

THE SECRET. By RENE FUMOLEAU. Toronto, Ontario: Novalis, 1997. ISBN 2-89088-919-X. 187 p., map. Poetry collection. Softbound. Cdn\$18.95.

Fumoleau is an Oblate priest who spent many years as a missionary to the Dene First Nation of subarctic Canada and has published works of both prose and poetry about his life among them. In *The Secret*, we see him in his role as poet. His style is free verse, and often as I read one of his poems I would feel that I was reading prose cast in poetic form. Still, if poetry does truly consist of nuggets of truth, he is a poet, and a first-rate one at that.

Fumoleau has a deep sense of caring for the Dene, and he has seen the injustices wrought upon them by encounters with an alien society. That concern, or love, comes through strongly in the poems that deal with the Dene. However, many areas of human existence have given him inspiration for his poems. His compassion for others is always there, but at times there is a gentle, yet somewhat acerbic edge of satire, and even sarcasm. Fumoleau does not suffer pomposity and arrogance easily, and he lets the reader feel his irritation. He dislikes materialism and pillories it with a rapier wit.

He has a good ear: he takes random phrases he has overheard and turns them into messages, as in the humorous *Foreigners*, about a blond girl who is appalled at the many "foreigners" in the Manila airport. There are poems about his childhood and his training for the Oblate priesthood, and in each one he takes a specific incident and uses it to teach us something about the human condition.

Most poems, however, are about the Dene. Some give the reader keen insights into Dene culture, and specifically, the spiritual side of it. Others use examples of Dene ways to poke fun at the foibles of non-Dene society. In all of them, we learn about the Dene from the perspective of a staunch advocate. Can anyone enter a culture into which he or she has not been enculturated, and then have the audacity to speak for it? Fumoleau has entered the world of the Dene, and I am willing to bet that the Dene accept his depictions of them, not only because they are positive, but because they are accurate.

I recommend this book to anyone interested in the peoples of the Canadian Subarctic, but also to any interested in rekindling and expanding their own spiritual worlds. Theology, philosophy, anthropology, sociology, and just good human common sense are found in this slim book of poems. It should not be read at one sitting, but rather savored, by opening it at random and reading parts at a time.

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DEER OF THE WORLD: THEIR EVOLUTION, BEHAVIOR AND ECOLOGY. By VALERIUS GEIST. Mechanicsburg, Pennsylvania: Stackpole Books, 1998. 326 p., appendices, bib., and index. Hardbound. US\$60.

Valerius Geist has attempted to review the extant knowledge of deer species and find the common themes that pull the diverse species together. Today, most ecologists and wildlife biologists specialize in one species, or even one aspect of a species' ecology. I can think of no other deer biologist who should even attempt a book like that created by Val Geist. With approximately 60 species that range from tropical forests to arctic tundra, it is difficult to imagine unifying themes. Groves and Grubb (1987) attempted a similar synthesis, but their effort dealt primarily with the phylogeny of deer, while Geist has expanded the comparisons of ecology and behavior.

The premise of the book, which is laid out in the first chapter, is that deer species exist along several continua: from saltorial to cursorial locomotion, from concentrate feeders to grazers, from territorial defense to "selfish" herds, and from ancestral to hypermorph to pedomorph body types. Where species fall along these continua can be explained by the combination of five forces: phylogeny, habitat, dispersal, humans, and predation. At the heart of many of Geist's arguments is the dispersal hypothesis of evolution that he originally developed in a series of papers in the late 1970s and the 1980s. This hypothesis holds that dispersal into food-rich habitats causes selection for ornate organs, large body size, and variable behaviors. Over time, increases in population density and decreased resource availability produce selection for maintenance traits, such as reduced body size, refinement of food acquisition and processing, and ritualization of behaviors. Geist feels some of this adjustment is phenotypic and not genetic. This phenotypic plasticity occurs during ontogeny in response to nutrient levels; these features overlay genetic changes that occur either rapidly during the dispersal phase, or slowly during the maintenance phase. Although Geist is confident in his ability to identify these two processes, he acknowledges the pitfalls involved.

In conjunction with this dispersal/maintenance selection is the role of predators. Geist considers security concerns one of the shaping forces in the biology of ungulates. These forces might even be operating continent-wide, as Geist sees the old-world species of deer being shaped by food limitations, while the new-world species evolved with abundant food and predator risks. The radiation of deer into North America provides an example of the dispersal hypothesis at work.

A necessary limitation on the book is that most of it focuses on the well-known temperate species, such as red deer, moose, roe deer, white-tailed/mule deer, and caribou. The tropical species are covered primarily in two chapters on early deer and three-pronged deer. This is unfortunate, but warranted by our current state of knowledge. We have a better understanding of the paleontology

of some temperate species than we do of the ecology of many tropical deer species. There is extensive treatment of the lineages for each group, including a chapter devoted to *Megalocerus* and other recent giant deer species, most of which is devoted to linking allometry, habitat, and ecology. The concluding chapters cover each deer group and return to Geist's continuing theme of continua that are shaped by selection forces. His conclusions that humans have shaped much of deer biology is certainly borne out in the European species, and I agree with the high value he places on species' responses to predators.

The strengths of the book lie in Geist's ability to draw together a diverse literature and to place behaviors and ecology observed for one species in the context of other deer species. The bibliography is extensive, and Geist had access to many texts that I was not aware of, citing extensively from German and Russian texts. I enjoyed the emphasis on behavior and the cross-species comparisons of flight and mating behavior. I was surprised by the scarcity of behavioral observations on many species outside captive situations. One strength of the book is certainly the illustrations, most of them drawings by Geist, which capture the subtle differences between species. The appendix tables of physical and physiological measurements will be a valuable reference for all deer biologists. There is an index, but it is not extensive, as topics are brought up repeatedly throughout the book, but only the main discussion appears to be referenced in the index.

I did not agree with the in-depth comparisons between subspecies. The premise is that differences in coat color and marking and in antler configuration reflect ecological/genetic selection at work on these populations, while size differences are phenotypic and reflect site quality. I agree with the size differences, but await more support for the coat colors. I realize that subspecies comparisons are at the heart of Geist's dispersal hypothesis, but for me the clearer chapters are the ones in which subspecies issues do not cloud the picture, such as those on white-tailed/mule deer and three-pronged old-world deer. I wish there were range maps that went with each discussion, as my sense of geography is not what it should be. I found a minimum of mistakes, just the usual pesky decimal points. It seems each chapter was written as an independent unit, as similar discussions occur in each chapter. For example, a discussion of species differences in response to being chased by dogs or mounted hunters occurs in each group chapter. Geist might have shortened the book considerably by referring to previous discussions.

More ideas are expressed in each chapter of this book than are usually seen in an entire Ph.D. dissertation. The speculative ideas, which usually come at the end of paragraphs or sections, are fascinating, but certainly debatable. Geist's writing style is such that speculative ideas or hypotheses are sometimes presented with stronger language than the data would bear. The lack of qualifiers was sometimes disconcerting, but, when I could lean back and enjoy the ride, it made for fascinating reading.

I recommend this book to laypersons who are curious about the animals they have been following. No other book compares the well-known species, which are covered extensively within the hunting literature, with the less-known species that make up the bulk of the world's deer. This is not a management book that provides prescriptions for each species. However, I do recommend this book to professionals, as it provides a unifying theme for deer species and enough detail to start testing hypotheses. The cross-species comparisons are thoughtful and point to the lack of basic information on tropical species, and the behavior of common species in natural settings. I am not sure what percentage of the hypotheses that Geist presents will prove true, but they will provide the gist for many dissertations. This book will be mined for a generation, while we wait for the next holistic deer biologist to appear.

REFERENCE

GROVES, C.P., and GRUBB, P. 1987. Relationships of living deer. In: Wemmer, C., ed. *Biology and management of the Cervidae: A conference held at the Conservation and Research Center, National Zoological Park, Smithsonian Institution, Front Royal, Virginia, 1–5 August 1982*. Washington, D.C.: Smithsonian Institution Press, 1987. 21–59.

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POLAR DANCE: BORN OF THE NORTH WIND. Photographs by THOMAS D. MANGELSEN, with text by FRED BRUEMMER. Omaha, Nebraska: Images of Nature, 1997. ISBN 1-890310-03-4. 264 p., 1 coloured map, 280 colour illus., line drawings, index. Hardbound. US \$65.00.

This book is a large, attractive volume, replete with hundreds of fine colour photographs, well produced on good-quality paper. The large format announces to the reader that this could well be a further addition to the "coffee table genre" of big publications with minimal text and pretty images. However, while the authors would be unwise to deny a certain kinship with that much-disparaged genre, there is much to distinguish and recommend this production.

This is not an academic text, and it would be invidious to judge it by such exacting criteria. That said, it is important to recognize what this book is, rather than what it is not. It is overwhelmingly a popular book intended to serve a wide audience of nonspecialists who seek an introduction to the polar bear, its habits, and its environment.