

Skipping across the waterfront

Robert T. Rubin

Hormones and Human Behaviour. By Bernard T. Donovan. Cambridge University Press: 1985. Pp. 223. £25, \$39.50.

ON receiving *Hormones and Human Behaviour* for review, I was excited by the prospect that here was a succinct, integrated overview of "psychoneuroendocrinology", written with the consistency of a single author. Such a book would be of great value for students and others interested in acquiring a basic understanding of this complex field. I was further buoyed by the author's statement of purpose in the preface — we are told to expect an exciting, concise and intelligible review of present knowledge, not definitive or comprehensive, but a guide to the literature and of help to those working in the behavioural sciences or studying for a specialist qualification in psychological medicine. After careful reading of the contents, however, I fear that while the book contains a great deal of useful information, it falls short of the mark in several respects.

In writing the book, the author undertook a formidable task, perhaps an impossible one. In a mere 191 pages of text he has attempted to cover a vast range of topics: limbic/hypothalamic/pituitary/target endocrine gland interrelations; all the pituitary and other hormones; the roles of the many neurotransmitters and neuro-modulators in endocrine function; patterns of hormone secretion; cellular mechanisms of hormone action; the interrelations of hormones and brain development; and male and female sexual behaviour; aggression; control of food intake; emotion; and learning and memory. To cope successfully with all these subjects would require an economy of concept and of style quite beyond that shown here.

Clearly, Donovan has a broad interest in this field, and he has marshalled a mass of references into an impressive bibliography which is accurately cited in the text. However, he paints his subject with a broad, and occasionally reckless, brush. I should let some quotations speak for themselves: the hypothalamus "integrates almost all higher functions" (p.16); "hypothalamic function is modulated or regulated by the amygdala" (p.19); "The secretion of cortisol is increased in depressive illness" (p.25); the structural similarity between growth hormone and prolactin "gives rise to problems in hormone assay" (p.48); "it has become clear that the locus ceruleus... plays a major role in the control of anxiety" (p.169).

While each of these statements may be accurate when accompanied by the appropriate qualifiers, such qualifiers are too often absent or tacked on in desultory fashion at the ends of paragraphs.

In the book, Donovan covers the waterfront of psychoneuroendocrinology. However, the organization of the impressive array of facts he has brought together is often wanting, particularly in conveying the concepts and controversies surrounding behaviour-hormone interactions. The introduction and overview, which, conceptually, ought to be the clearest of the chapters, is a jumble. By contrast the paragraphs on homosexuality (pp.129 and 130) are well-balanced. If only the rest of this volume were consistently so.

In his final chapter, "What Next?", Donovan puts forth some cautions and caveats which he himself has failed to observe earlier in the book. For example: "It is not enough to refer to 'depression' or 'schizophrenia.'" The endocrine evidence points to different categories or groups of

depressed or schizophrenic patients" (p.188). He further states, "Hormonal disturbances seem to be less common in psychiatric patients than the incautious reader of Chapter 1 might be led to expect" (p.188). We well may ask, especially of a volume intended for beginners, who should be more cautious, the reader or the author?

The subject matter of this book fits in well with the aims of the series, *The Scientific Basis of Psychiatry*, of which it is part. The book also highlights an area of the "mind-body interface" that is growing ever more important (and ever more complex), and it contains an abundance of fascinating material. But it should be read with great caution, especially by the naive reader hoping to find a trustworthy introduction to psychoneuroendocrinology. □

Robert T. Rubin is in the Division of Biological Psychiatry, Department of Psychiatry, Harbor UCLA Medical Center, Torrance, California 90509, USA.

Zeolitic first

William S. Wise

Natural Zeolites. By Glauco Gottardi and Ermanno Galli. Springer-Verlag: 1985. Pp. 409. DM 160.

By various counts, depending on nomenclature and definitions, there are at least 42 different zeolite minerals, some of which have been known since the eighteenth century. In *Natural Zeolites* Gottardi and Galli have provided the first book entirely devoted to the description of them. Writing it must have been difficult, because new physical descriptions and fresh information on occurrences is continually accruing. But, for the moment at least, this book is a valuable addition to the literature.

In an account of this nature the topics that should be included are some sort of classification, and for each species a description of crystallography (morphology and crystal structure), physical properties, chemical compositions (including dehydration and ion exchange data), occurrences (localities and geology), and nomenclature and history. All of these are covered to some extent. As Gottardi and Galli note in their preface, however, no book could satisfy all readers in the completeness of its coverage. Because the authors are structural crystallographers, the emphasis of the book is appropriately upon a new structural classification and upon details of framework geometries, such as ordering.

Certainly, the topic of widest interest beyond mineralogy is the framework arrangements of the various minerals or

groups of minerals. In the introductory chapter, these structures are well described and illustrated not with the usual stereographic drawings, but with "tetra-units and spaghetti", a technique developed by Gottardi himself. I found these drawings to be a particularly effective way of depicting most of the three-dimensional arrangements. Other strengths of the book are the detailed comments on the historical development of nomenclature, the critical evaluation of structural crystallography, and the inclusion of newly determined DTA, TG, DTG curves and new x-ray powder diffraction data for most species.

My only disappointment was with the depth of treatment of the occurrences and of paragenesis. For the most part, in this book zeolites are classified as "sedimentary" or "hydrothermal". Actually the first category is the diagenetic alteration of volcanic glass in sediments, while the second pertains to the large crystals found mostly in cavities of volcanic rocks. To be sure, many of these are results of low-temperature (<150°C) hydrothermal alteration of volcanic piles. However, there are also large areas of zeolite occurrence where these minerals grow as a result of diagenetic adjustment of the basalt or andesite to shallow burial and saturation with ground water. □

William S. Wise is in the Department of Geological Sciences, University of California at Santa Barbara, California 93106, USA.

● Newly published by Elsevier is *Zeolites: Synthesis, Structure, Technology and Application*, the proceedings of a symposium held by the International Zeolite Association in Yugoslavia in 1984. Editors are B. Držaj, S. Hočevar and S. Pejovnik, price is Dfl. 345, \$127.75.