Book Review

Azotobacteraceae: The Taxonomy and Ecology of the Aerobic Nitrogen-Fixing Bacteria. J.P. Thompson and V.B.D. Skerman. Academic Press, Inc., New York, 1980, 418 p., \$74.00.

From the time of Beijerinck's initial isolation on "old year's day" at the turn of the century, these bacteria have fascinated microbiologists. Their taxonomy, however, has developed at irregular intervals, with newer forms being described, added to the literature, and included in succeeding editions of such publications as *Bergey's Manual of Determinative Bacteriology*. This new book, aptly titled *Azotobacteraceae: The Taxonomy and Ecology of the Aerobic Nitrogen-Fixing Bacteria* is the most comprehensive treatment of this family ever attempted.

The authors set out to reappraise the taxonomy of the family *Azotobacteraceae* by modern numerical methods. Experience recorded by various investigators over the years had differed, and thus the literature on the subject has, at times, appeared at considerable variance. It is to the great credit of the authors that they sought and retrieved from others a large number of cultures which they were able to study along with their own isolates. More than 150 strains were analyzed by hierarchical classification and ordinary procedures. This book provides com-

plete descriptions of their materials and methods. Particularly useful to others will be the procedures employed in isolation and cultivation. There is an excellent review of the widely scattered literature. Although the lengthy bibliography does not cover all of the literature devoted to the bacteria in this family, it is well selected to cover the taxonomy and methodologies employed. Keys are included for the identification of unknowns. A number of diagnostic properties are described at each furcation, a marked improvement over conventional single-attribute keys.

As pointed out by the authors, their work exemplifies a classical systematic treatment of a bacterial family carried out with modern computer-assisted methodology and, as such, may form a model for similar treatments of other families. Anyone who attempts the study of one or more members of this family, for whatever reason or type of investigation, would be well advised to have access to this well-written and definitive source book.

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