balance. As for the *handling* of specimens, just eight pages, under the chapter title "Curating," are allotted to collecting, sampling, killing, preservation in the field, recording field data, and shipment and storage. Only 15 pages (chapter 5) are devoted to identification. The analysis of geographical variation within species is not dealt with at all, despite the fact that it occupies most of the time of most vertebrate taxonomists today. Statistical treatment is mentioned only to be dismissed: ". . . in the description of taxa, which means the description of the features of individuals or of groups of like individuals, there is little place for statistics as such. . . . In spite of some published statements that taxonomy deals basically with populations, it is easy to see that almost all descriptive taxonomy deals solely with individuals and with groups of individuals which hold the pertinent features in common" (p. 287).

This last argument, which appears in several forms throughout the book, plainly reveals the author's typological bias. (This bias he denies on pp. 345–46, but it is clear that he does not understand the word "typology" as most modern writers use it.) He also believes that "Many writers have thought that the Darwinian revolution in biology must have affected taxonomy. Some have even claimed that it did, but no one has cited examples," and "Recent attempts to combine taxonomy with evolutionary studies have not been highly successful." Of these breathtaking beliefs, I can only say that they are wrong, and I think most working taxonomists will agree with me on the basis of massive evidence.

If those parts of Blackwelder's book that deal with the actual handling and study of specimens are mostly halfhearted and spotty in their coverage, he does warm up in chapters 17, "Taxonomy as a science," and 18, "The nature of classification and of species"; but these really are polemical essays, out of place in a textbook.

In part 6, the author expands into the subject that really interests him most: zoological nomenclature. Here, in 230 pages, he analyzes in detail the latest *International Code of Zoological Nomenclature* (1961 and 1964), which has an English-language text of about 80 pages. Many working taxonomists, particularly entomologists, will agree with at least some of Blackwelder's criticisms of the code. The real question is whether a "text and reference book" should be so heavily burdened with this sort of thing.

What of the reference function claimed in the subtitle? Undeniably, there is much procedural and bibliographic detail here that practicing taxonomists need to have handy. But this information is frequently poorly organized and repetitive, it is heavily interlarded with controversial philosophical ramblings, and too often its facts are wrong or misleadingly incomplete. For example, in a list of commonly used Latin phrases with definitions there appears "*species novum* . . . (pl., *species nova*)"; it should be *species nova* (pl., *species novae*). In a list of American museums with their publications, we read: "Museum of Comparative Zoology (M.C.Z.) at Harvard University; publishes *Johnsonia* (mollusks)." True, but what of the M.C.Z.'s important *Bulletin* (135 volumes published beginning 1863), and its *Breviora* series?

As a text for students of systematics, *Taxonomy* falls short. As a reference work for advanced taxonomists, it may serve as a brief for a minority report.

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Properties of Compounds

Physics and Chemistry of II–VI Compounds. M. AVEN and J. S. PRENER, Eds. North-Holland, Amsterdam; Interscience (Wiley), New York, 1967. 862 pp., illus. $30.

At the end of this year the transistor, discovered in December 1947, will come of age. Its discovery has focused the talent and energy of many scientists on the basic and applied aspects of semiconductor research. In reviewing those 21 years, the scientists involved can say that they have been successful, successful beyond their ability to perceive the future.

In the early years, the electrical properties of silicon and germanium were studied and mastered. These two semiconductors have spawned and nourished the transistor and computer industries, which together will soon overshadow the automobile industry in size. About 1954 some scientists began to shift their attention to the properties of the III–V compounds. Once again the knowledge gained from germanium and silicon technology was capitalized upon, and the properties of these compounds were mastered and in 1960 the *p-n* junction laser was discovered. The new laser offered to technology a new method for the efficient conversion of electrical to optical energy. Unfortunately, success showed that only the red-green portion of the visible spectrum could be produced with these compounds, and the search for simple and efficient conversion of electrical to optical energy has shifted to the II–VI compounds, where one hopes to cover the whole visible spectrum.

Although research on the II–VI compounds dates back a hundred years, it is only within the last decade that the sophisticated theoretical and experimental methods which have worked so well with other semiconductors have been brought to bear upon these materials. The most important of these is the use of single crystals, which has led to the understanding of how intrinsic as well as extrinsic defects play a role in determining electrical and optical properties.

This book serves a double purpose in that it brings together for the first time the significant material in the literature and provides good and concise introductions to each of the significant aspects of II–VI compounds. Thus the experienced research worker has a ready and reliable guide to the existing literature and at the same time a scientist new to the field can with diligent study become aware of the major problems. The first seven chapters of this volume cover the basic chemistry and physics of zinc and cadmium chalcogenides. Chapters 8 through 14 cover the various optical and electrical phenomena encountered in these materials. The properties of mercury chalcogenides are described in chapter 15. All the articles show that significant progress has been made in certain selected areas. However, almost every author points out that there still remain important problems to be understood. More recent developments were reported at the International Conference on the Physics of II–VI Compounds held at Brown University in September 1967. The proceedings of that conference should cover work done since this volume was written.

Meanwhile technology waits on the sidelines, ready to take over whenever the simple and efficient conversion of energy into visible light is achieved.

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