Book Review

The Sulphate-Reducing Bacteria. John R. Postgate. Cambridge University Press, Cambridge, England, 1979, 151 p., \$29.50.

This excellent monograph by Dr. Postgate (ARC Unit of Nitrogen Fixation, University of Sussex, Brighton, England) summarizes very well the activities of a little-known (by most microbiologists) group of organisms "that are adaptable to almost any natural environment on this planet except, strangely enough, the most common: an ordinary aerobic environment." The smallness of the volume bears no relation to the tremendous economic significance and importance of this group of bacteria, "sulphate-reduction being one of the most commonly occurring and extensive microbiological processes on earth."

All aspects of this fascinating group of organisms are covered, including chapters on classification, cultivation and growth, structure and chemical composition, metabolism, evolution, ecology and distribution, and economic activities. Also included are two appendices, one a list of characters of strains of sulfate-reducing bacteria in the National Collection of Industrial Bacteria, England, and the other a list of inhibitors of these bacteria; both are useful references for investigators in this field.

The chapter on economic activities is espe-

cially interesting because of the wide variety of natural processes in which the bacteria are involved. They contribute to pollution; metal, stone and concrete deterioration; formation of mineral deposits; food spoilage; isotope fractionation; nitrogen fixation; removal of heavy metals; petroleum processing, etc. Discussion of these activities is amply documented and illustrated. In the discussion of iron corrosion by these organisms, however, it is stated that the mechanism of anaerobic corrosion (bacterial removal of hydrogen from the surface of iron) is now "largely understood and agreed upon." Recent evidence (*Microbial Iron Metabolism*, J. B. Nierlands, ed.) indicates that this may not be correct.

Although this volume will be welcomed as a handy reference by students and researchers concerned with sulfate-reducing bacteria, it will be of extreme interest and most intriguing to all microbiologists and even to the lay reader. It would be a valuable addition, not only to the microbiological library, but also to engineering, geochemical, biochemical, geological, general, and public libraries.

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