probably require more than one book, and Ewer has therefore limited the scope of her volume to the main theme of the "animals themselves and their adaptations." In addition, she has followed her personal predilections. For example, she writes about viverrids and cats in considerable detail but treats bears in a rather cursory manner, even failing to refer to the best study of bears available, that of John and Frank Craighead on the grizzly. Food habits receive a detailed species-by-species treatment, whereas the chapter on social signals discusses mainly scent marking in selected animals and only briefly touches on displays, facial expressions, and vocalizations. Habitat preferences of species, population and group dynamics, and denning behavior are among the other topics receiving at most passing mention. Selectiveness of subject matter extends to the illustrations as well: the 40 or so photographs represent only five of the seven carnivore families, bears and hyenas having been excluded.

I would like to have seen a direct attempt to relate the wealth of material to current theories of sociobiology and ecology. The ecological separation of carnivore species inhabiting the same area and the relationship between ecological conditions and social organization would be two topics relevant to the main theme of the book. Of course every writer brings a personal bias to his or her work, and, as far as I am concerned, a book authored by one person with a certain point of view is infinitely more interesting than the impersonal symposium volumes in vogue today.

Ewer writes pleasantly and her text is refreshingly free of jargon, so that the book is enjoyable to read for layman and scientist alike. Here and there are personal reflections and anecdotes which not only help to enliven the pages but often also provide a new insight into a problem. To anyone who likes carnivores and wants to learn interesting facts about them, whether the size of home range of a wolf, the hunting methods of lions, or the food habits of wolverine, this book will be satisfying. Furthermore, in an age of specialization, when even mammalogists may limit their research to bats or rats, the book provides an overview of knowledge about an order that until recently has received too little attention. The sociology of primates has, for example, been studied intensively for over a decade and various deductions have been drawn from the data about human evolution. Man is a primate by inheritance but he is a carnivore, a hunter, by profession. Cohesive social groups are characteristic not just of primates but also of some carnivores—banded mongoose, hunting dog, spotted hyena, to mention just three—and a knowledge of the selective forces that shaped their societies is as important to understanding the genesis of human society as are the studies of nonhuman primates. *The Carnivores* should help man to view himself and the other mammals in a broader perspective.

GEORGE B. SCHALLER
Center for Field Biology and Conservation, New York Zoological Society, New York City

Bacteria

The Staphylococci. JAY O. COHEN, Ed. Wiley-Interscience, New York, 1972. xii, 548 pp., illus. $34.95.

This book, written "to bring together in one volume information acquired both by microbiologists and by physicians," provides a much-needed synthesis of a subject which attracts specialists from a wide variety of fields, including medicine, applied and basic microbiology, immunology, and biochemistry. All these fields and others are represented in this volume by internationally recognized experts. No significant matter of research or practice related to the staphylococci has been omitted.

The book begins most appropriately with a chapter dealing principally with the classification and identification of the staphylococci. This subject is developed from a historical viewpoint leading up to the studies which have given rise to the now generally accepted differentiation of the Micrococcaceae and of the species of *Staphylococcus*. This is not presented, however, as a completely acceptable classification; objections to it and the difficulties which these present in identification are dealt with fully.

Much effort continues to be expended in examining the role of exocellular products as contributors to virulence, on the assumption in many instances, no doubt, that knowledge of the incriminating factors will serve as a guide to the preparation of antigens capable of inducing immunity to infection. Of interest here are the results of numerous studies conducted during the last decade or so on exocellular polysaccharides. Results indicate that production of this substance by staphylococci may be associated with increased virulence for animals and that antibodies to it may confer a measurable level of resistance to experimental infection. Supporting evidence for these conclusions is to be found in studies which show not only that diffuse-colony variants of staphylococci are more virulent than compact-colony types but that unlike the latter the diffuse-colony variant produces capsular-like material. Other work has demonstrated that exocellular polysaccharide is capable of neutralizing factors in some human serums which protect mice against infection.

The impression should not be left, however, that the book deals primarily with immunity. It presents excellent and critical reviews of such subjects as the chemistry and structure of cell walls, enzymes, hemolysins, enterotoxins, and L-forms, to name but a few.

A number of chapters deal with essentially clinical subjects, such as staphylococcal infection, epidemiology, therapy, and bacterial interference. The last-mentioned topic represents a recently revived approach to defense against the staphylococci, following realization that antibiotic therapy is not the ultimate weapon against infections by these organisms. The chapter on infection provides the nonmedical scientist with a most relevant and intriguing overall view of the bizarre variety of clinical conditions to which the staphylococci can give rise. An awareness of the substance of these chapters should be a prerequisite to almost any investigation of the staphylococci.

This review has touched on but a few of the fields of current activity described in the some 23 chapters which make up this book. A consistently high quality is maintained throughout, however. Each chapter not only presents thorough assessments of the present status of the subjects covered and includes an excellent bibliography, but leaves the reader with an appreciation of problems yet to be resolved. The volume can be highly recommended for clinicians, investigators, practical microbiologists, and teachers alike.

A. W. JACKSON
Laboratory Centre for Disease Control, Health Protection Branch, Department of National Health and Welfare, Ottawa, Ontario