

the chapters are, it seems to me, overly drawn out for a work of this nature. The reading is frequently tedious, minor items are belabored, the messages diffuse. It is a pity that the editors didn't impart more muscle to the book by insisting on a substantial condensation of several of the chapters. Lest the argument be raised that the breadth and scope of certain chapters are justification for prolixity and trivia, I refer to T. F. Anderson's superb exposition on bacterial viruses. This is a model of incisiveness and of the presentation of basic facts and general principles on a subject which is broader in scope and diversity than any of the other subjects in the book. I also thought that Lennox on immunological analysis and Weibull on locomotion have the elements of a suitable pedagogical complexion.

The individual author system, as employed here, reveals the need for wise editing to curtail repetitious and overlapping treatments and to insure inclusion of material borderline to the assigned topics; it would also mean exercising firm control over space apportionment and style, and ruthless pruning. I imagine this situation to be little different from a conductor's responsibility for forcing a balance among the musicians in his orchestra, even the virtuosos. Reiteration and overlapping are particularly noticeable and irksome in connection with information on the chemical composition and on the properties and functions of the bacterial cell wall. Also, since the protoplast and the cell wall are intimately bound up with each other in the living cell, the artificial separation of the treatments of the two is not only conducive to redundancy, but is unrealistic and unnatural.

On the other side of the ledger, if one is willing to condone the exclusion of the remarkable body of knowledge which exists on yeast cytology and of a consideration of actinomycetes, myxobacteria, and perhaps other investigations on less studied bacteria, one will find in the book practically all of the significant, basic information available at the deadline for receipt of manuscripts. There can be no doubt about the timeliness and the value of this volume for anyone seeking intimacy with bacteria.

J. W. FOSTER

Department of Bacteriology,
University of Texas

Bionomics, Systematics, and Phylogeny of *Lytta*, a Genus of Blister Beetles (Coleoptera, Meloidae). Richard B. Selander. University of Illinois Press, Urbana, 1960. vi + 295 pp. Illus. \$5.50.

The main portion of this paper is a monograph of the North American species of *Lytta*. The 69 species recognized are classified in four subgenera, 13 species groups, and 11 subgroups; each category is defined and characterized, often partly on the basis of bionomic information. There is an artificial key to species; there is also another set (more difficult for the beginner to use) designed to show relationships, with separate keys for each subgenus, species group, and subgroup.

The introductory portion contains a summary of the bionomics of the genus on a world basis, a redefinition of the genus, and a reclassification which places *Poreospasta* and *Pomphopoea*, previously recognized as separate Nearctic genera, as subgenera, and which adds five new subgenera, two of which are North American. The classification that results is certainly more satisfactory than its predecessors and is the first that really interrelates the world fauna.

For the treatment of the North American species, Richard Selander has examined a large portion of the specimens in collections and has carried out extensive field work himself, particularly in Mexico. Some of the species of *Lytta* are not easy to obtain for study. They may be very abundant in a limited area at one time and then not be seen again for many years. Some species have been collected only once, even large and strikingly marked species that would attract the attention of any entomologist. The extreme fluctuations in population are puzzling, but no more so than the sources of the enormous numbers of individuals of large species sometimes produced. The larvae of all species for which the life history is known live in the nests of solitary bees, feeding on stored pollen and probably on immature bees. At times a greater mass of *Lytta* protoplasm seems to have been produced than can be accounted for by the numbers of bees in the area.

At the species level the classification is a conservative one. Geographic variation, involving both anatomic and color pattern characteristics, has been an-

alyzed in detail for polymorphic species. The author has chosen to use vernacular names for geographic races that are very distinct, as suggested by Wilson and Brown. Names that we might expect to be retained as Latinized sub-specific names have all been synonymized, including two previously proposed by Selander himself. The classification benefits; it is simple and easily followed.

The diagnostic features of each species have been illustrated adequately, and the ranges have been indicated by small maps in the text. I am happy to see individual localities shown; this is a particularly valuable feature because one often encounters difficulty in identifying some of the older localities in a list of records. A considerable amount of geographic detective work must have been necessary to produce these maps, particularly those for Mexico and California, two regions where many collectors have used almost meaningless names for localities all too frequently. The text ends with a detailed index, a rare item in a systematic paper.

FLOYD G. WERNER

Department of Entomology,
University of Arizona

The Luapula Peoples of Northern Rhodesia. Custom and history in tribal politics. Ian Cunnison. Manchester University Press, Manchester; Humanities Press, New York, 1960. xiv + 258 pp. Illus. \$6.50.

The African peoples described in this book live on either side of the lower Luapula River, the boundary between northeastern Rhodesia and the Congo. They are principally fishermen, for the environs of the river are fertile swamps. The peoples are of particular interest, because, although on the Rhodesian side, they comprise a single society under a paramount chief, they are culturally heterogeneous and are of several tribal origins. This book is a study of political and social integration occurring in a situation of persistent cultural diversity. Cunnison found himself compelled to begin his analysis from the point of view of Luapula histories. These people have a marked interest in their oral traditions; although Cunnison recognizes that the oral traditions are not necessarily correct accounts of the past, he admits their validity for the