

listed forward (e.g., Lapland Rhododendron and Alpine Lady Fern) and some entries are listed backward (e.g., Primrose, Finnmark and Birch, Downy) making it difficult to decide which letter to use.

The author includes range maps from other sources. The maps for plants use the scientific names (If you did not know *Silene acaulis* is a Moss Campion [as opposed to the synonyms: *Silene bryoides*, *Silene ex-capa*] you would be a little lost. The lovely photo of *Parmelia centrifuga* is not identified as a concentric ring lichen). The map captions for birds use English names. The maps are not in the index.

The Three-toed Woodpecker was split in 2003 into the American Three-toed (*Picoides dorsalis*) and Eurasian Three-toed woodpeckers (*Picoides tridactylus*) using differences in mitochondrial DNA sequences. The author has not mentioned this or any other recent splits. Perhaps this is not as significant an issue in a book focused on ecology rather than identification.

Finally, the book contains two photos of people; one is the author, although the caption omits this detail and the other is Jeanette. The book is dedicated to this lady, but her presence is never explained (she is Mrs. Redcliff).

This is a great book for anyone interested in the far north or who wants to understand the complexities of life. It is wonderful and fascinating reading if you are passionate about natural history, but is of more limited value for research.

Derek Redcliffe was the first to establish the role of agricultural pesticides with the decline of birds of prey. He was chief scientist of the Nature Conservancy Council in the UK where he acted as a scientist and lobbyist for nature conservation. He fearlessly attacked and changed agricultural and forestry interests for the damage to wildlife value caused by their policies and practices in place at the time. Not an easy or popular task in Maggie Thatcher's world. Despite his legendary contribution to UK conservation he was denied any honour by the state – in a country that knights pop stars. Redcliff was known an extraordinary naturalist, good company and friend. His last book is a fitting legacy.

ROY JOHN

2193 Emard Crescent, Beacon Hill North, Ottawa, Ontario
K1J 6K5 Canada

Fish, Fur and Feathers: Fish and Wildlife Conservation in Alberta, 1905-2005

Fish and Wildlife Historical Society. Federation of Alberta Naturalists (FAN), Edmonton. \$39.50, 418 pages.

This sumptuous, well-illustrated book is an eclectic mix of articles, reminiscences and interviews. The main text is on white paper, and the other contributions on yellowish paper. Only rarely does this confuse the reader but the white paper portion of chapter four ends in the middle of an incomplete sentence.

As expected with any product of a committee, some chapters are stronger than others. We often know who wrote a particular piece, but sometimes we don't. Nowhere, not even at the end of the two-page Editor's Note, are we told the name of the chief editor (Bill Wishart, as I learned from a special enquiry to Edmonton). At the end of each chapter are references and a useful chronological list of the main happenings.

In Alberta, as elsewhere, the responsibility for fish and wildlife management grew from a handful of voluntary game guardians to a diverse group of biologists and enforcement officers within professional, academic, and conservation communities. Yet for the better part of a century the emphasis was on fishing and hunting. In 1967 the first female biologist (now the president of the Canadian Medical Association) was hired, and only in 1987 was the first non-game biologist hired. Now there are 14 recovery teams developing and implementing plans for threatened and endangered species.

Some accounts are superb. The account of the change in upland game numbers associated with harvesting practices, from threshing machines, grain separators,

and wheat stooks to combine harvesters, is among the best I have encountered.

Alberta has had some unique successes. The Peregrine Falcon restoration program, under the direction of Richard Fyfe, was immensely important. One week in the 1960s, biologists taught a three- or four-evening short course in wildlife biology and management, specially designed for Members of the Legislative Assembly; more than half of them attended! A M.Sc. thesis on the fish and wildlife damage inherent in the planned Highwood Dam helped to influence the shelving of that project.

Biographical information is generally excellent, giving credit to world leaders in biology, especially William Rowan. Even though this book is co-sponsored by the FAN, amateurs are somewhat slighted, except for Frank Farley, Cam and Joy Finlay, Elsie McAllister, Myrna Pearman, Dewey Soper, and Kerry Wood. Edgar Jones is barely mentioned and Otto Höhn, Robert Lister and Al Oeming are omitted. Information resulting from bird banding is provided only as regards waterfowl. The Beaverhills Bird Observatory is not indexed. The outstanding studies of Golden Eagle migration west of Calgary by Peter Sherrington, the landmark studies of Ferruginous Hawk biology by Josef Schmutz, and the northern owl banding by the Edmonton group are not mentioned.

The compilers are frank about some of the bureaucratic bumbles ("bureaucracies are often much too short-sighted," page 207) and failures, such as legislation

drafted, but never proclaimed. The “biggest mistakes of the century” are identified as the transfer of diseased bison to Wood Buffalo Park, game farming, predator control attempts, “too many fishermen,” and loss of habitat.

There are a few errors of fact and interpretation. The two-page account of the Prairie Farm Rehabilitation Administration is unusually misleading when it speaks of 87 community pastures by 1999, omitting the fact that only one (in three blocks within the Suffield Military Range) of these PFRA pastures is in Alberta. The American White Pelican was threatened, never endangered (page 341). Gary Pelchat was born in Ponteix, not the never-existent Phoenix, Saskatchewan. David Munro is misspelled “Munroe”. The first two Franklin Arctic expeditions were hoping to find an arctic sea route, not an overland route to Asia. The index is inadequate, failing to index names of any organism

(e.g., pronghorn, ring-necked pheasant, and liver fluke). For consistency, the book title might better have been *Fin, Fur and Feathers*.

With pressure from an increasing urban human population, highways, and mechanization of farming, mining, oil extraction, forestry, dams and irrigation, it will be difficult to maintain biodiversity in the decades to come. Some hope may be gained from looking at both the successes and failures of the past.

A large book, it is too heavy for bedside reading. Caveats aside, this is a wonderful collection of information that should be in all major Canadian libraries, and read by everyone interested in the history of fish and wildlife conservation and management.

C. STUART HOUSTON

863 University Drive, Saskatoon, Saskatchewan S7N 0J8
Canada

The Gulf of Alaska: Biology and Oceanography

By P. Mundy 2005. Alaska Sea Grant College Program, University of Alaska-Fairbanks, Edited by Exxon Valdez Oil Spill Trustee Council.

Alaska is perceived “...as a place of wilderness, beauty and a special way of life”. This book describes the Gulf of Alaska (GOA), a region with many world records. Besides covering a huge area, having the third largest permanent ice field in the world and being a central place, crossroads, for almost all of the Pacific salmon, GOA also is among the most productive oceans in the world.

The introduction is a chapter on general oceanography for the lay public; the classic concept of the ‘Conveyor Belt’ is presented. Due to its ecological importance, I like the human footprint statement such as “Human uses of the GOA are extensive” and “... it is rare to walk the intertidal zone anywhere in GOA without seeing evidence of human activity”. The “...marine pollution and floating refuse from as far away as Asia, or originating from deliberate deep-ocean dumping or accidents at sea, can be swept north and westward around the shelf edge in the GOA. Trash from the international fishing industry operating 200 miles offshore is commonly found on beaches”. Further, one will read that GOA has arguably the best known rocky tidal zone on earth, and this small tidal zone is crucial for the ocean. This book admits climate change but leaves it somewhat undefined whether it is a man-made issue, or not.

The book contributors emphasize that to fully understand the ecology of GOA first one needs to make an effort to identify of all relevant species, e.g., plankton. Shrimp, once among the dominant benthic epifauna in Lower Cook Inlet, Kodiak and along the Alaskan Peninsula, declined after maximum harvests in 1977, and today its fishery is virtually nonexistent. Red King Crab crashed in 1980, and Tanner Crab fisheries are

down as well. The clam fishery in Cordova never recovered from damages brought by an earthquake. Despite its fishery of global importance, the two short paragraphs for the Pacific Cod section are rather uninformative. The fisheries for Walleye Pollock have been down since 1982. The Herring loss story for Seldovia Bay and Lower Cook Inlet is reported on as well. Salmon from Japan, Russia, British Columbia, all of Alaska and the Pacific North West spend some part of their life cycle in the GOA. The canned salmon industry collapsed in 1959, the year when Alaska became a U.S. state.

Despite all of this overwhelming evidences of limited ocean supplies, some book contributors still claim in their chapters the traditional views of “unlimited resources”. Other sections blame the “stocks” and anglers for their impacts (rather than their managers with a governmental mandate for safeguarding the public resource). Fortunately, sea floor dredging effects are explained, since fishery impacts to the soft-bottom benthic community are a possible driver of community change. It is suggested in the book text that this affects Steller Sea Lions as well.

Throughout, the book shows that for non-commercial species we lack management information. These species compose the bulk of the biomass. By-catch of the juvenile cohort occurs in fisheries like Herring, Pollock, and Salmon. However, for many of the non-commercial species the magnitude of this phenomenon is not really known, nor how much it affects these stocks.

Even apart from all of these severe marine issues mentioned in the book, the described terrestrial situation is equally puzzling: The book states that in the GOA, 24% of the water bodies listed are on the state’s list of polluted sites attributed to some aspect of logging.