

Avian Resources of Southeast Alaska: A Brief Review and Their Importance to Eagles

M. E. "Pete" Isleib

1938-1993, Juneau, AK

The wealth and diversity of Southeast Alaska's avian populations are important to the area's Bald Eagles. Geographic position, maritime climate and diverse and rich marine environments all affect the abundance and diversity of the avian resources of Southeast Alaska.

Six major geographic regions have been recognized and defined for Alaska relative to bird distribution (Kessel and Gibson 1978). Southeastern Alaska, including its contiguous offshore waters south of Cape Fairweather, is the farthest east and smallest of these biogeographic regions. The region's southerly position and proximity to birds of continental climates and its position on the Pacific coastal migration corridor contribute to its avian diversity.

Relatively little has been published on the distribution and abundance of birds in the region. Historically, data prior to the end of the nineteenth century are extremely limited. During the late nineteenth century and the first half of this century, Southeast Alaska for the most part was bypassed by ornithological investigators seeking more discovery-oriented results from arctic and subarctic Alaska. However, two major natural history investigations, the Harriman Expedition in 1899 (Keeler 1910) and the Alexander Expeditions of 1907 (Grinnell 1909) and 1909 (Swarth 1911) visited numerous localities in Southeast Alaska and provided the first abundance of material and information on the birds of the region.

Subsequently and prior to statehood in 1959, several individuals added appreciably to our knowledge of the region's avifauna, including Alfred M. Bailey (1927), George G. Cantwell (1897), Joseph S. Dixon (1907), Ira N. Gabrielson (1944), Joseph Grinnell (1898, 1909), Stanley G. Jewett (1942), Harry S. Swarth (1911, 1922), J. Dan Webster (1941, 1950), George Willett (1914, 1915, 1921, 1928) and Ralph B. Williams. Brief summaries of the work of these people, as well as specific data and syntheses, are included in Gabrielson and Lincoln (1959).

Since statehood, governmental agencies have conducted several studies of the region's

waterfowl, raptors and seabirds. Some threatened species such as Bald Eagles and Trumpeter Swans have received special attention.

Of late, most recent agency studies have taken a more ecological or ethological approach. Comprehensive information on the status, distribution, abundance and breeding biology of all birds in the region has been gathered and compiled principally by Brina Kessel and Daniel D. Gibson at the University of Alaska Museum and by volunteers.

Volunteers working with programs of the National Audubon Society annually conduct breeding bird censuses in June at a few sites in the region. They also conduct Christmas Bird Counts at eight of the region's population centers and contribute observations to Alaska's seasonal columns in the Audubon Society's field journal *American Birds*. During the past 25 years, *American Birds* has contained much of the new information and information about trends regarding birds in Southeast Alaska.



Bald Eagle searching for food from spruce tree perch. Photo by Jack Hodges, USFWS.

Many states have completed or are compiling breeding bird atlases. These are comprehensive censuses and surveys of all breeding bird populations within their geographic borders. Mostly because of Alaska's vastness, Alaskans will probably lack this depth of information for the foreseeable future. For Southeast Alaska such information is available on some colony nesting seabirds and Bald Eagles. Brina Kessel and Daniel D. Gibson, however, are preparing a new comprehensive publication on Alaska's birds. The authors have been amassing a tremendous volume of material on the birds in the various biogeographic regions of Alaska for more than 30 years.

Of the 430 species of birds that have occurred in Alaska, more than 300 have been recorded in Southeast Alaska-more species than have been reported in any other biographic region of Alaska. (Gibson, pers. comm.). Several species are represented by hundreds of thousands, even millions, of individuals, while about 70 species have been "vagrants" beyond the periphery of their annual range. Many species reach their distributional limits within the region and some occur in very small numbers or only in restricted habitats or locations. Approximately 130 species breed in the region, about 120 species occur during winter, 210 during spring, 160 during summer and 215 during fall. Of the birds recorded in Southeast Alaska, approximately 50% are marine or water-dependent species and they constitute more than 80% of the total avian biomass utilizing the region during any season of the year. Waterfowl, shorebirds and seabirds each represent millions of individuals.

The diversity and quantity of birds in the region is important to water-dependent predators and scavengers such as *Haliaeetus* eagles, that depend on avian resources for much of their diet. The Bald Eagle, nearly ubiquitous in the region, represents a biomass of more than 100 tons and it captures and consumes even the largest of other birds. An investigation of the stomach contents of nearly 400 Southeast Alaska Bald Eagles conducted during the bounty years revealed that birds, principally waterfowl, constituted a large percentage of eagle diet during the colder months of October through April (Imler and Kalmbach 1955). During November more than 50% of the volume was ducks and geese and on an annual basis birds represented nearly 20% of the eagle's diet.

At seabird colonies on Forrester Island National Wildlife Refuge, another investigation of eagle pellets revealed birds were the most frequently found prey in summer and contributed the greatest volume to the diet (DeGange and Nelson 1978). Food habit studies elsewhere in Alaska and in the Pacific Northwest have reported that the proportion of birds in the diet of Bald Eagles may vary from nearly 20% to 86% by volume, depending on general area and time of year (Imler and Kalmbach 1955).

I leave you with a final note on the avian resources of Southeast Alaska: A healthy and productive environment for Bald Eagles depends on a similar environment for all birds.

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