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THE CAPTURE OF ALASKAN BALD EAGLES
FOR TRANSLOCATION TO OTHER STATES AND
RELATED PRODUCTIVITY STUDIES - 1987

Michael J. Jacobson



Progress Report

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Fish and Wildlife Enhancement
Raptor Management Studies
U.S. Fish and Wildlife Service
P.O. Box 021287
Juneau, Alaska 99802-1287

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The Capture of Alaskan Bald Eagles for Translocation to Other States
and Related Productivity Studies - 1987

Michael J. Jacobson, Fish and Wildlife Enhancement
Raptor Management Studies, U.S. Fish and Wildlife Service
P.O. Box 021287, Juneau, Alaska 99802 - 1287

In July 1987, a total of 58 young bald eagles (*Haliaeetus leucocephalus*) were translocated from southeast Alaska to five "lower 48" states: New York, Indiana, Tennessee, Missouri and North Carolina. This was the seventh consecutive year bald eagles have been taken from nests in southeast Alaska and transferred southward in an effort to reestablish viable breeding populations in other parts of the country.

A total of 218 nestling bald eagles have now been captured for translocation from southeast Alaska to lower 48 states during the 1981-1987 period. 162 of these eagles have gone to New York. An additional 56 eagles have been sent to Tennessee, Missouri, Indiana and North Carolina during 1986 and 1987. Table 1 provides a summary of the number of eagles translocated to recipient states.

Table 1. Alaskan bald eagle translocation.

Year	Number of Eagles Removed from Southeast Alaska ¹	Recipient States
1981	19	New York
1982	21	New York
1983	22	New York
1984	33	New York
1985	35	New York
1986	30	New York (16), Tennessee/Missouri (14)
1987	58	New York (16), Indiana (14), Missouri (15), Tennessee (6), North Carolina (9)
TOTAL	218	

1 In 1981, two additional eagles were taken from outside southeast Alaska at Cook Inlet, and in 1983 one additional eagle was taken from outside southeast Alaska at Fairbanks.

The U.S. Fish and Wildlife Service conducted the aerial surveys for the capture and monitoring program and provided support during the capture effort in southeast Alaska. Financial support for the helicopter surveys was provided by the recipient states.

Several people were involved in various phases of the 1987 effort:

Andy Anderson - USFWS, Juneau
Steve Cain - USFWS, Juneau
Bruce Conant - USFWS, Juneau
Arlene Doyle - USFS, Juneau
Dave Evans - Duluth, MN
Chris Iverson - Indiana Department of Natural Resources
Mike Jacobson - USFWS, Juneau
Russ Kaufman - ERA/Livingston Helicopters, Juneau
Jim Leach - USFWS, MN
Charlie McLeod - ERA/Livingston Helicopters, Juneau
Peter Nye - New York State Department of Environmental Conservation
Kathy O'Brien - New York State Department of Environmental Conservation
Pat Rudinsky - USFWS, Juneau
Phil Schempf - USFWS, Juneau
Scott Wilbor - Volunteer, USFS, Juneau
Don Williamson - USFWS, Juneau
Jim Wilson - Missouri Department of Conservation

STUDY AREA

There were two eaglet collection trips conducted in 1987. The first trip was to remove eaglets from the usual study area at Chatham Strait for transfer to New York and Indiana. The "Chatham Strait" study area (Figures 1 and 2) is described by Cain and Hodges (1981) with changes described by Cain et.al. (1982) and Wotawa et.al. (1984).

The second trip took place at a new study location along the eastern shore of Stephens Passage and Frederick Sound. This new area provided birds for Tennessee, Missouri and North Carolina. The "Stephens Passage/Frederick Sound" study area consisted of approximately 232 miles (386 kilometers) of shoreline along the mainland on the eastern side of southeast Alaska (Figures 1 and 3). The shoreline habitat is typical old growth coastal rainforest dominated by Sitka spruce and western hemlock. The removal (experimental) portion of the new study area is bordered on the north and south by control areas where no eagles were removed. The removal area is composed of approximately 113 miles (188 kilometers) of shoreline, the two control areas total 119 miles (198 kilometers) of shoreline.

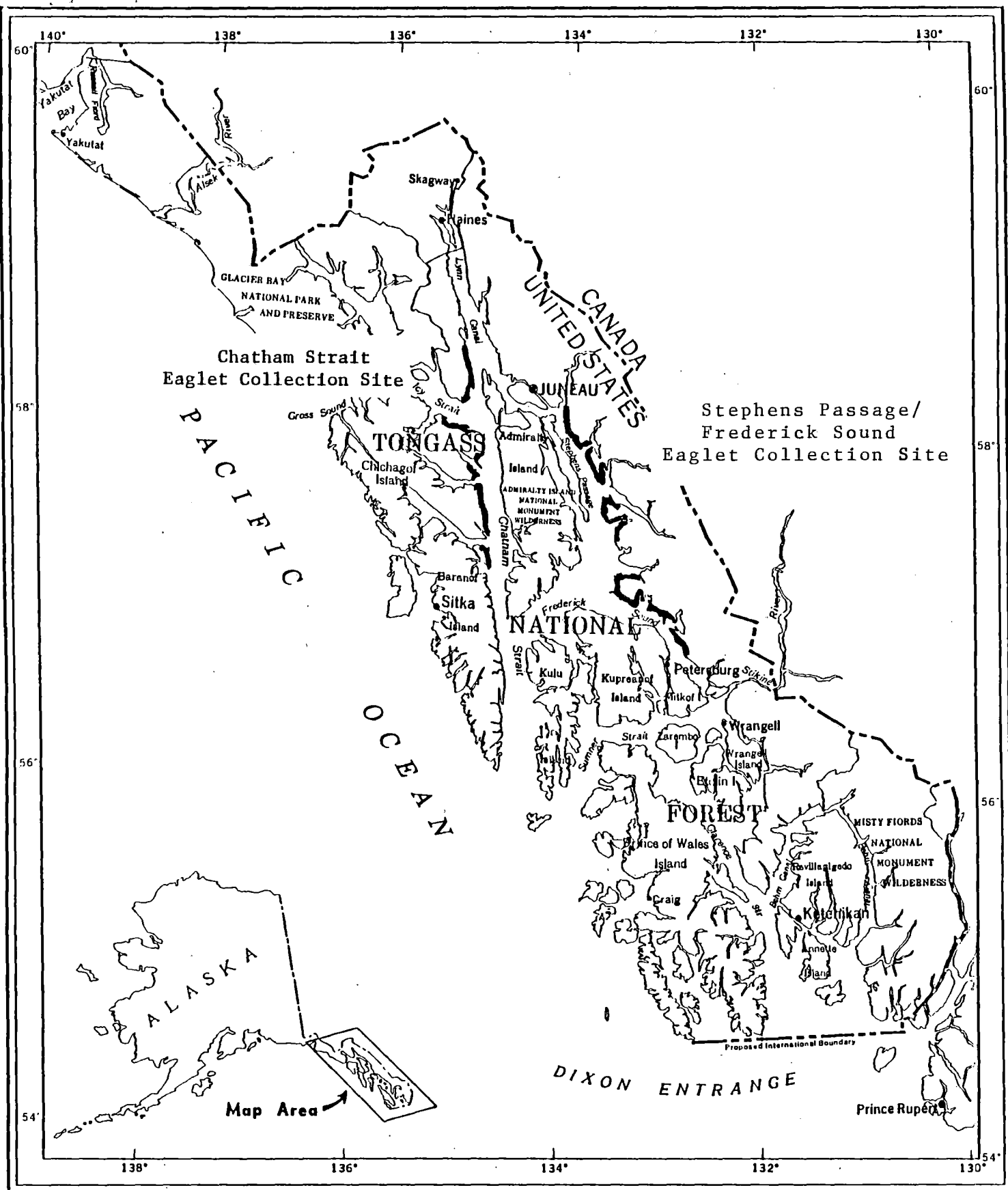


Figure 1. Bald eaglelet collection sites in southeast Alaska

Figure 2. Bald eaglet removal and control locations of the Chatham Strait study area.

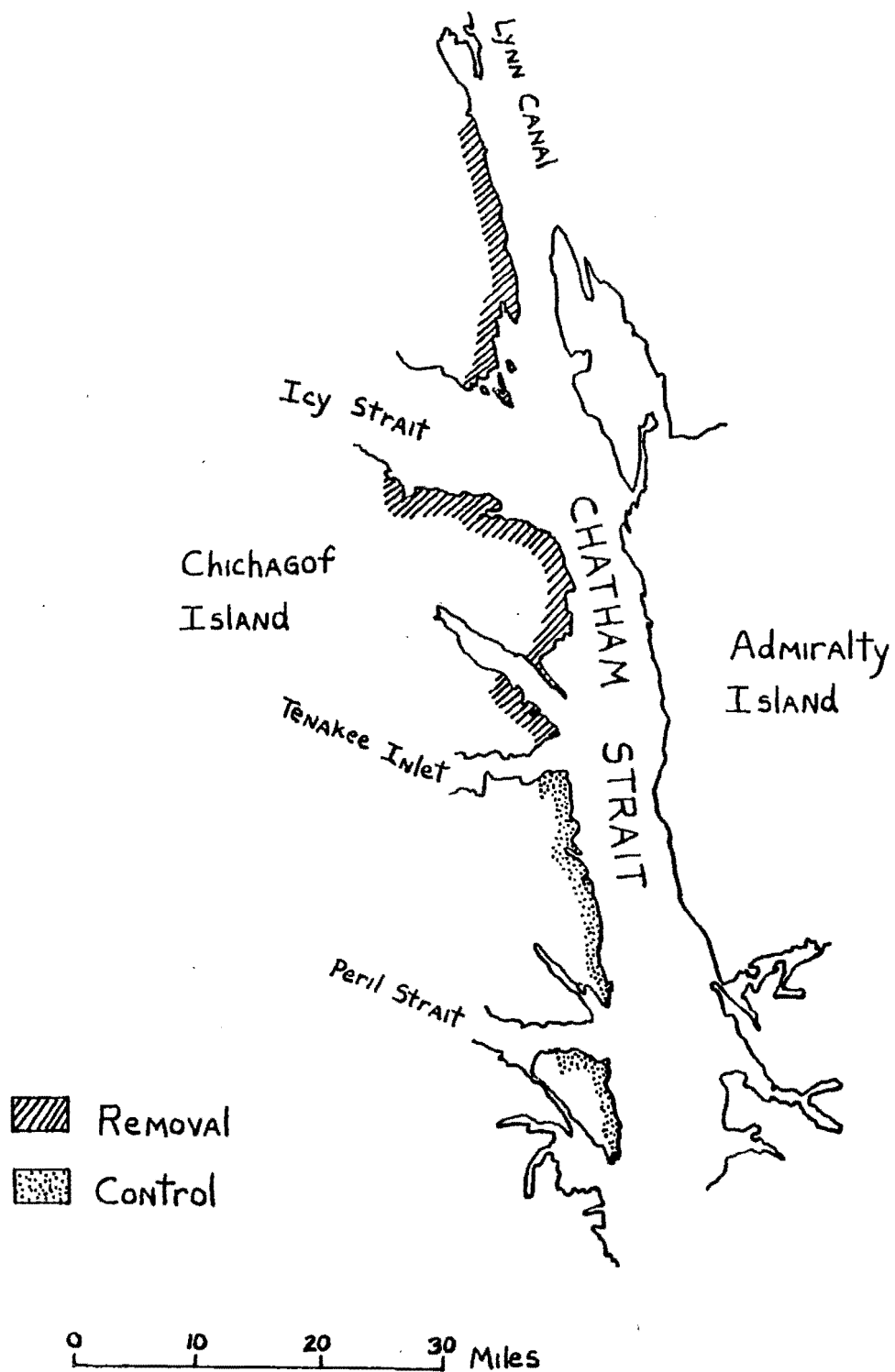
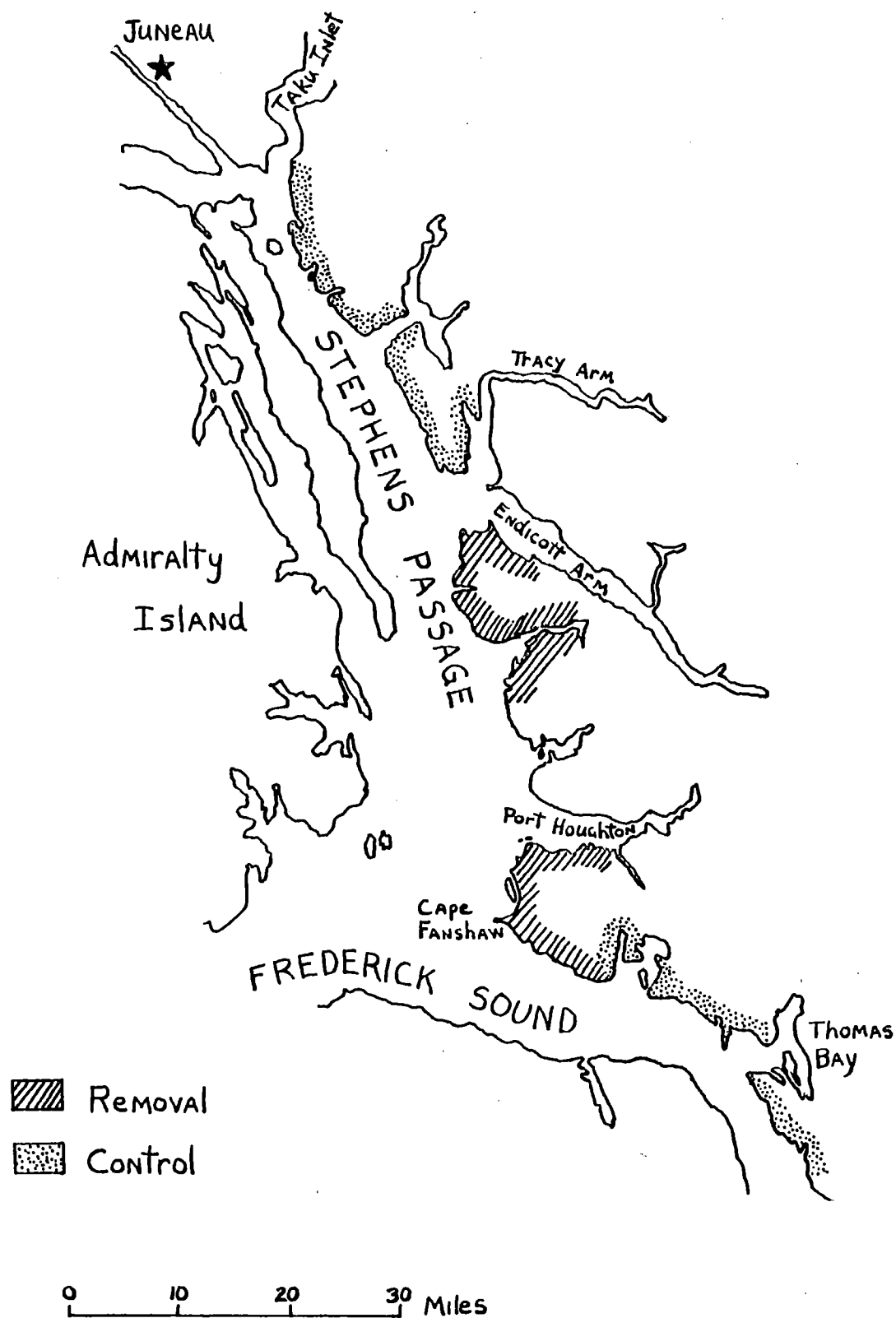


Figure 3. Bald eaglet removal and control locations of the Stephens Passage/Frederick Sound study area.



METHODS

Aerial surveys of both study areas were conducted by helicopter in May to find occupied nests. A follow-up survey flown in July was used to locate productive nests, determine the number of young, estimate the age of young and evaluate the climbability of nest trees. The number of adult eagles was estimated by an additional survey in July with a turbine-beaver aircraft.

Occupied nests were defined as nests with eggs or an apparent incubating adult on the nest. Productive nests were those with young present. Adult eagles were those with predominantly white head and tail. All nesting eagles seen had full adult plumage.

Helicopter surveys for the Chatham Strait study area totaled 6.9 hours of flying time on 11 and 12 May and 4.3 hours on 13 July. Helicopter surveys for the Stephens Passage/Frederick Sound study area totaled 9.8 hours on 14 and 15 May and 4.9 hours on 22 July.

The fixed wing survey of both study areas on 21 July totaled 7.2 hours. The adult eagle count of the Stephens Passage/Frederick Sound control area was not completed due to timing constraints. All surveys originated and ended at Juneau. Productivity data and results of aerial surveys are summarized in tables 2 and 3.

Methods for capturing eaglets were described by Cain and Hodges (1981). Two capture crews, composed of two to three people each, were shuttled to shore by skiff from the Fish and Wildlife Service vessel "Surfbird." Nest trees were then climbed using climbing spurs, ropes, and rappelling equipment. When a climber reached a nest, each eaglet was placed in a padded nylon bag and lowered to the ground. Each eaglet was then transferred to an individual size 200 standard air kennel and transported by skiff back to the "Surfbird." While on the vessel, the birds were given a constant supply of fresh fish and their kennels were cleaned daily. Upon returning to Juneau, the eaglets were transported to recipient states by four separate commercial airline flights.

RESULTS AND DISCUSSION

A total of 28 eaglets (56% of available young) were removed from the Chatham Strait study area from 15 July to 18 July, and 30 eaglets (79% of available young) were removed from the Stephens Passage/Frederick Sound study area from 24 July to 28 July (Table 4).

Table 2. Productivity data and results of aerial and boat surveys of the Chatham Strait study area.

Year	Experimental (Removal)								Control							
	81	82	83	84	85	86	87	Mean	81	82	83	84	85	86	87	Mean
Nests Surveyed	123 ^a	131 ^a	170	173	185	211	166	165	80	86	88	94	100	102	77	90
Occupied Nests ¹ (Percent)		58 ^a (44)	70 (41)	36 (21)	52 (28)	66 (31)	53 (32)	56 (34)		33 (38)	21 (24)	27 (29)	35 (35)	29 (28)	14 (18)	27 (30)
Productive Nests ² (Percent)	22 ^a (18)	34 (26)	31 (18)	28 (16)	30 (16)	37 (18)	35 (21)	31 (19)	15 (19)	27 (31)	13 (15)	18 (19)	13 (13)	14 (14)	10 (13)	16 (18)
Young Produced (Per Nest Surveyed)	26 ^a (.21)	48 (.37)	36 (.21)	40 (.23)	43 (.23)	60 (.28)	50 (.30)	43 (.26)	18 (.22)	37 (.43)	20 (.23)	25 (.27)	16 (.16)	20 (.20)	12 (.16)	21 (.23)
Young Per Occupied Nest		.83	.51	1.11	.83	.91	.94	.77		1.12	.95	.93	.46	.69	.86	.77
Young Per Productive Nest	1.18	1.41	1.16	1.43	1.43	1.62	1.43	1.38	1.20	1.37	1.54	1.39	1.23	1.43	1.20	1.34
Young Removed	17	21	20	31	33	30	28	26		2						
Adults in April (By Boat)			354								143					
Adults in July (By FWS Aircraft)		276		229	244	321	143	243				85	104	106	70	91

a Adjusted for several small islands which were not surveyed in these years.

1 Occupied Nest - A nest with eggs or an apparent incubating adult on the nest.

2 Productive Nest - A nest at which one or more young were produced.

Table 3. Results of 1987 aerial surveys of the Stephens Passage/Frederick Sound study area.

	Experimental (Removal)	Control	Total
Nests surveyed	102	103	205
Occupied nests ¹ (percent)	53 (52)	44 (43)	97 (47)
Productive nests ² (percent)	25 (25)	21 (20)	46 (22)
Young produced	38	29	67
Young/occupied nest	.72	.66	.69
Young/productive nest	1.52	1.38	1.46
Young removed	30	00	30
Adults in July	82	00 ³	82

1 Occupied nest - a nest with eggs or an apparent incubating adult on the nest.

2 Productive nest - a nest at which one or more young were produced.

3 Adult eagles were not counted in control area.

Table 4. The number of bald eagle young available and the number removed from the Chatham Strait study area and the Stephens Passage/Frederick Sound study area in southeast Alaska

Year	Chatham Strait experimental (removal) area		
	No. young available	No. young removed	% young removed
1981	26	17	65
1982	48	21	44
1983	36	20	56
1984	40	31	78
1985	43	33	77
1986	60	30	50
1987	50	28	56
Total	303	180	58%

Year	Stephens Passage/Frederick Sound experimental (removal) area		
	No. young available	No. young removed	% young removed
1987	38	30	79%

Excellent weather with sunny skies and calm days was encountered during the eagle capture trip to Chatham Strait. A total of 18 nests were visited to secure the 28 eagles. Later in the month the weather was not so favorable during the capture trip to Stephens Passage and Frederick Sound. Rain, wind and occasional fog made the work more difficult. Also, since this was the first visit to a new study area, there were problems with climbing unfamiliar nest trees. Some trees were found to be unclimbable because of their large diameters or for other reasons of safety. Nineteen nests were visited at the Stephens Passage/Frederick Sound study area to secure 30 eagles. Two sibling eagles, approximately 7 weeks of age, jumped from their nest when they saw the climber appear at nest level. One of the eagles fell a short distance to a branch and was uninjured. The other eagle fell straight to the ground and was killed on impact.

At another nest containing one eaglet, the youngster was found tangled in heavy monofilament fishing line and unable to move from the nest's center. The line had become tightly wrapped around the eagle's legs and feet. The bird was freed and collected. It was healthy and uninjured but would have eventually succumbed at the nest had it not been freed.

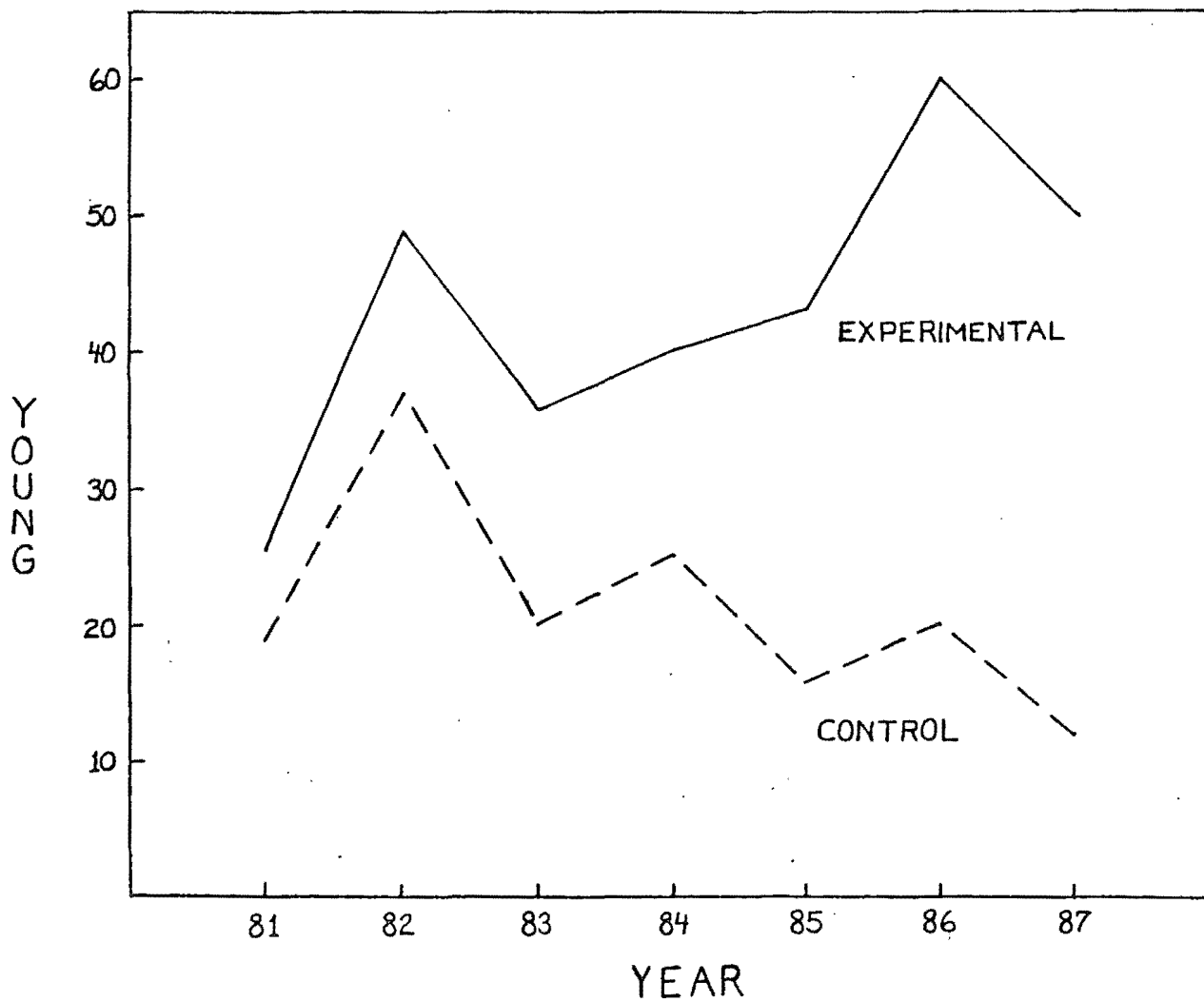
A listing of prey species observed at nests in both study areas showed remains of pink salmon, starry flounder, rockfish, sculpin and a pre fledging red-breasted merganser. Many nests were empty of prey remains. No quantitative data on prey remains were collected.

Compared to previous years, there was a significant drop in the number of nests observed in May and the number of adults seen in July during aerial surveys at the Chatham Strait study area (Table 2). The primary observer (Jacobson) was the same for the past four years, other observers and pilots were all experienced, and survey effort and coverage was the same, so the reason for fewer nests observed is not fully known. However, it is felt that very few, if any, nests occupied by eagles went unobserved during the surveys.

The number of adult eagles seen in the fixed wing survey of the Chatham Strait study area was lower than any previous year. The number of adults is quite variable and likely results from attraction to food sources. Another factor for the low count of adult eagles may have been the warm sunny weather occurring on the day of the survey. Eagles often soar on thermals at high elevations during warm weather, so could be missed during a low level aerial survey.

Although the number of nests observed in the Chatham Strait experimental area decreased in 1987, the number of occupied nests, productive nests, and total numbers of young were similar to the mean figures for all years of the study. The control area at Chatham Strait, however, was quite a different story. Here, the number of occupied nests, productive nests, and the number of young were the lowest yet recorded. Reasons for this are unknown. Perhaps in response to the removal of young in the experimental area, productivity there has remained steadily high. The removal of young may have actually created a positive reproductive response in the experimental area. The data shows an increasing trend in production of young for the experimental area and a decreasing trend for the control (Figure 4). The number of young raised per occupied nest (.77) was identical in the experimental and control areas of the Chatham Strait study area, and no detrimental effect on productivity has been detected from removal of young during the seven year study period.

Figure 4. Comparison of bald eagle young produced in the Chatham Strait experimental (removal) area where young were removed with the control area where young were not removed.



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