emphasis on work carried out during the past decade. The material in chapter 2, "Aliphatic fluorocarbons," and chapter 3, "Derivatives of perfluoroalkanes," will be familiar to most organic fluorine chemists; nevertheless, it serves as a useful summary and bibliography of those fields. For the novice, a differentiation between fluorocarbon chemistry and hydrocarbon chemistry becomes clear. The author condenses a great deal of material into clear, understandable abstract. This is particularly valuable now, at a time when researchers are faced with a nearly insurmountable task of literature survey in order to remain competent in even a narrow field. The use of diagrams summarizing chemistry of individual compounds is an excellent and effective technique.

A major effort of the book is to summarize the chemistry of perfluoroalkyl derivatives of elements other than carbon (chapter 4). Banks does this very competently, in a report-like fashion, and most fluorine chemists will find new and interesting information in this chapter.

Banks also notes that there are still significant gaps in the field which should provide opportunities for interesting and profitable work for future researchers. The section on perfluoroalkane-sulfur compounds is particularly well written. The inclusion of a few photographs of apparatus is distinctive for a book of this type.

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Endocrinology and the Nervous System

Neurosecretion. M. GABE. Translated from the French by R. Crawford. Pergamon, New York, 1966. 886 pp., illus. $30.

"[I]n the future no single scientist will ever be able to deal with . . . neurosecretory organs in the whole animal kingdom in one and the same volume as Dr. Gabe has done." So writes pioneer "neurosecretionist" Bertil Hanström in his brief but cogent preface to this remarkable volume, which he predicts will become "the bible of neurosecretion." But Gabe has provided us with much more than an encyclopedia; he has provided us with a careful and imaginative "composite picture," raising numerous questions and problems that will stimulate and orient future research in the continually expanding area of neurosecretion.

This huge book, with its almost 600 illustrations and its bibliography of almost 100 pages (bringing the references up-to-date as of July 1965), represents an enormous effort of scholarship on the part of a man who has no peer today in the field of comparative histology.

Gabe's intimate knowledge of both vertebrate and invertebrate tissues is derived from detailed studies using both ordinary staining methods and precise cytochemical techniques. Hence it is regrettable that many of the excellent original photomicrographs of Gabe's superb histologic preparations have received such muddy reproduction in the hands of the publishers. Even some of the drawings are reproduced so badly that they are almost useless. In such a situation the author has the right to ask whether the expenditure of his time and the reader whether the expenditure of his money (this is an expensive book) is justified.

By far the largest part of the monograph is devoted to an analysis of the occurrence of the neurosecretory phenomenon and its physiologic correlates in vertebrate and invertebrate animals. The point of departure is essentially that of cytology and is based on recognition of specialized neurons with staining characteristics that suggest glandular activity of an endocrine nature. At the present time, when the concept of neurosecretion is being reestimated, it must be admitted that this approach has its limitations. Some workers will regret the extensive use of the adjective "neurosecretory" without sufficient qualification. Undoubtedly, presumed neurosecretory cells and systems are described in this book that will prove to have no neuroendocrine significance, and systems of considerable physiologic significance may not have been considered, owing to the absence of dramatic staining properties. That the author is aware of these limitations is clearly indicated in his discussions, and he is cognizant of the problem raised by "innervation" of endocrine tissues by neurosecretory fibers, with which morphologists and physiologists are presently attempting to cope.

The text is up-to-date as of the middle of 1962; since that time the number and the nature of advances in the field have been such as to necessitate revision of some of the descriptions and conclusions. This fact, however, only underlines the value of this work as a central reference document for future studies of the phenomenon fundamental to the entire field of neuroendocrinology. Indeed, Gabe can be commended for his prescience; in more than one instance he anticipates by his careful analysis of earlier studies what more recent data have firmly established (for example, in his treatment of the octopod epistellar body).

The translation leaves unquestionable the work's origin in the French language and has yielded an occasional neologism. The bibliography shows its share of misspellings, which are bothersome though understandable; typographic errors of a minor nature are frequent. A careful proofreading by an English-speaking biologist would have been useful. There is little one can find in the way of real shortcomings, however, and the importance of this work cannot be overestimated. The student of neurosecretion and of neuroendocrinology will find his background enriched from the point of view not only of morphology, both gross and fine, but also of physiology and cell biology. Gabe has truly done the comparative biologist an invaluable favor.

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Stereotaxic Atlas

Atlas Stéréotaxique du Diencéphale du Rat Blanc. D. ALBE-FESSARD, F. STUTINSKY, and S. LIBOUBAN. Editions du Centre National de la Recherche Scientifique, Paris, 93 pp., 39 plates. F. 50.

There are several features which will make this volume more useful than previous publications of its kind (see Table 1).

The atlas includes both frontal and parasagittal planes. A method for modifying the standard Horsley-Clarke apparatus for use with the rat is described, and the coordinates used are based on this modification. As an alternative to buying an apparatus specifically designed for the rat, this relatively simple alteration should prove expedient and economical to many lab-