ganized things as though man had more to learn about himself from studying rats, mice, rabbits, cats, cows, parrots, and the like than from studying other primates.

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Pests

Flies and Disease. Vol. 1, Ecology, Classification and Biotic Associations. BERNARD GREENBERG. Princeton University Press, Princeton, N.J., 1971. xiv, 856 pp. + plates. $30.

This ambitious undertaking is the first volume of a two-volume compendium dealing with the relationships of flies and disease on a worldwide basis. The work is timely, for in spite of modern insect control practices flies and disease are still very much with us; it contains a wealth of information, thus filling a real need; and it should serve as a potent stimulus to additional research in this important field.

Four of the six contributors to volume 1 are European, and this is reflected in the coverage of the literature, which reverses the usual American practice of good coverage of American literature and poor coverage of some European and especially Russian literature. This one-sidedness is especially noticeable in the otherwise excellent chapter on synanthropy, which deals mainly with the Palearctic region. One hopes there will be a chapter in volume 2 on synanthropy in the extra-Palearctic regions. Also, the short chapter on bionomics seems to lack balance because some of the newer biological data are not included. On the other hand, the keys to both adult flies and larvae are excellent, and the line drawings illustrating the taxonomic characters are first-rate. The 15 color plates are among the finest representations of the metallic colors of calliphorids and the browns and grays of the muscids that this reviewer has ever seen. It is unfortunate that these plates are not referred to in the text.

The two most useful and unique chapters consist of extensive reciprocal listing of the biotic associations of flies with other organisms ranging from viruses to mammals. A total of 6500 recorded associations are listed, and the information is accessible both under the name of the associated organism and under that of the fly. If a running paragraph format had been used instead of the vertical listings, however, about 200 of the 533 pages devoted to these two sections could have been saved with little sacrifice in ease of use. Such savings might have resulted in a reduction in the price of the book.

This volume is a most welcome and valuable addition to the reference material available to the biologist. It is hoped that the companion volume will appear soon.

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Emotional Processes

Physiological Correlates of Emotion. PERRY BLACK, Ed. Academic Press, New York, 1970. xviii, 310 pp., illus. $13.50.

Over the past few decades the study of emotional behavior has developed into a field that encompasses an extremely broad range of clinical and experimental data, as well as different sets of definitions and theoretical constructs.

This book is a timely and important publication for those investigating emotional behavior or working in related fields such as endocrinology, neurophysiology, psychophysiology, and pharmacology. The basic goal of the book is to present in a straightforward manner the major experimental approaches currently used in the study of emotion. The book is divided into several sections, each dealing with a specific approach: genetic and developmental, neurochemical and endocrinological, neurophysiological, and psychophysiological. There is a historical review, and in several places the pitfalls and hazards of research on emotional behavior are discussed.

The book is based in part on a conference held in Baltimore in 1968, and the list of contributors reads like a Who's Who in the field. Each chapter is concisely and clearly written. There is a complete author and subject index, and references are up to date.

The book will probably be most valuable as a general reference text. It will also be useful and will serve as a meeting ground, so to speak, for a broad range of medical and behavioral scientists. It is difficult, if not impossible, to present a coordinated, comprehensive overview of all the research efforts involved in furthering the understanding of emotional processes. I believe, however, that the book could have profited from a final chapter to summarize and, if possible, to coordinate the messages of the individual contributions. The editor would have served a useful purpose if he could have provided for a senior figure in the field to overview the overviews. On the whole, however, the effort comes off very well, and many students and workers will find it a welcome addition to the reference shelf.

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Mind and Molecules

Biochemistry of Brain and Behavior. Proceedings of a symposium, Kenosha, Wis., May 1970. ROBERT E. BOWMAN and SURINDER P. DATTA, Eds. Plenum, New York, 1970. xxvi, 364 pp., illus. $16.50.

Most people believe that mind and behavior are regulated by neuronal interactions. These interactions, like all cellular properties, may be contemplated in terms of big and little molecules. Although there are many molecular explanations of mind that have been proposed, most serious work now is being directed at fragments of the problem—perhaps a special brain protein, perhaps an adaptive response to a drug, perhaps a biochemical correlate of behavior. Given this view, the diverse contributions in this book are related. Each tells something about a brain macromolecule or small molecule. Behavioral correlates are then boldly considered, cautiously entertained, or completely ignored. The macromolecules that are discussed range from nerve growth factor to neurotransmitter enzymes to steroid hormone binding proteins to S-100 protein to RNA. The small molecules include amines, amino acids, and lipids. The major classes of behavior that are considered are memory storage and schizophrenia.

In more advanced fields this would be a fantastic hodgepodge. But to those of us who concern ourselves with neurobiology and behavior, it seems an understandable, though less than admirable, conglomerate. At this stage of the game we thank God for anything at all interesting or relevant to the overall problem—since the productive directions for definitively solving the problem are only vaguely discerned. Even at the risk of our paying attention