tions undertaken on guinea pigs. The literature is reviewed as adequately as in any recent review, except for the clinical studies, and the bibliography probably contains a more extensive citation of papers (40 pp.) reporting abnormal hyperplastic and metaplastic responses.

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Histology. Arthur Worth Ham. Philadelphia: Lippincott, 1950. 756 pp. $10.00.

This newcomer to the field of books on histology represents a carefully executed attempt to combine essential histological facts with various pedagogical devices in order to assist the student in learning and comprehending the subject matter.

Much space is given to introductory remarks, whereby the student becomes acquainted with the field of histology and with its relation to the closely allied sciences of physiology, biochemistry, and pathology. The materials, methods, and tools of the student of histology, are discussed, and the student is instructed in interpreting microscopic images and in evaluating artifacts in histological preparations.

In the body of the book the manner of presentation differs somewhat from the usual one. Emphasis has been placed on topics of special interest at the present time. The nature and integrity of tissues and their components, cells and intercellular substances, are admirably treated and reflect the widespread interest in the cancer problem. A chapter on tissue fluid and its role in body function is of marked value. Current interest in the cardiovascular system is reflected in the author's generous consideration of blood vessels and the clotting of blood.

The interest of the medical student is continually stimulated by the addition of obvious applications of the subject under description to its later use and need by the practitioner of medicine. This is especially well done in the sections on skin and the circulatory system.

The 445 illustrations are well conceived. No doubt in later editions more of the described structures will be illustrated, as, for example, the degeneration and regeneration of peripheral nerve fibers. Human material has been employed in a good percentage of the figures. A consistent method of labeling, in size and character of type, and a more generous use of colored illustrations would have improved this important portion.

The teacher must bear in mind when reading this book that it is written primarily for the student. With an easy, informal, conversational—at times "popularized" —approach the author has attempted to lead the student through an orderly progression of histological facts, pausing now and then to develop concepts, to draw helpful comparisons, to indicate functional significance, and to stimulate the curiosity. The book seems oversimplified, although many students find their way better through such simplification. One feels that, in places, the book contains unnecessarily lengthy physiological and speculative considerations. It is regrettable that such a procedure has required the omission of pertinent histological details in order to avoid a volume of too much bulk.

Professor Ham has succeeded in his attempt to make this a unique and thoroughly new book. The convictions that motivated this new approach are commendable.

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Nuclear Physics: A Textbook. Francis Bitter. Cambridge, Mass.: Addison-Wesley, 1950. 200 pp. $5.50.

This text of some 200 pages has been written, in the author's words,

> . . . for students who have had a course in atomic theory in addition to the usual introductory physics courses. Since it is often impossible to give separate instruction to students intending to continue the study of nuclear science and to those intending to specialize in some other field, an attempt has been made to write a book suitable for both groups.

The "attempt," in the opinion of the reviewers, has been successful. The presentation is direct and simple and shows an understanding of the problems met by students of a first course in nuclear physics. Although the book will serve to stimulate rather than satisfy the student's interest in the topics discussed, it should give those in other fields a reasonably complete and accurate picture of the present status of nuclear physics.

One of the most attractive features of the book is the large number of lucid diagrams. The time and effort that have clearly been spent in their preparation and in the selection of exercises at the end of each chapter should add greatly to the ease of assimilating the material.

The presentation starts out with an inspiring chapter on the evolution of nuclear physics. It emphasizes the fluid state of the subject—an attractive aspect in the eyes of the young. Subsequent sections briefly treat such topics as the mass defect curve, collision theory, properties of nuclei (radii, spins, magnetic moments), radioactivity, and nuclear reactions in a very clear manner. The general viewpoint is that of an experimental physicist, and the more deeply speculative and troublesome parts of the theory are subdued.

The last two chapters are largely concerned with chain reactions and the consequences of fission, such as administrative questions for nuclear power, health considerations, and the control of atomic energy. Although these problems are admittedly of primary concern, it is felt that their purpose would be better served in other than a physics textbook.

This text should adequately fulfill its purpose, and it is recommended that those teaching an introductory or descriptive course in nuclear physics give it serious consideration.

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