

The Status of the Bald Eagle in Southeast Alaska

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Within the twentieth century the Bald Eagle (*Haliaeetus leucocephalus*) population in Alaska has undergone considerable change (Imler and Kalmbach 1955, Robards and King 1966, Hodges et al. 1979, Jacobson 1989). A lengthy period of outright persecution toward Bald Eagles occurred in Alaska between 1917 and 1952 when a bounty was placed on them. Records from the Alaska Territorial Treasurer show that a minimum of 128,273 Bald Eagles were killed and presented for bounty, with more than 100,000 coming from Southeast Alaska (Robards and King 2008).

No doubt many fishermen and fur farmers routinely shot eagles, whether turned in for bounty or not. It is also likely that a large number of eagles were killed or injured and never retrieved (Imler and Kalmbach 1955). Even though the last bounty was paid in 1952 and the territorial eagle bounty was finally repealed in 1953, many eagles continued to be killed. Human attitudes that eagles were an undesirable predator were slow to change.

Figure 1. Estimated number of adult Bald Eagles in Southeast Alaska.

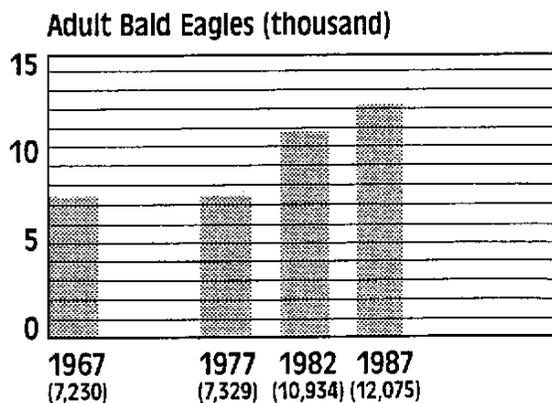
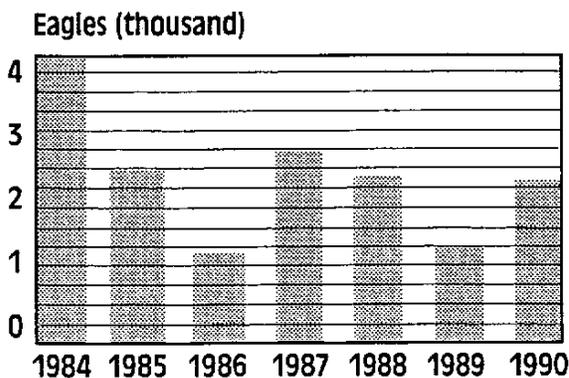


Figure 2. Peak counts of Bald Eagles in the Chilkat River Valley, Southeast Alaska, during fall 1984–1990.



Thus the number of eagles in Alaska was certainly reduced, but to what extent is unknown. Imler (1941) recorded the number of Bald Eagles seen during the summer of 1941 in various parts of Southeast Alaska and his findings show eagle density at about half of more recent years (Hansen and Hodges 1985).

Current Status

The most recent census of the adult population of Bald Eagles in Southeast Alaska was conducted in 1987 (Jacobson 1989, See editor's note.) This aerial survey was based on a sample of random plots originally devised by King et al. (1972). The same plots have been surveyed over a span of twenty years: 1967, 1977, 1982 and 1987. During this period, the Bald Eagle population of Southeast Alaska has shown a significant increase, from an estimated $7,230 \pm 896$

adults in 1967 to $12,075 \pm 2,438$ in 1987 at 95% confidence level (Figure 1). The population has recovered from the bounty period, stabilized and increased. Further, assuming that immature birds comprise 20% to 30% of the population, the total number of Bald Eagles in Southeast Alaska is estimated at 14,000 to 16,000. This represents about half of Alaska's Bald Eagles (J. Hodges unpubl. data, Schempf 1989), perhaps 35% of all Bald Eagles in the United States and about 20% of the total population (i.e., world population) in North America (Gerrard 1983, Stalmaster 1987, Johnsgard 1990).

The largest gathering of Bald Eagles - in fact the largest gathering of any eagle species in the world - occurs during the fall (October - December) in Southeast Alaska's Chilkat River drainage at the head of Lynn Canal. Peak counts from aerial surveys conducted in the valley during 1984-1990 have fluctuated from 1,124 to 3,988 birds, with an average of 2,277 (Figure 2).

Figure 3. Number of Bald Eagle eggs and chicks in nests in Seymour Canal, Southeast Alaska, during 1972-1990.

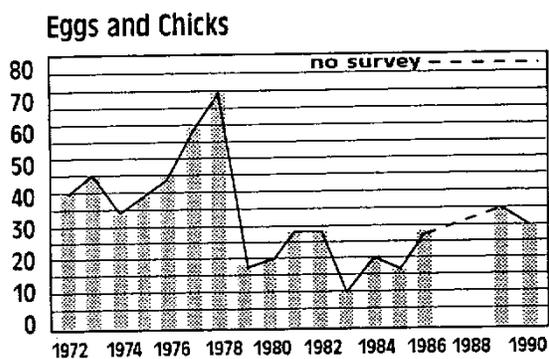


Figure 5. The number of Bald Eagle young produced from surveyed areas of Southeast Alaska.

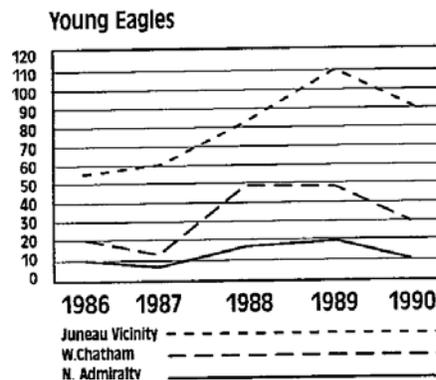
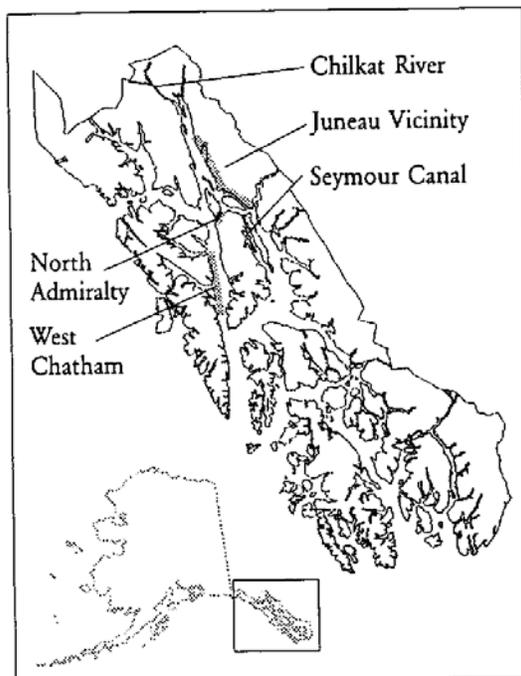


Figure 4. Map of Southeast Alaska showing areas surveyed for Bald Eagle productivity, and the Chilkat River region.



Surveys have been flown by helicopter since 1972 to determine Bald Eagle productivity along 87 km of coastline in Seymour Canal on Admiralty Island (Hodges 1982, Jacobson unpubl. data). Productivity has generally been high, though there was a period in the late 1970s and into the 1980s where it dropped (Figure 3). This decrease may be related to changes in the amount of food available (Hansen and Hodges 1985, Hansen 1987). Reproduction surveys have been consistently conducted in other selected areas of Southeast Alaska in recent years, showing considerable numbers of successful nests (Figure 4, Table 1). The years 1988-1990 had a surge of productivity (Figure 5).

Little is known about the survival rates of Bald Eagles in Southeast Alaska and survival may actually be the most important factor in Bald Eagle population maintenance and growth. Relatively small changes in survival rates may have a significant affect on Bald Eagle populations (Grier 1980). Since the population has increased in recent times, it can be assumed that survival rates for Southeast Alaska's Bald Eagles have been favorable.

Table 1. Bald Eagle productivity in Southeast Alaska.

Area Surveyed	Years Surveyed	Shoreline km (miles)	Average no. of active	Average no. of successful	Average no. of young produced	Young/active nest	Young/successful nest
Juneau vicinity	1986-90	219(136)	79.8	52.0	80.4	1.05	1.53
West Chatham	1986-90	84(52)	34.8	21.6	32.6	0.90	1.46
North	1986-90	59(36)	17.6	10.0	13.6	0.77	1.36
Seymour Canal	1972-90*	87(54)		22.4	33.1		1.41

* Not surveyed in 1987-88.

Discussion

I believe the population increase documented since the first comprehensive survey of 1967 is due to the following basic factors:

Elimination of the bounty (eagles are now protected by law, particularly the Bald Eagle Protection Act (16 U.S.C. 668-668d).

Most fish populations (the primary food of Bald Eagles) in Southeast Alaska have remained strong. Peoples' attitudes have changed. There has been increased public concern for the welfare of Bald Eagles. Alaskans no longer view eagles as undesirable predators. In turn, many eagles have become more tolerant of people. Eagles are seen living adjacent to most communities of Southeast Alaska. They have nested successfully among subdivisions, near roads and airports and other areas of human activity (Jacobson unpubl. data).

Problems

The situation is not so pleasant for Southeast Alaska's Bald Eagles as it may appear however. There has been steady growth and expansion of the human population; mining is undergoing a surge of growth; air traffic has multiplied; and there are many hatchery reared salmon which can compete with wild stocks, a situation which may ultimately prove detrimental to eagles. Also, an unknown number of eagles continue to be shot each year; they are frequently electrocuted; they are accidentally trapped; they have collisions with power lines and moving vehicles; and they suffer from contaminants such as lead. Moreover, eagles face the continuing threat of habitat loss. Suitable habitat for Bald Eagles is being altered and even eliminated, with the main problem being the elimination of waterfront areas which eagles have used since time immemorial. Large areas of public lands have been transferred to private ownership and there has been a tremendous increase in logging and road construction.



Bald Eagle nest tree left in a clear cut on Peratrovich Island, Southeast Alaska. Without the other trees creating a natural windbreak this eagle nest tree is susceptible to windthrow Photo by Mike Jacobson, USFWS.



Since 1969, the US. Fish and Wildlife Service vessel M/V Surfbird has provided support for Bald Eagle nest surveys and associated studies in Southeast Alaska. Photo by Mike Jacobson.

Furthermore, Alaska continues to have the least restrictive of all Bald Eagle habitat protection measures in the United States. The Bald Eagle Protection Act helps to protect the birds, their eggs, nests and nest trees, but it does not specifically protect surrounding habitat. Maintaining Bald Eagle habitat is essential to provide for the long term maintenance of the population.

In conclusion, the Bald Eagle population of Southeast Alaska has responded favorably to decreased persecution and is at its highest recorded level, but the coming years will have to increasingly focus on the need for protection of their habitat if the population is to remain in abundance.

Editor's Note: Aerial surveys to estimate the size of Southeast Alaska's adult Bald Eagle population were conducted in 1992 and again in 1997. The estimated number of adult eagles in 1992 was (13,341 +7-2,348 at 95% confidence level. The 1997 estimate was 12,026 (+ or - 3,108). The U.S. Forest Service's Tongass Land Management Plan Revision now restricts most timber harvest within 1,000 feet of the beach, the same area where the majority of Bald Eagles are found on the forest.

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