The style is simple and the arguments flow logically. Although the subject is mathematical, Shugart does not frighten his readers by showing them how complicated the models can become, but welcomes them by presenting the simplicity of arguments and functions that constitute the backbone structure of the models. There are two things that I liked in the book: the always critical and balanced discussion of the ecological implications of gap models and the temporal and spatial scales on which they work; and the vision of the hierarchical nature of biological systems. It is here where the importance of the book resides, and where both critics and supporters of gap models will find material for further discussion and future research.

Anyone interested in forest succession will find the book a rich source of information; this is particularly true for those involved in the application-oriented part of the subject or for people planning to use or develop computer models (gap or not) of forest dynamics.

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NORTHERN ECOLOGY AND RESOURCE MANAGEMENT. *Memorial Essays Honouring Don Gill.*

Edited by Rod Olson, Ross Hastings, and Frank Geddes. The University of Alberta Press, Alberta (Canada). $22.50. xviii + 438 p. + 4 pls.; ill.; no index. 1984.

This book is a collection of papers prepared in honor of the late Don Gill. As with others of its type, this volume lacks an overall integration of the wide diversity of the contributions. The mixture of reviews, research papers, and progress reports consists of four sections: Abiotic Components (4 papers), Animal Communities (6 papers), Plant Communities (3 papers) and Land Use (4 papers). Most papers will interest only those concerned with arctic ecology.

Pettapiece provides a useful introduction to soil-forming processes for ecologists with no formal training in soil science; and Pruitt reviews the ecology of snow in a text encumbered by specialized snow terminology (for which a useful glosary is provided).

Archibald and Jessup describe their radiotelemetric study of the population dynamics of pine marten. Males had larger home ranges than females (6.2 km^2 vs 4.7 km^2); within each sex, home ranges were virtually exclusive, but male and female home ranges overlapped extensively. The review by Russell and Martell is a good, general introduction to caribou biology, especially in relation to winter ecology; and Telfer discusses the wide variety of habitats used by moose. The interesting movement patterns of these species seem explicable in terms of meeting energy and nutrient requirements. I found Calef's report on population growth in a herd of wood bison introduced into the Mackenzie Bison Sanctuary one of the most interesting. Population growth continues to average almost 26 per cent per year; survival was calculated to exceed 95 per cent for both calves and adults. This population must have achieved r_{max}; the irruption apparently was possible because predators and other grazing ungulates were absent.

Kersaw describes the role of 15 floristically defined plant communities (one table occupies 19 pages) in the revegetation of disturbed sites. The section on Land Use provides some instructive examples of the role of planning, environmental assessment, economic considerations, ignorance, and human behavior in the developmental equation.

The price is reasonable and the book is well illustrated with eight colored plates and numerous black-and-white photographs (but many lack contrast); it belongs in every institutional library where it can be browsed for those subjects related to one's personal interests.

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FUNGUS-INSECT RELATIONSHIPS: PERSPECTIVES IN ECOLOGY AND EVOLUTION.

Edited by Quentin Wheeler and Meredith Blackwell. Columbia University Press, New York. $00.00. xiii + 514 p.; ill.; author, subject, and taxon indexes. 1984.

This book, the proceedings of a symposium held at Cornell University in 1981, holds much of interest for taxonomists and ecologists interested in fungus/insect interactions. The title may be a little misleading, however, since many of the papers focus on the application of cladistic methods of taxonomy rather than on ecological relationships. The book is divided into three sections: theoretical contributions (3 papers), mycological contributions (6 papers) and entomological contributions (8 papers).

The theoretical papers are concerned entirely with the exposition of cladistic methods of taxonomy and their application to fungus-insect relationships. Although this topic should be of interest to all biologists, the partisan approach of many adherents of cladistic methods does little for their cause. The claim by Wheeler and Blackwell (p. 5) that "cladistics . . . is becoming *the* general reference system for biology" might raise eyebrows even among taxonomists. A more balanced account is provided by Funk, who argues the case for cladistics with both clarity and admirable brevity.