Book Reviews

Comprehensive Inorganic Chemistry. vol. 4. M. Cannon Sneed and Robert C. Brasted, Eds. Zinc, cadmium, and mercury, by Howard M. Cyr and the eds. Scandium, yttrium, and the lanthanides series, by Thomas D. O'Brien and the eds. Van Nostrand, New York, 1955. xii + 193 pp. Illus. $5.

The fourth member of this projected 11-volume reference work on the chemical elements and their inorganic compounds retains the simplicity of style and clarity of presentation that were characteristic of its predecessors. Although the series title suggests an encyclopedic work à la Mellor, the editors state that their aim is extensiveness in fields covered rather than fullness of treatment.

This volume presents a balanced but clearly limited survey of its subject matter. Part 1 ("Zinc, cadmium, and mercury") devotes more attention than usual to the industrial aspects of the inorganic chemistry of the IIb elements—as is consistent with the aims of a reference work written in part for the chemist in industry.

Chapters on the individual elements are preceded by an introductory section, containing an extensive table of physical properties of the metals, as well as an up-to-date table of isotopes. Each chapter contains a list of compounds in alphabetical order, with a description of properties, methods of preparation, and uses.

One rather puzzling feature of these chapters is the apparently random inclusion of crystallographic data, which in some cases is incomplete or erroneous, and in other cases redundant.

The introductory section of Part II ("Scandium, yttrium, and the lanthanide series") contains an extensive table of isotopes as well as a list of physical properties of the elements. The melting and boiling point data probably should be regarded with a good deal of skepticism, for most are at variance with recent observations.

Individual chapters on scandium, yttrium, and the lanthanide series are excellent within the limited range of subject matter considered. Some chemists probably will be disappointed that there is no detailed discussion of the magnetic or spectroscopic properties of the lanthanides, although recent work in these fields has been rather extensive.

Many chemists, however, will welcome these brief, authoritative and modestly priced volumes, in which the basic facts of inorganic chemistry are clearly and compactly assembled, leaving esoteric and doubtful material to references.

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Primates: Comparative Anatomy and Taxonomy. vol. 2, *Haplorhini: Tarsioidea.* W. C. Osman Hill. Interscience, New York; University Press, Edinburgh, 1955. xx + 347 pp. 49 illus., 14 plates. $9.50.

The first volume of this review of the *Primates* by the prosector of the London Zoo was published in 1953; it dealt with the grade Strepsirhini (suborders Lemuroidea and Lorisoidea). Of the several volumes planned to complete this project, the second has now appeared. It is concerned in its first 100 pages with a general introduction to the grade Haplorhini, under which Osman Hill classes the remainder of the primates; the rest of the book is confined to a detailed treatment of the suborder Tarsioidea (three species of the single living genus *Tarsius* and 31 genera of Tertiary fossils). Succeeding volumes will cover the final haplorhine suborder Pithecoidea, which contains the platyrrhine and catarrhine primates.

One can now examine Hill's reasons for using Pocock's seldom adopted bipartite division of the primates—namely, into the Strepsirhini and Haplorhini—since he here deals with the tarsioids, the assignment of which is controversial. Throughout the volume he frequently has to exclude *Tarsius* from general statements about "the haplorhines." The author prepares the reader for this on his second page and defends his inclusion of *Tarsius* in the grade with platyrrhine and catarrhine primates by the statement that "*Tarsius* would also prove an exception to most of the rules had it been included with the lemurs." This will probably only reinforce many readers' convictions that this reference work might better have used the more common tripartite division of the order, which gives independent status to the tarsioids, in recognition of the fact that we know too little of them to settle the disputed question of their alliances with the other great suborders of the primates.

The coverage is more broadly biological than the subtitle suggests, but the major part of the volume is anatomical, presenting a compendium from the widespread literature and the personal researches of the author. The first section, reviewing the Haplorhini, repeats much that was presented in the general coverage of the primates in volume 1, and is in turn repeated in the discussion of the genus *Tarsius*. The 150 pages on the tarsier represent a fuller treatment of one genus than will probably be possible for any other. This reflects Hill's interest in this animal, and his review here embodies much personal research. It does not represent a full anatomical monograph to supersede Burmeister's classic treatise or Woollard's paper, but rather reviews and supplements them; the illustrations are devoted largely to features in which Hill has himself taken special interest.

The section on fossil tarsioids reviews the fragmentary record of 48 Paleocene, Eocene, and Oligocene species. The evidence from dental and skeletal fragments is summarized, and about one-third of the genera are illustrated by figures redrawn from the original publications. The taxonomy is inevitably controversial; in the main, Simpson is followed. Thirty-one genera are given tarsioid status, and all but three are assigned to five subfamilies of the family Microchoeridae (Lydekker's name, which Hill prefers to the older and nearly universally used Anaptomorphidae of Cope). A new subfamily, Microchoerinae, combines the old Necrolemurinae and two genera (*Nannopithex* and *Periconodon*) heretofore regarded as too poorly known to permit even family designation. Another genus (*Yumanius*), usually classed as of uncertain family alliance, is placed in the Anaptomorphinae. Three Oligocene genera, the North American *Macrotarsius* and the Chinese *Hoanghonius* and *Adapidium,* are admitted to the Omomyinae, although their status as primates is admittedly precarious. A chart of Tertiary chronology has had the benefit of criticism by Simpson and is a real improvement on the one that was used in the earlier volume.

All interested in the biology of the primates will be thankful to Hill for this review of the Tarsioidea and for his arduous labor in this multivolumed project. Those who have tried for themselves to