to metal chimney caps than the peanut feeder? Why do birds insist on chirping in a new day at 4:30 in the morning, right outside their bedroom window? And of course, the timeless question; How to stop their new bird feeder from becoming an all-you-can-eat diner for the cunning gray squirrel? O'Connor provides excellent and thorough advice for his readers, even if he hasn't found a sure-fire solution to the squirrel problem.

Why Don't Woodpeckers Get Headaches is a fascinating collection of people's backyard bird triumphs and tragedies. O'Connor is a talented writer, whose quick wit and edgy humour had this reader crying with laughter. Not only does he answer readers' queries with accurate and detailed opinions, he also provides a brief background look into the bird's appearance and behaviour. The illustrations by Catherine E. Clark are well done and the birds are easily identifiable.

This book is aimed at readers of all ages, and all birding-skill levels, from novice to expert. It is well written and gives a new and often amusing perspective to the world of back yard birding. Even people who are not interested in birds will have a great time reading this book and I would recommend it to anyone. So why don't woodpeckers get headaches? Well, if you want to know, buy the book!

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BOTANY

Alaska Trees and Shrubs. Second Edition

By L. Viereck, and E. L. Little (with contributions by D. F. Murray and E. L. Little, Jr.). 2007. Snowy Owl Books, University of Alaska Press, Fairbanks, Alaska. 265 pages. US$24.95. Paper.

Measured in Cranberries, Alaska must be among the wealthiest states in the world. Although this Alaskan hardcopy publication was printed in China, it was produced with major U.S. governmental support. A long-awaited second edition, its underlying data exist elsewhere in digital geo-referenced format online. For some of the most abundant Alaskan species (willows, over 37 *Salix* species occur in Alaska) the authors present text that simplifies relevant details and identifications.

These complex details are all part of Alaska's wild reality and a management that is mainly oriented on commercial goals. The lack of a GAP project in Alaska (otherwise found throughout all states within the U.S.; see http://gapanalysis.nbii.gov/portal/server.pt) leaves it a large and harmful heritage; e.g., lack of relevant biodiversity management information and digital administrative culture. At least the digital data from this book are available in an older GIS format (ArcGIS 9.0 + Metadata) at the Bonanza Creek LTER website (http://www.lter.uaf.edu) raising hopes of great things to come in the future. This matters a lot, because as the book outlines: "An increasing number of people look to Alaska for wilderness that is no longer present in the more developed areas of the world". It therefore represents a global natural resource leadership issue and role model on how we deal and publish on Alaska's biodiversity and wilderness management components that are so crucial to business and human welfare of the global village.

Together with contributions by D. F. Murray and G. W. Argus, the authors summarize in this book (first edition published in 1972) their life-time achievement presenting up-to-date information on over 14 tree and 115 shrub species. The book offers four identification keys (Key to Alaska Trees and Tall Shrubs Based Mainly on Leaves, Winter Key to Deciduous Trees and Tall Shrubs of Alaska, Key to Genera of Alaska Shrubs, Winter Key to Alaska Shrubs). For each of the 132 species, distribution maps, a descriptive text (usually covering leaves, twigs, bark, wood, flowers, capsules, hybrids, habitat, distribution, uses and notes), paintings and photos (44 color plates overall) are presented. I enjoyed the numerous drawings (mostly taken from Forest Service publications). The plant distribution maps present traditional-style, expert-drawn "polygon monsters" with mathematically exact shapes and margins but are unlikely to represent biological reality or relevant landscape gradients. Some of the general species text information one might find in other botanical key references. However, readers interested in Alaskania will appreciate the many species details provided. For instance "Alaska Athabascans eat the fruits raw or cooked in moose fat" (for Silverberry), or "Alaska Indians used the wood for totem poles, dugout canoes, and houses, and made mats, baskets, and ropes from the stringy bark" (for Western Red Cedar).

The reader of this book will appreciate the incredible diversity (and abundance) of willows, birches, and berries (e.g., Blueberry, Bearberry, Cranberry, Huckleberry, Snowberry) in Alaska. But environmental problems, widely cited in geo-botanical publications, such as climate change, endemic species loss, road impacts, overcutting, nitrogen input and general human footprint found throughout Alaska are sparsely treated). Oil development, or pipeline impacts, key features in Alaska's landscape and recent history, and discussed almost worldwide with high-profile books devoted to this issue (see for instance National Research Council of the National Academies 2003), are hardly even mentioned.

The authors maintain a dubious and ecologically non-sensitive view that "…the distribution of trees and shrubs have changed little" since the 1970s. However,

at least the changes for Greene Mountain Ash and Creeping Juniper are described. The concepts of (Landscape) Ecology, Biogeography, Fragmentation, Biodiversity, and related loss of plant DNA are virtually omitted in this book. With great regret one has to see once more that the impact of the Intensive Management Law (signed 1994 by Governor Hickel; maximizing moose numbers through non-science based predator control, and thus severely affecting browsing on shrubs and vegetation Alaska-wide) remains virtually unmentioned. But the impact of ANILCA (Alaska National Interests Land Conservation Act) in 1980, and the number one problem of the Alaskan National Parks, invasive species, is mentioned (over 100 invasive species are referred to, but only 9 are described in this book; for a better description the reader is advised to visit websites such as http://www.ucsusa.org/invasive_species/state-invasion-portfolios.html and http://www.uaf.edu/ces/ipm/plants/index.html). Many of these species were introduced with governmental help, even by agencies that now have to spend huge amounts of their budget to deal with these earlier sins. The book section on Transplanted Native Species I found very informative (e.g., for Sitka Spruce: "During World War II, the U.S. military had an active program of planting trees near bases in the Aleutian Islands."). Other environmental topics mentioned are facts like "Much Alaska cedar is exported to Japan in log form…", or for Sitka Spruce: "Low-grade lumber is made into packing boxes for the Alaska salmon industry". Keep in mind that the Tongass and Chugach Forest is the largest temperate rainforest in the world, with an extensive network of forest roads reaching more than 10 times around the world! Fortunately, the authors leave no doubt that more forest exploitation will occur in Alaska. Such an outlook makes one shiver for Alaska's future well-being; plants included.

But Cranberry juice apart, "Alaska is a land of contrasts in climate, physical geography, and vegetation" providing a great country for botanists with a thirst to explore. Besides many endemics, it harbours the Quaking (Trembling) Aspen (most widely distributed tree in North America) as well as the largest cottonwood known until 1965. And so, the book is full of fascinating Alaskan landscape details such as nunataks, ice fields, permafrost, and some fire history. The prominent botanist Robert Marshall and his historic seedling experiments are also mentioned. But relevant Russian, Chukotkan, Kamchatkan and Bering Sea botany are not further dealt with, nor the links to the Yukon, British Columbia or the circumpolar Arctic.

It appears a botanical religion that a vegetation classification always has to be carried out in such botanical books and landscapes. Therefore, this publication offers 8 main vegetation types and their leading species for Alaska (published by the U.S. Forest Service 1971; but relevant quantitative analysis details are not provided, and one has to trust the experts blindly once more).

The underlying botanical species taxonomy of this book is still in flux, as can be seen in the large number of hybrids, or in the alder, birch and willow species complexes. Such dynamic and complex taxa are not easy to deal with by using classic governmental hardcopy black-and-white publication philosophies (the authors followed for instance the *Flora of North America*, Furlow 1997 and Argus 2004). It is here where readers need more leadership from the experts. Perhaps presenting links with Genbank (http://www.ncbi.nlm.nih.gov/Genbank/GenbankOverview.html) and ITIS (http://www.itis.gov/) would start this concept?

The general audience will appreciate the two Alaskan botanical maps and the four page glossary of botanical terms. A seven page index of Common and Scientific Names, and the six pages of literature are of further interest.

The authors state the contributions from several agencies and funding institutions, including the U.S. Forest Service and the Museum of the North Herbarium Database. Unfortunately, botany is often equated with timber, and, as elsewhere, a governmental forest service focus and its cultural bias can be found in this book. For instance, from an Arctic tundra perspective, I am disappointed not to find any relevant references from S. Walker in this book; the reader is advised to see online for CAVM http://www.geobotany.uaf.edu/cavm. But despite the forestry involvement, the authors still make a nice case that "…the forests of Alaska provide more than timber to the people of Alaska, and the rest of the United States". Well spoken.

This book well describes what Alaska currently has to offer: wide terrain, many new botanical findings that are waiting to be put in order (à la: "we sort 'em postmortem"), and much relevant ecology and sustainable management waiting to be done. Curious naturalists might also want to compare the state of the art in Alaska with the *Flora of adjacent British Columbia* (http://www.eflora.bc.ca). One assumes that the future will likely see digital online species pages, such as already started in Wikipedia and coming forward in GAP and GBIF, with a Biology Google ("Boogle", or Poogle for Plants) just being around the corner. This books makes for a great step towards this achievement for Alaska, its cranberries and beyond.

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