closely follows that book. In a few cases the wording is identical.

"A Practical Survey of Chemistry" will find ready acceptance with teachers who must stress the cultural side of chemistry, and to such Dr. Dyer has made a timely and valuable contribution.

R. W. GETCHELL
IOWA STATE TEACHERS COLLEGE

Fundamental Chemistry. By HORACE G. DEMING. xviii + 756 pp. Illustrated. New York: John Wiley and Sons; London: Chapman and Hall. 1940. $3.50.

AN interestingly different text-book, in which general chemistry is carefully boiled down to elementary principles, with minimum attention to descriptive, industrial and cultural aspects. Written for the inquisitive student.

HUBERT N. ALYEA
PRINCETON UNIVERSITY

General College Chemistry. By JOSEPH A. BABOR and ALEXANDER LEHRMAN. xiv + 659 pp., 151 figs. Thomas Y. Crowell Company, New York City, 1940, price $3.75.

Introductory College Chemistry. By JOSEPH A. BABOR and ALEXANDER LEHRMAN. xiii + 663 pp., 138 figs. Thomas Y. Crowell Company, New York City, 1941, price $3.50.

GENERAL COLLEGE CHEMISTRY is designed primarily for students who have had high-school chemistry, whereas "Introductory College Chemistry" (this book replaces "Elements of General Chemistry," by Babor, Estabrooke and Lehrman) is designed for two types of courses: (1) courses composed for students who have had high-school chemistry and (2) courses in which no differentiation between students is made on the basis of high-school preparation.

Frankly, the essential difference in the two books seems to be mainly in the order of presentation of the material. The sequence of topics in the "Introductory College Chemistry" is arranged to avoid the presentation of all the theoretical principles in a continuous order, whereas the "General College Chemistry" presents the working portion of theoretical principles previous to any discussion of the properties of the elements and their compounds. In other words, the only differences in the two books are the necessary changes in the introductory paragraphs of the various chapters resulting from the different arrangement of the material. One example will illustrate the point. The discussion of organic chemistry is introduced early in the list of topics in the "Introductory College Chemistry." On the other hand, all the material about organic chemistry is placed in the last chapter of "General College Chemistry."

Both books apply current views of atomic structure to the explanation of the properties of the elements. Quantitative experimental data are employed in the discussion in the fundamental principles and modern theories. The hydrogen ion, H^+, is used for simplicity instead of the hydronium ion, H_3O^+, in the discussion of oxidation-reduction reactions. However, the latter ion (H_3O^+) is used exclusively in the discussions of ionic equilibrium following the chapter on acids and bases. The more recent concepts of acids and bases are presented in a very clear manner.

In each book the chapters on atomic structure, electronic distribution and valence furnish splendid examples of the evolution of material presented in elementary courses over a period of years. The books illustrate how possible it is to utilize our present knowledge of atomic structure in the discussion of the laws of chemical combination, valence and the structure of matter.

A wealth of material written in a very clear manner is included in each text. Carefully selected problems and questions are utilized to illustrate the principles discussed and correlate various concepts. Several tables of data which are useful to the teacher and to the student for the solution of problems and the illustration of principles are included in the appendices. The two books are not as extensively illustrated as some of the books now on the market, but the illustrations are well chosen and well drawn.

Teachers of elementary chemistry should find either of these books to be very satisfactory for class use, or, if not, as an excellent reference book to supplement another text.

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REPORTS

SOME EDUCATIONAL EFFECTS AND IMPLICATIONS OF THE DEFENSE PROGRAM[1]

I CAN say with propriety that our defense work is concerned with problems of urgent importance to our country's military effectiveness and that gratifying progress is being made in attaining objectives. These statements are true not only of the activities under

[1] From the report of Dr. Karl T. Compton, president of the Massachusetts Institute of Technology, to members of the corporation.