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Review

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the herb has little flowers so joyful and worthy of admiration (*nihil iucundius nihil magis admirabile*) that possibly this was the reason for inserting it into the herbal. That was the very moment in which a scientist diverted his attention from medicinal plants to a common one. It was the end of the world of *virtus* (*quality*) and the dawn of the universe of morphology (*quantity*): Botany was born and Science with it.

SERGIO TORESELLA, *Milano, Italy*

#### PLEASURE, THE POLITICS AND THE REALITY.

*Edited by David M. Warburton. John Wiley & Sons, Chichester and New York. \$49.95. viii + 171 p.; ill.; index. ISBN: 0-471-94229-4. 1994.*

This volume tackles an interesting area concerned with the "recreational" use of certain legal substances, such as nicotine and alcohol, and the factors that govern their acceptability in the community. This is an important issue that is relatively rarely addressed in the literature. The book is thus a timely commentary on the role of social and political perceptions on the public acceptability of these compounds which, it seems, is often not logically related to their medical, pharmacological, or toxicological properties.

The book is composed of 15 chapters contributed by researchers from a wide range of disciplines. As a consequence, each chapter is relatively short and very readable. It is important, however, that potential readers should not expect to find the medical and pharmacological issues explained in any detailed way. The editor's intention seems to have been to provide the reader with sufficient detail to be able to understand the principles involved, without having to become an expert in sociology or psychopharmacology. For a book that is aimed at a wide readership that is not necessarily well-informed scientifically, this is a justifiable approach to take.

The first half of the book focuses more on the psychopharmacological aspects of recreational drugs and provides the reader with a scientific base for the second half of the book, which is concerned more with medical and sociopolitical influences on their acceptability. Thus, the latter half of the volume is more controversial, with each contributor taking a particular view that may or may not find favor with the reader. The contributors do not appear to have been under any pressure to come to a consensus, although most seem to take the view that the use of legal recreational drugs is justified and that medical and political pressures to restrict their use is probably unwarranted.

The drugs that form the primary focus of the book are nicotine, caffeine and alcohol. While I fully understand the reasons for this, I was somewhat disappointed that the authors rarely extended their arguments to include illegal compounds, such

as cannabis, cocaine and the opiates. In the current political climate, I think this would have been justified and would have provided a more challenging task to the authors recruited to comment on the political and judicial influences on the use of drugs in the community.

D. J. K. BALFOUR, *Pharmacology, University of Dundee, Dundee, Scotland, UK*



#### GENERAL BIOLOGY

##### A NATURALIST IN FLORIDA: A CELEBRATION OF EDEN.

*By Archie Carr; edited by Marjorie Harris Carr; Foreword by Edward O. Wilson. Yale University Press, New Haven (Connecticut). \$28.50. xxv + 264 p. + 18 pl.; ill.; index. ISBN: 0-300-05589-7. 1994.*

Archie Carr (1909–1987) was one of the foremost ecologists and naturalists of this century. His work on the biology and conservation of sea turtles likely will be most familiar to readers of this journal, but it is his broad knowledge of all aspects of the natural history of the southeastern United States, especially Florida, that is displayed in this marvelous book. Carr never completed a general book about Florida in his lifetime, despite the fact that he spent the majority of his life there. Carr wrote in the 1960s that such a book could easily become mired in "nostalgia and indignation . . . a diatribe against the passing of original Florida" (p. xv), and that he preferred instead to write about "the joy still remain[ing] in the Florida landscape . . . [while sneaking] in some factual tooth-gnashing every now and then" about the destruction of a "vanishing Eden" (p. xv). The 25 essays that make up *A Naturalist in Florida*, written between 1936 and 1987, portray clearly Florida's unique natural history, and simultaneously present the tragic juxtaposition between it and the accelerating human impact on the Florida landscape.

The majority of the essays in this collection appeared previously in popular magazines, such as *Wildlife Conservation* (formerly *Animal Kingdom*), *Field and Stream*, and *Audubon*. The lyrical quality of the writing is more reminiscent of William Faulkner or Flannery O'Connor, and scientific details are kept to a minimum. The detailed endnotes (compiled by Marjorie Carr), however, could rapidly lead the interested reader into the primary scientific literature, or to the appropriate state management agency responsible for conservation and management plans of individual species or natural areas. The endnotes also provide many insights into the cultural and scientific contexts in which the essays were written, as well as changes that have occurred

since their writing. For example, the essay "Alligator Country" was written in 1969, when alligator populations were severely threatened throughout the state. Since that time, alligators have responded so well to protection and management that sales of alligator products now hover around \$3.5 million per year. Marjorie Carr also uses the endnotes to forcefully state conservation messages that often are understated in the essays themselves. Her observation that conservation plans designed to manage resources, as opposed to (for example) alligators, are ethically misguided and morally untenable brings into sharp relief many ideas of the growing cadre of "ecological economists."

In the foreword to this collection, E. O. Wilson writes that these essays can be read at two levels: superficially as adventure stories, and more deeply as a means of transmitting knowledge about a world now lost. I found other ways to read these essays as well. They present as-yet-unsolved research problems, such as the causes of *jubilees*—mass strandings of marine organisms along the coast of the Gulf of Mexico, the life history of Florida sturgeon, and reconciling the sustainability of a complex ecosystem with one of the fastest-growing populations in the United States. The *Subjective Key to the Fishes of Alachua County, Florida* (from *Copeia*, 1941) kept me laughing for days, and provides a welcome comeuppance to systematists everywhere.

Archie Carr was as keen an observer of human nature as he was of Florida's natural heritage. The essays collected in this book reflect the dialectic with which future generations will continue to grapple: the preservation of nature and the maintenance of what we have come to know as civilization. With naturalists such as Archie Carr to guide us, we may yet succeed in resolving this dilemma.

AARON M. ELLISON, *Biological Sciences, Mount Holyoke College, South Hadley, Massachusetts*

**PHYSIOLOGY BY NUMBERS: AN ENCOURAGEMENT TO QUANTITATIVE THINKING.**

By Richard F. Burton. Cambridge University Press, Cambridge and New York. \$59.95 (hardcover); \$19.95 (paper). xv + 185 p.; ill.; index. ISBN: 0-521-42067-9 (hc); 0-521-42138-1 (pb). 1994.

This book has been written with a dual purpose: (1) to promote the quantitative approach to physiology, and (2) to illustrate this type of analysis with readily accessible concepts and calculations. Even though quantitative analysis has been with us since Harvey used it to convince the world that blood must be circulating, still there is certainly a need to develop this tradition. Even recent biological research contains examples of a surprising neglect of quantitative analysis. Qualitative thinking may survive because quantification is not always possible, but also because it is not sufficiently empha-

sized during pregraduate training. It is therefore important to create a basis for quantitative thinking already at the pregraduate level; this book does so with a wide variety of examples of how physiological phenomena may be described in numbers. Most of the calculations are simple and admirably bridge the gap between the qualifications of the average student and the sophistication of experimental physiology. Its eight chapters describe more than 200 arithmetic problems in energy metabolism, the cardiovascular system, respiration, renal function, body fluids, acid-base balance, and nerve and muscle physiology. Several of them may be suitable exam questions or starters for group discussions with students.

Science is common sense, and certainly requires a sense for proportion. This book nicely exemplifies both of these concepts. On the other hand, although it is important to be quantitative, not all quantities (or relationships) are equally relevant. Written for students of human physiology, the data on the blue whale and the bush baby are perhaps of minor relevance. More worrying, however, for students of human physiology, the vast majority of whom will become MDs, there is too much "classical physiology" and too few clinical examples. Thus, the interesting and vital arithmetic of fluid and electrolyte therapy is neglected. Likewise, it would have been obvious to include the important and common disorders of gastrointestinal fluid balance. Also, clinical nutrition and endocrinology are very poorly represented. Certainly, there are examples enough to write another book along the same lines on, for example, "Clinical Medicine by Numbers." Burton's didactic and clearly written volume might become a forerunner for similar textbooks on other medical fields. Its strong emphasis on common sense might help medical students make better use of the rapidly accumulating and sometimes not very relevant information in the preclinical fields.

TORBEN CLAUSEN, *Physiology, University of Aarhus, Århus, Denmark*

**THE COMMON BUT LESS FREQUENT LOON AND OTHER ESSAYS.**

By Keith Stewart Thomson; illustrated by Linda Price Thomson. Yale University Press, New Haven (Connecticut). \$22.50. xi + 186 p.; ill.; index. ISBN: 0-300-05630-3. 1993.

This book is a collection of essays originally published in the author's regular column, entitled "Marginalia," in the *American Scientist*. The essays are grouped into three sections whose themes are best described by their titles: The Uses of Diversity, On Being a Scientist, and The Future of Evolution. Each section is introduced by an essay written for this book. Keith Stewart Thomson ably demon-