their emigration out of a population in order to avoid certain reproductive failure in spite of the often low probabilities of finding enough unclaimed resources in other populations to meet their reproduction requirements. This form of self regulation often leaves the population at a level lower than the maximum number of individuals that its habitat could support.

This book will appeal to all advanced students, scientists, and professionals interested in population dynamics. The mathematical models presented in this book are relatively simple to follow. Only a rudimentary understanding of calculus is required to understand these models. Lomnicki uses these models to explore some new areas of theoretical cology where empirical evidence is not always available. Although Lomnicki has done his best to use empirical examples, this book's content is largely theoretical. However, this author's writing style makes this book very accessible to a wide audience of biologists.

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Wetlands of Canada

By the National Wetlands Working Group, Canada Committee on Ecological Classification. 1988. Environment Canada (distributed by Polyscience, Montreal). xiv + 452 pp., illus. \$56.00.

This is a most attractive book. It has an abundance of black-and-white photographs and well-drawn diagrams. Most of the authors write clearly. Everybody interested in this country's wetlands will find the chapter dealing with their own region absorbing. Therefore, the book deserves the attention of nearly all serious amateur naturalists, since all of them (surely?) find wetlands fascinating; but probably few will want to buy so hefty a book, covering the wetlands of all Canada.

It is the work of 33 contributors, whose affiliations are: 25 from assorted federal and provincial Government departments; 4 from ecological consulting firms; and 4 from universities. Between them, they have written 10 chapters and an appendix.

The appendix should be read first. It is by a committee of 13 of the contributors who present a three-level taxonomy of wetlands. At the highest level are Classes, of which there are 5 (bogs, fens, swamps, marshes, and open water). Next come Forms, for a total (in all classes) of 70. Lastly come Types, of which there are 16 (on two hierarchical levels). None of the forms is represented by more than a few possible types, so (fortunately) there are fewer than 1120 ultimate taxa.

After an introductory chapter, Chapters 2 to 9 give descriptions of the various wetland taxa in each of the 8 Wetland Regions (all with subregions) into which Canada is divided. These descriptions are all examples (admittedly, good ones) of classical descriptive ecology of the kind that prevailed 40 or 50 years ago. Most are a pleasure to read, and they

impart plenty of information. But it is rather like listening to a running commentary on the Stanley Cup Final on radio instead of switching on the TV. The descriptions of vegetation must be based on data sets that cry out for modern methods of multivariate data analysis, that is, for well-chosen classifications and ordinations, but there isn't a sign of them. Three (only) of the chapters have diagrams showing the putative successional relationships among the different wetland taxa in a region. How interesting it would be to see ordinations of the data on which these diagrams are based! It is not as if such a treatment would be too technical for the intended readership: the book abounds with exceedingly detailed tables giving the results of chemical analyses of peat and water samples from particular wetlands.

The indexes are inadequate. There should have been an index to plant species and another to geographic locations, as well as the rather sketchy general index.

There is a glossary, and it cites the sources of its definitions. Perhaps it is unfair to quote the single embarrassing howler: "AUTOTROPHIC: Capable of deriving energy for life processes from the oxidation of inorganic materials (Agriculture Canada 1976)." Agriculture Canada should be ashamed.

It *is* fair to end on a positive note, however. The book has many virtues and its faults can be put right in promised future editions. One obvious way to improve it would be to invite more contributions from research workers in the academic world.

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