a firm than to teach the methods of a long established business to a professional programmer. This book covers almost everything about programming and computers, needed by such personnel, except, of course, the specifications of the particular system installed in their office. As in a previous book on programming by McCracken, a hypothetical computer, DATAC, incorporating features of the various business computers on the market, is described and used in the text rather than any existing computer. This is a disadvantage; as I indicated above, one learning to program for a computer should run several programs on that computer. However, there is a good chance that, in view of the excellence of this book, DATAC simulators will be written for various existing computers. This will enable one to run problems written in the DATAC code on a particular computer.

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Ascidiacea. *Discovery Reports*, vol. 30. R. H. Millar. Cambridge University Press, London, 1960. 160 pp. Illus. 70s.

This monograph is based on 2500 specimens representing 78 identifiable species, principally from the Falkland Islands and the Patagonian shelf, but also from other subantarctic islands and some material from New Zealand as well. There are 13 new species.

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Science Study Series. *Horns, Strings, and Harmony*. Arthur H. Benade. 263 pp. Illus. $0.95. *The Restless Atom*. Alfred Romer. 192 pp. Illus. $0.95. Doubleday, Garden City, N.Y., 1960. (Available to secondary school students and teachers from Wesleyan University Press, Columbus, Ohio.)

These most recent volumes of the "Science Study Series" maintain the high standards set in its previous books. The series is being published by the Physical Science Study Committee as one part of its program for improving high school physics education. The books are intended to be read profitably by young students and by laymen. Amazingly enough, they seem to be successful on both levels.

The new books are well written. This does not necessarily mean that they are easy; each book will demand careful, hard reading from the nonprofessional reader. However, if he is sufficiently interested in the subject or if his intellectual curiosity is great enough, his work will be well rewarded.

Horns, Strings, and Harmony was written by Arthur H. Benade (Case Institute of Technology). Benade's main field of research is in nuclear physics, but he continues an old Case tradition by studying the physics of music.

Following an introduction that is partly autobiographical, Benade presents some of the physics necessary for understanding musical vibrators. He then discusses how the structure of the human ear determines our hearing of music. The various types of musical instruments examined range from strings to brasses to woodwinds. The final chapter applies the information found in the earlier sections by giving instructions for constructing simple trumpets and woodwinds.

Benade's book communicates well his love for both music and physics. Not only is the reader reminded of the compatibility of music and physics, but he sees how the study of either subject can provide some valuable understanding of the other.

Alfred Romer (St. Lawrence University) wrote *The Restless Atom*. It is a clearly written, exciting account of the revolution which occurred in physics between the 1890's and the 1910's.

Romer does not attempt to give a complete history of atomic physics; he stops after indicating the first successes of Rutherford and Bohr. Relativity and quantum mechanics are hardly mentioned. Nevertheless, Romer gives the reader a good appreciation for modern understanding of the atom. He accomplishes this by telling his limited story well.

He starts his story with a brief description of Röntgen's discovery of x-rays, backtracks to describe the understanding of the elements current before Röntgen's work, and then proceeds to describe the rapid developments which followed. Romer recounts the work of Becquerel, the Curies, the young Rutherford, Crookes, Soddy, and Bohr, among others. He presents the problems that confused them, their groping for answers, and the gradual creation of a workable picture of the atom.

The Restless Atom leaves the reader eager to learn more about the development of quantum mechanics, and it gives him a good background for such study.

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Moisture in Textiles. J. W. S. Hearle and R. H. Peters, Eds. Textile Book Publishers (Interscience), New York; Butterworths, London, 1960. ix + 203 pp. Illus. $6.50.

Although moisture in textiles has been a topic of fundamental importance for many years, not all aspects of the problem have been properly appreciated by students and recent research workers. This book, based on a series of lectures given at the Manchester College of Science and Technology, provides some help in a convenient, compact form. The authors of the various chapters are well known authorities, each an expert in the field he discusses.

In the first chapter, P. S. H. Henry discusses humidity: how it varies seasonally, diurnally, indoors, and out-of-doors; how it is affected by the presence of people, furniture, and windows. A brief chapter by J. W. S. Hearle describes the structures of the principal textile fibers in use today. These two introductory chapters lay the foundation for the remainder of the book.

In an excellent chapter on sorption isotherms, A. R. Urquhart summarizes research on moisture regain and explains in nontechnical language the principal theories proposed to account for the phenomena observed. The next paper, by W. H. Rees, is an interesting and lucid discussion of the heat of absorption; the latter part of this chapter explains the thermostatic action of hygroscopic textile materials when used for clothing.

In the next two chapters, G. King reviews the various theories of moisture absorption. J. Crank follows with three chapters on the rate-of-change of moisture content, simultaneous diffusion of heat and moisture, and diffusion of moisture in fiber-forming substances. Hearle follows with a chapter on moisture and electrical properties. R. Meredith has contributed two chapters on the physical properties of textile fabrics. Hearle, in the final chapter, discusses fibers and liquid water.