

kin relationships to new reservation realities.

Parsons gives a sweeping, speculative, and very intriguing paper examining the parallel dyads of husband-wife and brother-sister as metaphors or models for other kinds of social arrangements over the course of European history. Here his thinking is congruent with the recent work of David Schneider and Terence Turner on the subject of the elementary forms of kinship, converging on a more sophisticated statement of systems theory with refinements from Lévi-Strauss, Piaget, symbolic analysis, and other such sources. One is struck by the contrast between this style of Parsonianism and the kind represented by much of the less interesting work in this volume: it was the application of wholly inappropriate empiricist-positivist pseudoscience methods and attitudes that led to the disaffection of many contemporary anthropologists with what they took to be Parsonianism, not the system itself, which I think will only now begin to emerge with its real virtues appreciated.

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## Marine Invertebrates

**Experimental Coelenterate Biology.** HOWARD M. LENHOFF, LEONARD MUSCATINE, and LARY V. DAVIS, Eds. University of Hawaii Press, Honolulu, 1971. x, 282 pp., illus. \$12.

This small book is very much what the title proclaims and, as well, presents reviews and original findings by the editors, two visiting instructors (R. Mariscal and A. Reed), and a group of 15 graduate students. The impetus came from a program sponsored by the National Science Foundation, devised by the staff of the Hawaii Institute of Marine Biology, and utilizing the facilities of the Institute's laboratory on Coconut Island, Oahu. The intent of the program was to train graduate students in experimental research. No single aspect of coelenterate biology was selected for the program, although the approach was primarily biochemical. The volume is divided into four parts, which speak for the breadth of approach, as follows: Growth and Development; Feeding Behavior, Food Transport, and Metabolism; Endosymbiosis with Algae; and Calcification. No

research is reported on neurophysiology, an active field of coelenterate biology, and behavioral studies are limited to feeding behavior. Nor are any of the reports ecological, although some of the results obtained have ecological implications. The research was carried out in 1967.

Of particular value are the introductory chapters by various of the editors to each of the four sections of the book. The section Growth and Development is introduced by two chapters, one by Lenhoff and one by Davis. Lenhoff's chapter is interesting, not because of its breadth as a review, but because of his attempt to elucidate the principles of coelenterate culture methods. Surely the particular success in the raising of various hydras is largely responsible for the detailed advances in knowledge that have come from study of these beasts. Davis provides in his chapter a careful review of culture methods for colonial hydroids and a useful discussion of stolonial growth and elongation. The introduction to the section Feeding Behavior, Food Transport, and Metabolism by Lenhoff is divided between a review of the chemical control of feeding behavior and a more general review of work on the metabolism and biochemistry of coelenterates. His review draws heavily on work of his own and his collaborators. Buried in this section of the book is a particularly useful appendix to a chapter by Mariscal. This consists of a revised key, with illustrations, to coelenterate nematocysts. The two final sections of the book are introduced by chapters by Muscatine. These are both scholarly chapters and are important and useful reviews of the endosymbiosis of algae and coelenterates and of calcification in corals. No one should begin a study of these subjects without thoughtful use of these chapters.

*Science* (160, 1141 [1968]) carried a report of the program that gave rise to this volume and a succinct summary of the research findings that are published in it. These need not be reviewed again here. However, the book has an unusual aspect. The introduction states that 8 of the 25 papers (chapters) have already appeared in scientific journals. From the footnotes of chapters 8 through 11 and 13 through 16, one can determine where and by whom these eight papers were published. No further comment may be called for than to note that of these eight previously published papers all

ascribe a junior authorship to Lenhoff, while Muscatine and Davis share a junior authorship along with Lenhoff on one paper each.

Current and future students of coelenterates will find this volume a handy general reference, and it deserves a place in the library of anyone interested in marine biology.

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## Electrolysis

**Ionic Interactions.** From Dilute Solutions to Fused Salts. S. PETRUCCI, Ed. Academic Press, New York, 1971. Two vols. Vol. 1, Equilibrium and Mass Transport. xiv, 410 pp., illus. \$19.50. Vol. 2, Kinetics and Structure. xiv, 282 pp., illus. \$16.50. Physical Chemistry, vol. 22.

These volumes, part of a series under the general editorship of Ernest M. Loebl, set out to cover diverse sources of information on ion-ion and ion-solvent interactions in the entire range from dilute solution to fused salt. Equilibrium and transport properties are examined in the first volume both to see how they give insight into ionic interactions and, because of their practical importance, to see how these properties can be predicted or correlated from a consideration of ionic interactions. Statistical mechanics forms the basis for discussion of the Debye-Hückel electrostatic theory, ion pairing, and conductance. (Debye's model is frequently referred to as the "primitive" model, the implication being that something better is available.) Extensive attention is devoted in the second volume to experimental means of determining what species are present in the solution—to infrared, Raman, ultraviolet, and visible spectra. The dynamics of solvation and relaxation from a perturbation in pressure or temperature provides additional insight into the species present and their lifetimes. Absent are nuclear magnetic resonance spectroscopy, x-ray investigation of radial distribution functions, studies of the kinetics of reactions of ions in solution, and a consideration of the kinetic theory of liquids.

The authors provide a good introduction to the literature and, in a very complex field, give a passable account of theory and results. At times, it should be mentioned, this becomes