of mountain minorities in Vietnam and their role in the Viet Minh war of independence against the French is also a work of real scholarship which still has great relevance even in the political and military context of 1968. But in general there must be very few kinds of reader who could discover in these pages the kind of information they might be looking for.

EDMUND LEACH

King's College,
Cambridge, England

Zootoxicology

Venomous Animals and Their Venoms. Vol. 1, Venomous Vertebrates. WOLFGANG BÜCHERL, ELEANOR E. BUCKLEY, and VENANCIO DEULOFEU, Eds. Academic Press, New York, 1968. xxiv + 707 pp., illus. $24.

Venomous Animals and Their Venoms is to be a three-volume publication. A comprehensive work on venoms, especially one in English, is long past due. The last extensive publication in any language was the two-volume *Animaux Venimaux et Venins* by Marie Phisalix, which appeared in 1922. Unfortunately, the new three-volume publication apparently will not be as extensive, and some groups important to the venomologist, the general zoologist, and the physician will be omitted.

The opening sentence of the introduction to volume 1 states that "the so-called venomous animals described in these volumes possess at least one or more venom glands and mechanisms for excretion or extrusion of the venom, as well as apparatus with which to inflict wounds." This last stipulation is somewhat misleading, since the table of contents for volume 2 includes papers on venomous toads and other amphibians.

Volume 1 consists of 20 chapters. The first three give excellent coverage of venomous mammals, including the platypus (Australian duckbill), *Ornithorhynchus anatinus,* and the insectivores. The discussion of the latter includes not only the shrews (genera *Neomys* and *Blarina*) but also the squirrel-sized forms of the genus *Solenodon.* The remaining 17 chapters give partial coverage of venomous snakes. Of these, chapters 4 through 9 give "general information" on evolution, venom extraction from Brazilian snakes, and comparative biochemistry of snake venoms. Chapter 10 gives very general information on the methods of classification of venomous snakes. This chapter has excellent line drawings of snake skulls and other anatomical features, but none of the structures are labeled and thus the illustrations contribute little to furthering the editors' stated purpose of producing a book useful to students and laymen as well as to those with professional interest in the subject. This omission also makes the key on page 311 of little value to any but the specialist. Chapter 11 discusses the venomous sea snakes but lacks a key to the species and illustrations of the venom apparatus. Venomous snakes of Central and South Africa are covered by chapters 12 through 17, and the remaining three chapters are devoted to those of East Asia, India, Malaya, and Indonesia.

This volume will serve as an excellent point of departure for the novice in venomology. It will be of largely academic interest to physicians and veterinarians of the United States and Canada. Physicians are forewarned that discussions of "cryotherapy" in several places throughout the volume are actually only considerations of "hypothermia," which per se can be harmful when used in conjunction with venenation by venoms that are capable of producing local histolysis such as those of pit vipers and some spiders. Their special attention is directed to chapter 20, "Symptomatology, pathology and treatment of land snake bite in India and Southeast Asia." In this chapter H. A. Reid fortunately points out important therapeutic principles that have wide application.

H. L. STAHNKE

Department of Zoology,
Arizona State University, Tempe

Semiconductors

Electrochemistry of Semiconductors. VIKTOR A. MYAMLIN and YURII V. PLESKOV. Translated from the Russian edition (Moscow, 1965). Plenum, New York, 1967. xxiv + 430 pp., illus. $19.50.

This book reports an abundance of experimental results and is very thoroughly referenced to both the Russian and English literature up to 1965, when the original Russian edition was written. In addition, to update the American edition through 1965 the authors have added an appendix commenting on the state of the electrochemistry of semiconductors, and to each chapter they have appended a considerable listing of additional literature.

The authors close the preface to the English edition expressing the hope that the text will promote scientific exchange in the field of electrochemistry of semiconductors. The book should serve this end among workers already involved in this specialty, but unfortunately it cannot be regarded as an attractive vehicle for one intending to enter the field with a conventional electrochemistry or solid state background. A number of crucial errors, feeble definitions of some important terms, and nonsequential developments militate against the use of this work as an introductory text. Too brief an index also limits the value of the book as a reference work, but a detailed table of contents partially compensates for this weakness.

Measurement techniques, theory, and experimental results which help define and explain the often complex role of the semiconductor in semiconductor-electrolyte cells are examined in the first three chapters. The participation of minority carriers, carrier lifetime effects, and the existence of a space charge region in the semiconductor at the electrolyte-semiconductor interface are evidenced as accounting for the sharp distinction between this area of study and the realm of metal electrolysis.

Although most of the work described is concerned with germanium and silicon, several III–V compounds, CdS, and ZnO are also represented. Most of the definitive techniques described involve either the manipulation of minority carrier concentrations or potential distributions in the semiconductors. Among the methods described are those involving photostimulation, minority carrier injection by nearby rectifying contacts or components of the electrolyte, pulse signal, and a-c techniques. The results of these are presented and analyzed in some detail.

The concluding two chapters deal with the corrosion of semiconductors and the practical application of electrochemical methods to the analysis of semiconducting materials and the preparation of semiconductor surfaces.

FLOYD O. ARNTZ

Department of Electrical Engineering
and *Center for Materials Science*
and Engineering, Massachusetts Institute
of Technology, Cambridge