

dives deeply into anthropology. The Pronghorn represented fleetness, alertness, and pertinacity, and was a catalyst in the social structure and welfare of most plains tribes. It is no wonder that many place names today derive from this one species, but who would have expected 108 such instances in Arizona and 79 in Wyoming? Two detailed appendices list dates of eyewitness accounts between 1540 and 1896, and the names of the Pronghorn in each native language. Historical accounts go back to Sahagun in 1569 and Hernandez in 1651, both in Mexico. Lewis and Clark popularized it during their exploratory journey of 1804-1806, and George Ord gave the Pronghorn its binomial Latin name in 1815.

Before Europeans reached the Americas, aborigines hunted the swift-footed Pronghorn with three instruments: sling, atlatl, and bow-and-arrow. A well-conditioned, determined native could sometimes, in spite of his much slower pace, outlast and eventually tire and kill a Pronghorn. More often, stalking, pursuing, surrounding, luring, calling, impaling, ambushing, netting, driving with v-shaped fences, setting prairie fires, and making pitfalls, were the methods used to kill them for food. Pronghorn hunting required more preparation and more co-operative effort than did hunting of the larger Bison. The Pronghorn was then one of the natives' most important food sources, especially where Bison were scarce near the edge of their range. An antelope skin was thinner and lighter than that of a Bison, and thus more suitable for clothing. A native would obtain about 45000 calories from a 43-pound Pronghorn carcass.

Pronghorn bones were used as toys, rattles, awls, pipes, fishhooks and decorations. Sinew served as strings for bows, and for sewing. A skin stretched tightly over a section of hollowed tree formed a drum. Marrow was rubbed on sunburned or chapped lips and

skin. A Pronghorn fawn was used as bait on branches above a pit where an Indian patiently waited to catch a Golden Eagle for its feathers. Images of the Pronghorn were used to decorate native pottery, on the walls of caves at ten known sites, and as effigies.

Hunting became much easier after guns spread north from Mexico and guns and ammunition were obtained in trade, but this soon led to squandering of the once-precious resource by a veritable army of 5000 white hunters. From 1874 through 1877, more than 100 000 Pronghorn hides were shipped from the plains annually. As the Bison almost vanished, the Pronghorn became even more important as a food source, and their numbers dwindled as well, from about forty million to fewer than 15000 in 1910. Bereft of their two largest natural food sources, native peoples were overwhelmed, subjugated, displaced, and pauperized of their culture, identity and social options, losing much of their spirit and vitality.

Although three of the four last sections tell a grim story, dealing with the near demise, in turn, of the Bison, the people, and the Pronghorn, the book ends on a positive note with the birth of the conservation ethic. In 1887, Theodore Roosevelt convened a dinner meeting in Manhattan to launch the Boone and Crockett Club; he and the other founders had a strong affection for the Pronghorn, which eventually benefitted from the conservation ethic and philosophy of this fledgling movement.

This attractive, scholarly, modestly-priced book belongs in major libraries. It would make a perfect gift for anyone interested in history, geography, anthropology, or big game hunting on the plains.

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A Guide to the Birds of St. Helena and Ascension Island

By N. McCulloch. 2004. The Royal Society for the Protection of Birds, The Lodge, Sandy, Bedfordshire, SG19 2DL Great Britain. iv + 92 pages, 11 GBP.

The booklet is intended for the visitor and has three parts. The first is an overview of island history from time immemorial to present. The second is a site guide giving where to find birds on these islands. The last part is the bird accounts.

The bird accounts cover 31 species for St. Helena and 46 for Ascension that a visitor is likely to see in a day trip around each island. Of these 11 are seabirds and 10 are shorebirds on St. Helena and 13 are seabirds and 16 shorebirds on Ascension. So only about 30 % of the island species are land birds, with most of them being introduced. There have been 41 other attempts at introduction on St. Helena and 9 on Ascension.

The account of the history is fascinating and so typical of remote islands, especially after its "discovery" by humans. This is not good bedtime reading

though. The destruction of the islands ecosystem is the usual unpleasant tale of wanton destruction misguided mistake and foolish carelessness. There have been 41 failed attempts to introduce everything from a white-eye to an ostrich to St. Helena and 9 attempts on Ascension. This includes the introduction of House Sparrows in 1986 (to be company for a ship-assisted vagrant who arrived in 1985). Will we never learn? On a happier note there are programs underway to restore habitat for around 40 species of endemic plant and 9 species of creepy crawlies (one – the Golden Sail Spider – is illustrated) as well as birds. There are also programs to reduce cats, goats and the like.

The bird finding section is typical of current field guides, portraying the bird on the left and giving information on the right. It covers 28 species. Half of these are seabirds. The remainder are land birds, almost all introduced. The English names are fairly consistent with other texts, but there are no references to alter-

native names. For example Maderan vs. Band-rumped Petrel or Parasitic Jaeger vs. Arctic Skua. The text here along with the rest of the book is good and clear.

The author has added a table of accidental species for the two islands (31 on St. Helena and 46 on Ascension. This did not quite match my own list, but I think the difference is due to the political boundary that includes Tristan de Cunha and Gough Islands, thus adding several Antarctic species)

The artwork consists of watercolours that are refined sketches of birds during their normal activities. This gives a better idea of their jizz than the more formalized field guide style of the recent books, and is more akin to the style of postwar books. Indeed, my favourite is a perky field sketch of a Java Sparrow that fronts the section of land birds on which you can almost count the small number of brush strokes. The reader can compare this with the more "finished" plate in the accounts section.

I found it ironic that the endemic Madagascar Fody was introduced, not from Madagascar but from Mauritius (where it is an introduced threat to the endemic

Mauritius Fody) and became so numerous it was part of the St. Helena cage bird trade. How convoluted we make the world.

So why go to these remote places? First there is the attraction of wild oceanic islands. While they are no longer the lush paradise first seen by the Portuguese they still are dramatic. The rich brown cliffs surrounded by blue sea set off the white, guano-capped islands. Second, however diminished, there are good seabird colonies; always exciting places. And last, for the hard core, they are the only places to see Ascension Island Frigate and Wirebird. While remote, these islands are not inaccessible. There are some tours that include them on a cruise, although these are very expensive. Routine commercial sailings leave from Cardiff, Wales and Cape Town, South Africa a few times a year. They dock in St. Helena and Ascension for a day or two – enough time with this guide to see most of the islands birds

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BOTANY

Flora and Climatic Conditions of the North Pacific: A Collection of Scientific Papers

Edited by A. N. Berkutenko, H. G. Lumsden, and D. Lumsden. 2001. Institute of Biological Problems of the North, North-East Scientific Center, Far East Branch, Russian Academy of Sciences. Magadan. 189 pages, No price available.

The subtitle – *A collection of papers* – better indicates the contents of this book than does its lead title. What we have here is a nicely produced small book consisting of papers on flora and vegetation, for the most part, but also one paper each on fungi and ethnobotany, two on seed biology, and one on the influence of air masses from the Sea of Okhotsk on summer temperatures in Japan. An odd mix, but perhaps the inevitable result of the need to collect sufficient papers, achieve critical mass, and gain publication. To one interested in floristics and taxonomy, several of these papers are informative and useful. Since the book is entirely in English, it opens to a wider audience than usual the results of botanical studies in the Russian Far East. The prime mover for this collection was A. N. Berkutenko who wrote entirely or contributed to six of the collected 15 papers. Since it is difficult to generalize the disparate contributions, I will give a précis of each.

Yakubov et al. provide a brief sketch of the physical setting, a history of botanizing, and an annotated checklist of 235 species for the flora of Avachinsky volcano. The next paper by Mochalova describes the very small flora of very small islands of the Commander archipelago and the effects of bird colonies on the vegetation there. Two papers by Khoreva and by Berkutenko et al. discuss the vegetation and flora of two islands in the Sea of Okhotsk and provide checklists

for the Yams Islands and Nedorasumenia Island, the latter with the unexpected occurrence of the Asiatic shrub *Caragana jubata*.

Sinelnikova gives a synopsis of the plant cover and a checklist for 454 species of vascular plants found at the Orotuk field station in the upper Kolyma River region. The station lies in larch taiga near the Kolyma floodplain. The *Chosenia arbutifolia* and *Populus suaveolens* of the gallery forest and the *Pinus pumila* communities farther upslope are among the memorable botanical images I took away from my trip to the region. A short paper by Berkutenko and Khoreva, in a structure now familiar, provides a sketch of the vegetation and a checklist to the 98 species found at the Mount Kamenny Venets nature monument, which includes the endemic willow *Salix magadanensis*. Thus ends the first 117 pages. From here on, the papers have less to do with each other or to what has gone before.

A list of 161 macromycetes in the Magadan Preserve by Sazanova is followed by a report by Berkutenko and Yukawa of the first record for the orchid *Liparis kumokiri* for mainland Russian Far East. Next Misako proposes that morphological variation in the Japanese *Sanguisorba tenuifolia* has originated from hybrids between *S. parviflora* and *S. officinalis* occurring in coastal Russian Far East. In a brief, idiosyncratic but interesting essay, Berkutenko contrasts with ethnobotanical anecdotes the changes that have taken place in people's lives since Krashenninnikov reported on 18th century habits of the local people on Kamchatka. She includes some differences between practices in the Russian Far East and Alaska as well. This paper is fol-