and pursuing the smallest detail." *Playing* . . . not forcing. Many of his more sober-sided colleagues found it hard to live with the gay and witty Hungarian. When he discovered ascorbic acid he proposed to name it "ignose"— *-ose* for sugar, and *ig-* for "I don't know." Arthur Harden primly objected. . . . How about "Godnose" said Szent-Györgyi? . . . He had to settle for "hexuronic acid."

Is it too much to suggest that the Malvolios of science need an occasional Sir Toby to ask: "Doest thou think, because thou art virtuous, there shall be no more cakes and ale?"

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Biochemistry

The symposium on which this volume is based appears to have been an attempt to bring together research workers engaged in clinical research as well as those who study the more basic aspects of muscle chemistry. In many fields of biochemistry, the proceedings of a symposium are out of date by the time they are published. But in the field of muscle research, this is not the case, for progress is not exceptionally rapid in this field. To many workers in this field, muscular contraction is still the interaction of myosin and actin, as it was 25 years ago. Since then, other muscle proteins such as tropomyosin A and B have been discovered. Their importance and relevance to muscular contraction is indicated by the observation that in certain muscle diseases, instead of myosin, tropomyosin-like structures appear. But few attempts have been made to incorporate these muscle proteins into the contraction mechanism. Our knowledge of actin and myosin is still so inadequate that a satisfactory rational model of muscular contraction on the molecular level cannot be constructed. We are far from the stage where only the finer details have to be filled in. We have to realize that although several dozen attempts have been made during the last two decades to determine it, the molecular weight of myosin is still not agreed on.

We learn from this book, **Muscle: Proceedings of a Symposium** (Pergamon, New York, 1965. 600 pp., $15), edited by W. M. Paul, E. E. Daniel, C. M. Kay, and G. Monckton, that there can be little doubt that, in the cross-striated muscle, thick and thin filaments slide by each other during shortening. Apparently these sliding and interdigitating filaments are "guide lines" which secure that, on relaxation, the displaced elements of the muscle fiber will find their way back where they were displaced during shortening.

There is a convincing demonstration that ATP is dephosphorylated in a single twitch and that this can be correlated to the work muscle carried out. This correlation, however, may be nothing more than the balance sheet of a bookkeeper. Many of us who work in this field believe that ATP is split (dephosphorylated) in muscular contraction, but until the details of this enzymatic process are explained on the molecular level, the "splitting" remains a word only and we will not be able to incorporate it into the mechanism of muscular contraction.

The many topics covered in this book should attract a large audience. In addition to papers concerned with the contractile systems, enlightening articles can be found on sacroplasmic reticulum, on the role of Ca^{++} in excitation, and so on. There are 37 papers and as one would expect in a field so broadly covered, the treatment of the problems is not always deep. I wish the symposium had included a session concerned with the application of the fluorescent antibody technique to the localization of muscle proteins.

The papers that deal with muscle diseases are interesting reading that will be useful to clinicians as well as those who work in the laboratory. The value of publishing the comments and discussions that followed the presentation of the papers is apparent, for many of the comments are indeed revealing and add greatly to the usefulness of this book.

Apart from the minor complaints that I have noted, this volume gives a fairly broad view of the activity in this field, and I will end my review with a quotation from the dust cover: "New concepts throughout the whole field of muscle function are contained in this volume which will be invaluable to all, whether advanced students or practicing scientists and clinicians, who are concerned in the study of muscle and its disorders."

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Prehistoric Archeology

In this book, **Introduction to Archaeology** (Basic Books, New York, 1965. 175 pp., $4.50), Shirley Gorenstein introduces the reader, at what I judge to be the level of high school seniors and college freshmen, to the methods and techniques of prehistoric archeology.

Gorenstein begins with a discussion of the kinds of problems that interest archeologists trained and practicing within the context of anthropology. She contrasts this form of archeology with classical studies. This precedes a brief description of the kinds of data that prehistoric archeologists utilize when working with extinct societies.

The major portion of the book is devoted to descriptions of archeological techniques for gathering, recording, and interpreting data. The author devotes a chapter to techniques used to locate sites and a chapter each to methods of excavation and record keeping. The final two chapters describe methods of archeological interpretation. In the first of these final chapters, she details techniques for drawing chronological inferences. The final chapter, "Reconstructing culture," considers the limitations of archeological data and the wide range of cultural inferences that are made possible by the use of special techniques of analysis, a sound background in general anthropology, and imagination.

The author has illustrated the various techniques discussed throughout the book with actual examples from all over the world. Many of the examples are drawn from quite current research.

The book is extremely well written. The prose is clear and concise. The content, too, is excellent. The book is logically developed and presents a readable account of archeological methods of research.

My only major criticism is concerned with the inexpensive format of the publication itself. The paper is of poor quality and the photographs are not at all well reproduced; it is not a handsome book. Of course, increasing the quality of the publication would have made necessary a higher purchase price.

I can recommend this book as an excellent introduction to the techniques of prehistoric archeology for the younger reader.

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