

SYMPOSIUM ON STEROIDS

Steroid Dynamics

Edited by Gregory Pincus, Takeshi Nakao and James F. Tait. (Proceedings of the Symposium on the Dynamics of Steroid Hormones held in Tokyo, May 1965.) Pp. xv+577. (New York: Academic Press, Inc.; London: Academic Press, Inc. (London), Ltd., 1966.) 160s.

ONLY within the past few years has it been possible to study the steroid hormones *in vivo* with any precision and as a routine process. A major obstacle has been the need to assay complex mixtures of steroids, often available from body fluids or tissues in only microgram or sub-microgram quantities. This book highlights the rapid advances being made towards an understanding of the biological role of steroids now that this difficulty has been largely overcome by the availability of a wide range of radioactively labelled steroids, augmented by refined techniques of chromatography.

The book contains twenty-one papers by leading workers in Japan and the United States. Subjects range through almost the entire spectrum of aspects of steroid biochemistry embraced by the title, including among other topics the biosynthesis, transport, storage, hormonal functions, metabolic clearance, and excretion of steroids. Several papers give detailed accounts of modern analytical methods applied to the study of steroid hormones in man, covering such subjects as the production of steroids by particular tissues, the distribution of steroid hormones in the body, or the interaction of steroids with their target sites. The existence of distinct anatomical compartments, each maintaining its own characteristic steroid pattern, complicates any attempt to deduce an over-all picture of the production or distribution of a particular steroid from analytical data derived, for example, from plasma or urine samples.

Three papers concerned with the binding of steroids to proteins indicate that this may be of major importance in the transport of steroids and probably also in providing an inert "reservoir" of hormone, so avoiding the adverse effects of high concentrations of free steroids.

This is a book for specialists in steroid biochemistry. It is liberally provided with clear graphs and tables of experimental data, and most papers describe in moderate detail the experimental methods employed. All the papers are well referenced, and most are followed by verbatim reports of discussions which followed their presentation.

D. N. KIRK

INTRODUCING THE ALGAE

An Introduction to the Algae

By Ian Morris. (Hutchinson University Library.) Pp. 189. (London: Hutchinson and Co. (Publishers), Ltd., 1967.) 13s. 6d. paperbound; 32s. 6d. clothbound.

THIS book is a disappointing addition to an otherwise excellent series. The text combines inexpert gleanings from Fritsch, Smith and Fott with an arbitrary selection of recent research. The illustrations are badly drawn and, though most are referred to a specific source, the author has sometimes added incorrect details of his own (for example, Fig. 21A—"after Fritsch"—has acquired a flagellar swelling, basal granules and a stigma in the wrong position).

For most algal divisions, a list of features is given "by which they can be distinguished from all other algae". In no case is the list correct. "Flagella are completely absent" (page 25) fails to separate Cyanophyta from Rhodophyta; the four features given for Xanthophyceae (page 79) in fact distinguish the class only from Chlorophyceae; and three of the four features listed for Euglenophyceae (page 119) are found in other classes, while several truly unique characters are not mentioned.

Other peculiarities include a definition of oogamy (page 23) which excludes the oogamous brown algae; the statements (pages 65 and 66) that asexual reproduction is "uncommon" in Mesotaeniaceae and "rare" in Desmidiaceae (meaningless, for reproduction of desmids by cell division is common and zoospore formation is unknown); and the claim (page 101) for Ponnales that "the main structural element on the cell surface is a spine, and the finer secondary structures are arranged as lateral branches" (?).

The high incidence of factual errors and misconceptions makes it impossible to recommend this book for use either by students or their teachers. Other phycologists will easily discover the many mistakes, but the student would be well advised to leave this book on the bookshop shelf.

G. F. LEEDALE

MAKING FIRM BONDS

Adhesion and Adhesives

Edited by R. Houwink and G. Salomon. Vol. 2: Applications. Second, completely revised edition. Pp. xiv+590. (Amsterdam, London and New York: Elsevier Publishing Company, 1967.) 180s.

WHILE plastics technology is the child of our time, the preparation and use of adhesives from natural products have been going on for more than two thousand years. It therefore gives something of a jolt to find that, since 1965, publishers have been rushing into print with volumes on adhesion, volumes both large and small. The book being reviewed is in the large category, following the lines of volume 1, which dealt with "Adhesives".

The very long and ineffective introduction is followed by thirteen chapters by sixteen authors. One approach to adhesive study which is prominent from time to time is the consideration of adherend surfaces. This is treated in the chapters on "Surface Texture" and "Surface Treatment of Adherends" as well as in other chapters. The former takes a theoretical approach, discussing various profiles of natural indentation; the latter chapter discusses the specific cases of metals, including aluminium, steel, titanium and copper and also covers glass and wood. With this last material, it is perhaps out of touch to refer to the exudate from Burma teak as an oily substance when, in fact, it takes the form of a rubber type latex. The mechanical structure of materials subjected to laminate bonding and similar construction has wide coverage in the chapters. "Adhesive Bonded Metal Structures" is a good example, and mentions—but not in too much detail—the types of adhesive finding application in metal to metal bonding. The adhesive bonded sandwich is covered here, as it is in the chapter on bonded composite structures where a fascinating variety of light weight open spaced sandwich elements are described. The design philosophy makes interesting reading.

Wood is treated from the mechanical stress aspect in the chapter "Wood, Reconstructed Wood and Glue Laminated Structures", and this title is fully descriptive of the contents. Aspects of mechanical properties of wood are given in detail: tensile strength, shear strength, bonding strength and torsion. Although an insight into mathematic treatment is given, there is no attempt to describe methods for the measurement of any of these parameters. This is a very long chapter and somewhat padded.

To this point, the sub-title of the book is a misnomer and would be more accurately described as an introduction to the structure engineering of adherends. The real bones of the book as entitled lie in the four chapters "Pressure Sensitive Adhesive Tapes", "Rubber Textile Structures", "The Tack of Printing Inks", and "Adhesion in Paint Technology". The chapter "New Uses for Adhesives" is both relevant and interestingly assembled. The theme