

dressed by international development agencies.

Because Harris and Ross bring a fresh perspective to the population problem, this book is a "must read" for biologists, teachers and students. Even though it is intended for scholars, the authors write so well that general readers, including high school juniors and seniors, should find it informative. It is not always easy to agree with every argument Harris and Ross make, but the opportunity to reexamine some old demographic issues in a new way is welcomed.

James Stanlaw
Illinois State University
Normal, IL 61761

ADDICTIONS



The Addictions Handbook. By Virginia Alvin and Robert Silverstein. 1991. Enslow Publishers, Inc. (Bloy St. and Ramsey Ave., Box 777, Hillside, NJ 07205). 192 pp. Hardback \$18.95.

Psychologists, social workers, students, family, friends and addicts will find this book a valuable asset in understanding the problems associated with dependencies. *The Addictions Handbook* is easy to read and the scientific explanations are understandable. The variety of topics covered is remarkable. The table of contents is a prologue to the vast number of addictions facing the industrial nations of the world—from chocolate, caffeine, food, gambling, risk taking and television to our preoccupation with shopping and sex. The majority of the information, however, is centered on the more well known addictions to drugs, alcohol and smoking. The authors first introduce you to the many different forms of addictions and then profile the addictive personality, allowing you to identify with one or more of the many low risk addictions. Then they demonstrate that your addiction is really not that much different from the higher risk ones. This teaching method is effective and sensitizing.

Some of the lesser known addictions are presented in the unique format of societal as well as medical problems. Addictive behaviors are treated in a sensitive and intelligent manner, shedding our prejudices and preconceived notions on the personal flaws

of an addict. I predict that anyone reading this book will be able to identify with at least one of the behaviors presented. Reading the entire book gives you the perspective that addictions come in many forms and activities and that there are many different aspects of addiction to which we can relate. This book helps break the stereotype of an addict, and I would like to see it in all public and school libraries.

I found the first few chapters dealing with causes, stages and perceptions to be an excellent introduction to the various types of addictive behavior. Two valuable features of this book are its extensive appendix and self-help reference section. The appendix contains more than 50 drugs and includes both their medical and street names, their legal status, tolerance limits and how they make you feel, along with the harmful effects. A book of this quality is much overdue. Our current awareness of the problem of addiction has not made a significant difference in how we approach treatment. Maybe a fresh look at the problem will lead to a better understanding for therapists as well as those who care for addicts.

Karen K. Oates
George Mason University
Fairfax, VA 22030

ANIMAL BEHAVIOR



Food Hoarding in Animals. By Stephen B. Vander Wall. 1990. University of Chicago Press (5801 S. Ellis Ave. Chicago, IL 60637). 445 pp. Paper \$29.95, library cloth edition \$76.

The literature on animals' adaptive strategies for food storage is widely scattered. This volume attempts to bring diverse information together and does so admirably. The nearly 1500 references cited and frequently summarized cover a wide variety of mammals, birds and arthropods.

The author attempts to address major ecological, evolutionary and behavioral questions and issues of food hoarding. He also approaches hoarding from a taxonomic viewpoint with separate chapters on hoarding in mammals, birds and arthropods.

Food hoarding is defined as the handling of food for future use, and the author considers storing and caching

to be synonymous with hoarding. Most animals that hoard do so to meet energetic and nutritional demands during acute and chronic food shortages. One of the interesting questions addressed here is the difference in protein content in foods that are consumed immediately and those that are stored for future use. The differences involve patterns that have implications for maximizing long term benefits to the animals.

Several hypotheses are discussed to explain the evolution of hoarding. These include feeding site, security, food envy, food delivery, nest building and the protected site hypothesis. Several specializations and modifications that may have led to hoarding behaviors are described, including the variation in rodent cheek pouches. A discussion of the coevolution of plant propagules and food hoarders and the important interactions of ectomycorrhizal fungi are also included.

Cache protection and cache loss are addressed; one interesting adaptation under this heading is the fact that some shrews produce a toxin that causes mice, worms and insects to become comatose but does not kill them. The prey is kept nearby, alive but relatively immobile, for future consumption by the shrew. This prevents spoilage, which would occur with dead animals.

Many factors that influence hoarding behavior are discussed, including both genetic and other internal factors, as well as environmental factors such as photoperiod and temperature.

Many photographs, diagrams, charts and graphs are included either slightly modified, in the form they were used in the original sources or prepared specifically to amplify this text. In addition, there are several original drawings by Marilyn Stewart Huff which are especially helpful in explaining parts of the text. Appendices include a list of the food-hoarding mammals and birds mentioned in the text and a list of plants, plant parts, fungi and lichens stored by animals and mentioned in the text.

This book will probably have its greatest value to the biology teacher as a reference book. It should be a part of any library that serves serious students of biology, ecology or natural history.

Paul M. Daniel
Miami University
Oxford, OH 45056