

representatives from Michigan presented three papers that dealt with hunting with hounds, age determination from premolar sections, and age determination from cementum annuli. A review of the Black Bear's status was not outlined for Michigan.

It was generally felt that compared to other major wildlife species, knowledge of the Black Bear is presently insufficient to enable biologists to develop suitable management strategies. Many jurisdictions have initiated research and management programs only in the last decade. There is much still left to learn about the Black Bear in Central and North America.

Part two consists of a paper presented by Stephen Herrero of the University of Calgary, entitled "Black Bears — the Grizzlies Replacement." Herrero presents the theory that Black Bears, despite their apparent adaptability to man and altered habitat, will not succeed the Grizzly Bear in its habitat for evolved morphological and behavioral reasons.

Part three is comprised of the reports from the Pacific, Rocky Mountain, southeast, and central and northeast Canada and the United States working groups. Consideration is given to: habitat, land use,

management, hunting, population trends and density, illegal activities, bear-man conflicts, public education, and research needs. Corresponding recommendations are set forth in the text. For example, timber management guidelines designed to protect and enhance Black Bear habitat were submitted by the Pacific working group. They include recommendations that deal with the size, spacing, and frequency of clear cuts, as well as herbicide use, road construction, and access.

Part four, entitled "Final Session Comment," is a dialogue between the participants during which the chairmen summarize the recommendations developed by their respective working groups.

The text is well organized; however, a few of the figures referred to in the text are missing. The book is a useful reference document and is recommended to those involved in Black Bear management.

PAUL A. GRAY

Wildlife Service, Government of the Northwest Territories,
Yellowknife, Northwest Territories X1A 2L9

The Freshwater Fishes of Alaska

By James E. Morrow. 1980. Alaska Northwest Publishing Company, Box 4-EEE, Anchorage, Alaska. 248 pp., illus. U.S. \$29.95 (+ \$.75 U.S. Postage and handling).

This is an informative, pleasingly designed, well-illustrated book on the 56 species of fishes occurring in the freshwaters of Alaska. A considerable amount of information is packed into the two and a half ($8\frac{1}{2} \times 11$ in.) pages devoted on the average to each species. The text, which is written in readable prose rather than telegraphic statements, should appeal to the angler as well as the scientist, especially as the text's layout and typography is pleasing to the eye.

The book is divided into an introductory section, a key to the families, family and species accounts, a 25-page bibliography, a glossary, and an index. The color photos and illustrated plates are grouped together in the middle of the book. Some color photos are excellent (the elegant spawning livery of the Dolly Varden) while others are based on moribund specimens. The carbon dust illustrations by Marion J. Dalen combine detail, precision, and the spark of life. I care less for her water colors which do not seem to capture the luminosity of live pigments.

A chapter is devoted to each family or subfamily. The chapter usually begins with a key to species and an account of the distinctive morphological and biological features of the family. Important diagnostic characters are often illustrated to help the reader use

the keys. The species accounts have the following sections after the common and scientific names: distinctive characters, description, range and abundance, habits, and importance to man. Habits, the longest section, presents an account of the life history of the species. Outline drawings and maps with ranges indicated by cross-hatching are included for most species. The reviewer prefers spot distribution maps for the greater amount of information they convey. Little emphasis is given to systematics.

The book is well edited and there are few typographic and scientific errors. The range of Arctic Charr, however, extends to Alert, northern Ellesmere Island; and Ninespine Stickleback, contrary to several references, are not found in Greenland. The lateral line "pores" of Blackfish and head "pores" of the Arctic Lamprey are instead surface neuromasts. Plate 30D shows eight left and seven right branchiostegals on the coastrange sculpin; normally six are found on each side in this species.

This beautifully designed, informative, and readable book should appeal to the fisherman, naturalist, and biologist. The author, artist, and editor are to be congratulated.

DON E. MCALLISTER

Ichthyology Section, National Museum of Natural Sciences,
Ottawa, Ontario K1A 0M8



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