

BOOK REVIEWS

An Illustrated Catalog of the Neotropical Arctiinae Types in the United States National Museum (Lepidoptera, Arctiidae). Part II. Smithsonian Contributions to Zoology, No. 128, pp. iii + 160, 106 pls. Superintendent of Documents, Washington, D. C. \$2.86.

This is one of the enormous routine jobs that occasionally must be done in order to lay a firm nomenclatural basis for taxonomic work in any group. Such spadework is often very dull and tiresome; but when thoroughly and meticulously done, as is the case here, it opens the way for sound systematic research as nothing else can. A total of 174 types of Dognin, Druce, Dyar, Henry Edwards, Schaus and Strand were verified and studied. The whole specimens and their genitalia are figured. Type designations are cited, and lectotypes designated when necessary. Nomenclatural changes are made when advisable, and there are some synonymic notes. The complete bibliography, which corrects some earlier misapprehensions, is extremely valuable.

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Army Ants. A Study in Social Organization. T. C. Schneirla. 1971. Edited by Howard R. Topoff. W. H. Freeman, San Francisco. xx + 349 pp. \$12.00.

Dr. Schneirla's unique contribution is that he observed the army ants as an animal behaviorist and comparative psychologist and at the same time studied the biology of the individuals in the colony. This book demonstrates how such a methodology can expand our understanding of biological phenomena.

The first chapter tells of the early reports of army ants, and it reviews recent past knowledge about them. The author expresses his dissatisfaction with previous simplistic explanations of the behavior of army ants and his interest in undertaking a systematic study of their social behavior. The second chapter is a general survey of the army ant colony and the activities of the individuals of the colony. The later chapters abundantly discuss the activities mentioned. They explore the bivouacs and the emigrations, the broods, the functional cycles and nomadism, the roles of the queen, males and young queens, as well as colony divisions and the establishment of new colonies. A special chapter is devoted to surface-raiding species of the widely ranging Old World doryline, *Aenictus*, and the final chapter is a correlating and summarizing one, The Doryline Colony as an Adaptive System.

Two aspects of Dr. Schneirla's research make it particularly noteworthy. First, his system of marking queens made it possible for him to have some queens and their colonies under surveillance, intermittently, over a period of five years. This system of marking queens combined with his long field trips, extending over several months, allowed him to recheck his previous observations and to refine his conclusions. Second, his search for the key to an understanding of the functional doryline cycle, once he had clarified the nomadic-statory cycle and species-typical differences in the New World genera of *Eciton* and *Neivamyrmex*, led him to a further study of the primitive Old World genus *Aenictus*. Despite reported variations in the doryline genera of different environments, Dr. Schneirla concluded that the nomadic-statory cycle is dominant.

Extensive footnotes supplement the text. They support the textual material and provide bibliographic references related to the topics under discussion. There are many excellent photographs and numerous explanatory diagrams.



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