The Sloane Herbarium consists of 265 volumes comprising 337 numbered *Horti Sicci.* Sloane himself collected mainly in Jamaica, Barbados, Nevis, and St. Kitts, and these specimens were an important basis for published work on the rich flora of the West Indies. But most of the specimens were collected by Sloane's contemporaries. The largest of these collections were assembled by William Courten, by James Petiver, and by Leonard Plukenet. The Petiver and Plukenet collections contain American plants which, through published illustrations, became the basis for names supplied by Linnaeus. The collections of Mark Catesby from Carolina, Florida, and the Bahama Islands, as well as that of John Bartram from the area around Philadelphia, are important to American botanical history. Actually, many of the *Horti Sicci* of Sloane do contain American plants. For example, *H.S. 74* comprises "plants gathered in Maryland by Mr. Jones a minister, Dr. Krieg, and Mr. Vernon, and by them given to Mr. Ayrie."

It is important to keep in mind that Dandy's book, *The Sloane Herbarium,* attempts to give the reader an insight into what is contained in the Sloane collections, but is not a major source book in itself, even though there are many hints and suggestions for the discerning researcher.

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Progress in Organic Chemistry. vol. 4. J. W. Cook, Ed. Academic Press, New York; Butterworth, London, 1958. ix + 256 pp. Illus. $8.80.

Volume 4 of this series includes the following chapters: (i) "Naturally occurring unsaturated fatty acids" (25 pages, 151 references), by F. D. Gunstone; (ii) "Free valence in conjugated organic molecules" (36 pages, 155 references), by B. Pullman and A. Pullman; (iii) "Oxygen heterocyclic fungal metabolites" (40 pages, 72 references), by U. B. Whalley; (iv) "Naturally occurring 2-acylcyclohexane-1,3-diones" (22 pages, 80 references), by C. H. Hassall; (v) "Degradation and synthesis of peptides" (65 pages, 484 references), by A. H. Cook and G. Harris, and (vi) "Heterocyclic derivatives of phosphorus, arsenic and antimony" (29 pages, 65 references). There is a 7-page index.

Among the fatty acids discussed in chapter 1, the most striking ones are perhaps those which appear to contain a cyclopropene ring. The author agrees with the ω-(2-n-octylcycloprop-1-enyl) octanoic acid structure for sterculic acid. It is commendable to have in a book of this type a chapter on free valence ("a measure of the residual unutilized bonding possibilities of carbon atoms"). The treatment is clear enough, since the mathematical developments have all been left in the original references. A correlation between free valence and localization energy is undoubtedly attractive to the organic chemist, who would like nothing better than a neat map of reactivity with each structural formula.

Chapter 2 discusses this information, which, however, will have to be accepted ex cathedra. Correlations between free valence and a number of properties, such as resonance energies, acidic and basic strength, dipole moments, and spectroscopic effects, are also given.

Chapter 3 includes the methylene quinones (citrinin and two others), the chromenopyrones (cytromycetin and five others), the spyrocoumarin-3-ones (griseofulvin and two others), and the depsidones. Reference is made to the acetate hypothesis of biogenesis and to the formate and propionate variations. Chapter 4 contains very interesting chemistry, including the usnic acid problem, with an all-too-brief exposition of Barton's elegant synthetic solution.

Chapter 5 will become, probably, one of the best points of departure for gaining an acquaintance with peptide chemistry. Chapter 6 is essentially a compilation of work by F. G. Mann and his coworkers. It may not be superfluous to point out that the "heterocyclic derivatives" of the title are all of the saturated type. The reader should not expect to find anything on the aromaticity of group V heterocycles.

This is a worthy addition to the series of valuable reviews appearing under the editorship of J. W. Cook.

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New Books

Amid Masters of Twentieth Century Medicine. A panorama of persons and pictures. Leonard G. Rowntree. Thomas, Springfield, Ill., 1958. 702 pp. $11.50.

Anatomie de latimeria chalumnae. vol. 1, *Squelette, muscles et formations de soutien.* J. Millot and J. Anthony. Publie avec le concours de l'Institut de Recherche Scientifique de Madagascar, Tananarive, par les Editions du Centre National de la Recherche Scientifique, Paris, 1958. Text, 122 pp.; plates, 80 pp.

1958 Annual International Conference on High Energy Physics at CERN. Proceedings. Sponsored by the International Union of Pure and Applied Physics, Geneva, 30 June–5 July 1958. B. Ferretti, Ed. European Organization for Nuclear Research, Geneva, 1958. 356 pp. F. 45.

Antibiotics. Their production, utilization and mode of action. A symposium held at the Hindustan Antibiotics (Private) Ltd., Pimpri, 27–30 March 1956. Council of Scientific & Industrial Research, New Delhi, 1958. 317 pp. Rs. 15.

The Archeology of Coastal North Carolina. William G. Haag. Louisiana State Univ. Press, Baton Rouge, 1958. 147 pp.

Atomic Terminology. English, German, French, Italian. Lore Lettenmeyer. Isar Verlag, Munich, Germany, 1958. 298 pp. The purpose of this dictionary is to provide the essential scientific and technical terms used in atomic and nuclear physics, reactor engineering, radiation physics, and associated fields, with the object of facilitating the study of the relevant foreign literature on the subject. The main section of the dictionary is based on English. The terms are listed alphabetically and numbered consecutively. German, French, and Italian equivalents are given in parallel columns with the same numbers. This section is followed by alphabetically arranged German, French, and Italian indexes listing the terms with the numbers under which the corresponding terms in the other languages will be found in the main section.

Big Molecules. Harry Melville. Macmillan, New York, 1958. 180 pp. $3.95.

Biochemical Preparations. vol. 6. Carl S. Vestling, Ed. Wiley, New York; Chapman & Hall, London, 1958. 114 pp. $5.25.

The Chemical Behavior of Zirconium. Warren B. Blumenthal. Van Nostrand, Princeton, N.J., 1958. 404 pp. $11.

The Chemical Kinetics of Enzyme Action. Keith J. Laidler. Oxford Univ. Press, New York, 1958. 426 pp. $9.60.

Contemporary Sociology. Joseph S. Roucek, Ed. Philosophical Library, New York, 1958. 1221 pp. $12.

Deficiency Disease. Fundamental and structural changes in mammalia which result from exogenous or endogenous lack of one or more essential nutrients. Richard H. Follis, Jr. Thomas, Springfield, Ill., 1958. 590 pp. $14.75.

Directory, American Council of Independent Laboratories. A guide to the leading independent testing, research, and inspection laboratories of America. American Council of Independent Laboratories, ed. 7, 1958 (order from Harold M. Dudley, Executive Secretary, 4302 East-West Highway, Washington 14). 100 pp.

Effect of Surface on the Behaviour of Metals. Lectures delivered at the Institution of Metallurgists Refresher Course, 1957. Iliffe, London; Philosophical Library, New York, 1958. 107 pp. $10.

Electronics of Microwave Tubes. W. J. Kleen. Translated by P. A. Lindsay, A. Reddish, C. R. Russell. Academic Press, New York, 1958. 370 pp. $9.

Elementary Seismology. Charles F. Richter. Freeman, San Francisco, 1958. 776 pp. $12.

Elements of Biophysics. James E. Randall. Year Book, Chicago, 1958. 333 pp.

Essential Fatty Acids. Fourth International Conference on Biochemical Problems of Lipids, Oxford, 15–18 July 1957. H. M. Sinclair, Ed. Academic Press, New York; Butterworths, London, 1958. 286 pp. $9.50. The papers were organized in the following divisions: Chemical aspects; Adsorption and distribution; Biochemical functions; General discussion of essential fatty acids. An author index, a subject index, and a list of participants is included.