children in poor villages, should become a classic in public health nutrition.

In general, this is one of the best presentations of the *problems* of protein-calorie malnutrition. One can only regret that the problem of what to do about it on a significant scale is hardly touched upon. Perhaps the foundation will consider holding a meeting of nutritionists, agriculturalists, industrialists, and economic planners to consider ways and means of making a large-scale attack on the problem of providing millions of small children with cheap, first quality protein.

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Socialistic Social Science

Introduction to Econometrics. Oskar Lange. Pergamon, London; Macmillan, New York, ed. 2, 1963. 433 pp. Illus. $7.

This is the second edition of a book by the Polish (Marxian) economist, Oskar Lange; it was first published in 1957. According to the preface, the differences between the first and second editions are primarily editorial. Impetus for the second edition appears to have come from the growing acceptance of econometric methods by socialist planners during the past few years. Lange cites as evidence a large number of econometric studies currently in progress in the Soviet Union and the People's Democracies, Hungary in particular. This development is in contrast to the abandonment of econometric studies by the Soviet Union around 1930, following several years of preliminary exploration.

The book constitutes a short course in certain selected areas of econometrics, "the science which deals with the determination by statistical methods of concrete quantitative laws occurring in economic life." Three areas are covered: (i) business forecasting via time-series analysis; (ii) market research via supply and demand analysis; (iii) the theory of programming via Leontief input-output analysis.

The technical exposition is clear and concise, despite its being threaded throughout with earnest political commentary. Although the ideological interpretations detract somewhat from the organization and (in many cases) the accuracy of the presentation, they also provide a dimension of interest unfamiliar to readers of nonsocialistic texts. For example, 20 pages on Pareto's law are tucked incongruously at the end of the chapter on market analysis. The 20 pages read like a morality play, with Pareto's curve taking the role of the capitalistic villain and the lognormal curve taking the role of the socialistic hero. After a review of some comparative income statistics, the play concludes triumphantly with a proclamation that workers' incomes in Poland are "by no means distributed according to the Pareto formula."

This book provides some interesting glimpses into the thinking of a socialistic social scientist and some interesting commentary on the state of quantitative research in socialistic planning. The reader who wants a comprehensive text on econometrics, however, should look elsewhere: for example, Lawrence Klein's new elementary book, *An Introduction to Econometrics.*

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Inorganic Chemistry

Nonstoichiometric Compounds. A symposium sponsored by the Division of Inorganic Chemistry, 141st Meeting, American Chemical Society, March 1962. Roland Ward, Ed. American Chemical Society, Washington, D.C., 1963. viii + 253 pp. Illus. Paper, $7.

This collection of 23 papers consists of an introductory paper, five papers on oxides, six on hydrides, two on intermetallic compounds, five on chalcogenides, one on clathrate compounds, and three on tungsten and vanadium bronzes.

The organization of the symposium papers according to the chemical nature of the compounds is convenient from the point of view of one who wishes to find information concerning particular chemicals, but an index of the volume would have been more useful. From the point of view of one interested in the physicochemical basis for nonstoichiometry, the organization is unfortunate. It results in considerable repetition, particularly of elementary concepts, and forces one to glean similarities and differences between compounds by a careful reading of the whole volume. However, if one is willing to read the entire work, he will be rewarded by a wealth of interesting information and motivated to learn more about an important field that tends to be neglected in the training of the average scientist.

In short, this work is not a unified discussion of nonstoichiometry, but rather a collection of research papers pasted together with a few more general articles. A decade ago these papers would have appeared together in one of the journals published by the American Chemical Society, where they would have received wider circulation and would have been permanently bound at the end of the year. Now, they appear as volume 39 of a disparate series of paperback books along with volume 24, *Chemical Marketing in the Competitive Sixties.* After one reading, my copy shows signs of succumbing to wear before the end of 1963. One might expect a longer life for 253 pages that cost $7.

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Baird-Agassiz Letters

Correspondence Between Spencer Fullerton Baird and Louis Agassiz, Two Pioneer American Naturalists. Elmer Charles Herber, Ed. Smithsonian Institution, Washington, D.C., 1963. 237 pp. Illus. $5.

An Agassiz *coup de plume* reveals and fascinates; Baird's letters inform and conciliate. Now we have the two men before us, pens in hand, exchanging the latest news on Carisle and Cuttyhunk, chelonians, cyprinoids, and crinoids Cassin and Cope. This is a book for the "museum man" and, of course, the historian, who will welcome this intimate way of learning what transpired at the Museum of Comparative Zoology and the old brownstone castle, the Smithsonian Institution. Here we see two of the most influential figures in American science 100 years ago, at the time the two institutions were founded, planning, sharing, borrowing, financing, and, yes, contesting for the prize collections which were coming in from around the world and with which they hoped to enrich or decorate their respective museums.

The editor, Elmer Herber (Dickinson

College), is writing a biography of Baird, and this volume of letters is a companion piece to it. Persons are identified in footnote paragraphs. There is an index, but at least a dozen names mentioned in the letters have been missed.

Mention of "W. Martin's California Birds" (p. 168) caught my eye and, recalling that Dall also published certain of these letters in his biography of Baird, I turned to learn whether the collector's identity had been suggested in the Dall volume. Lo! the two transcriptions of the letter differed, 20 times by count. Checking six of the more important discrepancies against the original Agassiz letter, John DeGurcé, the Smithsonian's archivist, found Dall correct twice, Herber twice, and both wrong once. From other letters "W. Martin" proved to be T. S. Martin of Lawrence, Massachusetts. This single letter once more emphasizes the difficulties inherent in delivering correct transcriptions.

The entomologist Ostensacken wrote in 1903 that were he asked to name the man who "was morally nearest to perfection," he would "unhesitatingly name Spencer F. Baird." Supporting evidence for his verdict unfolds in these letters.

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Research Résumé

Electron-Microscopic Structure of Protozoa. D. R. Pitelka. Pergamon, London; Macmillan, New York, 1963. x + 269 pp. Illus. $12.50.

The appearance of the first book dealing with the ultrastructure of protozoa must be greeted with great applause. It came just at the time when the body of findings on the subject started to become too vast and the rate of growth much too rapid for researchers in the field to keep abreast of the work. One has to admit that it is not an easy task to write a book on a subject in which research is moving so fast but in which the information available is nevertheless still rather incomplete and fragmentary.

Despite these difficulties Pitelka has done an admirable job. She achieved this by viewing the accumulated findings in a broad perspective and by analyzing them not only as a protozoologist and electron microscopist but also as a cell biologist and from the evolutionary point of view. This broad approach makes the book a most interesting survey of findings on protozoa in the field of electron microscopy. A vivid, imaginative language is another important asset of Pitelka's book, for it results in fascinating reading. The text is illustrated with electron micrographs and schematic drawings. In some instances one would wish to have more electron micrographs, and covering larger areas of the respective organism.

Pitelka introduces the reader to the subject by discussing the cytoplasmic and nuclear structures common to all protozoa. One of the important contributions of electron microscopy—the finding that the fine structure of protozoa is similar to that of cells in higher organisms—is stressed. At the same time emphasis is put on organelles characteristic of protozoa and particularly on the higher degree of elaboration of a number of structures. At this point it might be added that the complexity of protozoan structures seems to be related to the fact that a protozoon is not only a cell but first of all an organism in the full meaning of that term.

The bulk of information on the fine structure of protozoa is assembled in several chapters in which the author describes and discusses the morphology of organisms belonging to various taxonomic groups. The richness and diversity of structures in protozoa becomes apparent and striking in these pages. Interpretations are based on and correlated with the latest biochemical and physiological aspects, wherever data are available.

In the closing chapter the significance and possible origin of some typical protozoan structures are stressed. Special attention is given to fibrillar systems. Their analysis and classification lead the author to some revealing conclusions and thought-provoking speculations.

The book is a valuable contribution that will find its place on the book shelves of every protozoologist and also on those of electron microscopists who are interested in using protozoa in their work. It is an excellent guide for protozoologists who would like to begin working in the field of electron microscopy and a great help for those already advanced in that field.

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Botany

Aquatic Angiosperms. A systematic account of common Indian aquatic angiosperms. K. Subramanyam. Council of Scientific and Industrial Research, New Delhi, 1962. viii + 190 pp. Illus. $6.

The pretentiousness implied by the title on this book's jacket and dust jacket is clarified by the much more modest subtitle on the title page: "A systematic account of common Indian aquatic angiosperms." The book, in the format of a manual, accounts for some of the better-known, freshwater, aquatic flowering plants commonly occurring over most of the Indian subcontinent in lakes, ponds, pools, and tanks and for a few marine species common along the coasts. Rarer species are left to the specialist. One hundred and seventeen taxa belonging to 32 families are treated; 65 taxa are illustrated by line drawings, one by a color plate, the frontispiece. The illustrations are collected in a section that follows the text. An appendix gives the chromosome numbers, as far as they are known, for the taxa included, although the counts were not necessarily made on Indian plants.

Descriptions are not just compilations or rehashings of previously published information but are drawn from the author's firsthand study. The discussions of certain species are very much more extensive and inclusive than those for most species, and they incorporate much interesting and valuable information on anatomy, embryology, pollination mechanisms, ecology, and medicinal uses.

The binomials adopted are those that the author has ascertained to be correct according to present knowledge, and each is accompanied by its literature citation. Basionyms and commoner synonyms are frequently given for the binominal used.

Although obviously limited in its coverage, *Aquatic Angiosperms* may be highly recommended as a scholarly presentation that should find wide use among field botanists, botanical research workers, and naturalist-minded people of India. Botanists elsewhere will find much in the well-drawn descriptions and in the numerous more general discussions to commend it to them.

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