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Book Notices

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Today we hear about a generation gap. In contrast, this biography extending over several generations connects the past with the present. Under the skillful pen of Mr. Rogers, a great grandson of William S. Sullivant, we have more than a family history of a wealthy businessman who rose to scientific eminence; there is an unfolding drama from early advances on a wilderness to the rise of Ohio's statehood, and the establishment of its capital. Lucas Sullivant, William's father, as well as William and his two brothers, Joseph and Michael, were significant figures in this historical drama.

William S. Sullivant was educated in the classics at Yale University. There may have been some thoughts about pursuing a profession after his graduation from Yale, but in 1823, being nearly twenty-one years of age, he returned to Ohio to help manage the monies and agricultural lands left by his father's death. Subsequently he engaged in numerous business ventures (flour-mill, The Ohio Stage Company, banking, and others) in which he remained active even during his scientific preoccupations. In about his thirty-fifth year, he became interested in botany, first collecting and studying vascular plants in Ohio's botanically little-known wilderness. His increasing desire to understand the green world brought him into correspondence with John Torrey. It may have been during one of his visits to New York that Sullivant became acquainted, through Torrey, with Asa Gray, who became his closest friend among his scientific associates.

It was still later in Sullivant's botanical career that he began to turn his attention to bryophytes, especially the mosses (Musci). Gray proved to be a true comrade in Sullivant's pursuit of the mosses, for during Gray's visit to Europe to purchase botanical literature and to study North American plants in European herbaria, he secured books and the best microscopes of that day for Sullivant, and initiated correspondence between Sullivant and leading European bryologists. Sullivant and his second wife, working together as a team, developed their own proficiency in bryology. Their techniques in the illustration of critical diagnostic features are evident in contemporary works. His bryological publications and those with his co-worker, Leo Lesquereux, culminating in the Icones Muscorum (1864), established Sullivant as this country's most prominent bryologist, with an international recognition. Over two hundred and sixty new species of mosses and liverworts were described by W. S. Sullivant, alone or together with L. Lesquereux. A compilation of these species was prepared by Richard T. Wareham and is found in the appendix. William Starling Sullivant (1803–1873) is accepted as the father of American bryology. The Sullivant Moss Society was named in his honor. Since the original
publication of this biography, the society's name has been changed, in 1949, to the American Bryological Society, and subsequently changed again, in 1969, to the American Bryological and Lichenological Society.

The author maintains adherence to his stated aim, that is, “an evaluation of the life and work of William Starling Sullivant.” Neophytes in the sciences will find this book inspirational, especially those who might feel that they are standing alone in a little-known field of research. Students of Ohio History will want to add this volume to their libraries, not only for fruitful reading, but also as a useful reference.

JAMES R. RASTORFER


Optical rotatory dispersion (ORD) is optical rotation studied as a function of wavelength. The anomalous dispersion, or Cotton, effect exhibited as the optical rotation is measured in the region of an absorption peak provides particularly useful information on the conformation of proteins in solution. The author states that the purpose of the book “is to introduce the reader to the use of spectropolarimetric methods and to their applications in Molecular Biology” and that “the presentation is as concise and elementary as possible”. I think that the author has succeeded in his purpose. The book is not a specialist’s report, understandable only by those already expert in the field.

Jirgensons deals with the following major topics: theory, terms, and definitions (14 pages); instrumentation and measurement (17 pages); optical rotation of amino acids and peptides (8 pages); ORD of polyamino acids and proteins in the visible and near ultraviolet (9 pages); far-ultraviolet Cotton effects of synthetic polyamino acids (6 pages); Cotton effects and conformation of helical proteins (19 pages); Cotton effects and conformation of nonhelical proteins (23 pages); ORD of structural proteins (9 pages); ORD of nucleoproteins and histones (11 pages); and ORD of glycoproteins and lipoproteins (9 pages). The author emphasizes what can and what cannot be learned from experimental rather than theoretical considerations. There are 65 figures, mostly of dispersion curves, and 18 tables, containing a large and well-selected quantity of numerical data. The literature list is extensive (403 references) and up to date (through 1969); titles of journal articles are given. The index is adequate. Printing and format are excellent, but the binding is not what might be expected for the price.

E. J. BEHRMAN

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