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BALD EAGLE GROUND CENSUS
CHILKAT VALLEY, ALASKA
11-12 November 1983

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BALD EAGLE GROUND CENSUS - CHILKAT VALLEY, ALASKA, 11-12 NOVEMBER 1983

In 1979, the National Audubon Society initiated studies of the bald eagles inhabiting the Chilkat River valley (Boeker et al. 1980, Boeker et al. 1981, Boeker et al. 1982). Aerial surveys and ground counts of bald eagles were made along the Chilkat and Klehini Rivers as part of these studies. Audubon's active involvement in field studies ended after the winter of 1982-83, but we deemed it important to continue a lower intensity surveillance of the Chilkat bald eagle concentration. We propose to conduct at least 3 aerial surveys and 2 ground counts during the concentration period of late October through early December. This paper reports the results of our initial ground census conducted on 11-12 November 1983.

METHODS

E. L. Boeker, Audubon's principal investigator, provided a copy of their data collection sheets used for the ground census. These forms listed 8 counting stations on the Chilkat River and 10 on the Klehini (Table 1). These stations were located on the ground as accurately as the place name description allowed. At each station the eagles along one to three 1 mile segments of the river were counted and recorded as adults, subadults, or unclassified. During this survey, only birds with completely white heads were considered adults, while those eagles with eye stripes or other dark feathering on the head were considered subadults. Unclassified birds were too far from the counting station to be

Table 1. Bald eagle ground census results, 11-12 November 1983,
Chilkat Valley, Alaska.

Station	River Mile	Eagles Observed			Total
		Adult	Subadult	Unclassified	
1. Kaskulu Pt.	0-1	3	0	9	12
	1-2	4	2	0	6
	2-3	0	0	0	0
2. Yindastuki Pt.	3-4	1	0	0	1
	4-5	1	0	0	1
	5-6	4	0	0	4
3. Dok Pt.	6-7	3	2	0	5
	7-8	1	1	0	2
4. 9 Mile Road Only	8-9	19	3	0	22
	9-10	8	4	0	12
	10-11	0	0	0	0
	11-12	0	0	0	0
	12-13	1	0	0	1
	13-14	2	0	0	2
	14-15	13	0	0	13
	15-16	4	0	0	4
	16-17	16	2	1	19
	17-18	2	0	0	2
5. Kluk 2	18-19	519	120	0	639
	19-20	402	157	0	559
6. 20 Mile	20-21	752	220	0	972
7. Tsirku Delta	0-1	153	51	133	337
8. Klukwan	21-22	95	18	7	120
	22-23	142	50	0	192
Chilkat Subtotals		2145	630	150	2925
9. Gravel Pit	1-2	2	0	2	4
10. Steel Bridge	2-3	34	21	3	58
11. Porcupine Rd. (trees only)	3-4	*			
	4-5	*			
12. Hill Top	3-4	*			
13. 28 Mile	4-5	*			
14. 29 Mile	5-6	*			
15. 30 Mile	6-7	*			
16. Little Boulder Cr.	7-8	*			
17. Road Only	8-9	*			
18. Porcupine Spur	9-10	*			
	10-11	*			
Klehini Subtotals		34	21	5	62
Totals		2179	651	153	2987

* Station not surveyed

aged with any degree of certainty. Flying eagles were disregarded with the assumption that birds flying into the area to be counted equalled those flying out. Although most segments could be counted with the aid of binoculars, a spotting scope was essential to find eagles perched in the trees on the far side of the river. The census can be made by a single observer, but a recorder, either human or mechanical, speeds the work and allows the observer to continuously observe the eagles along the river so confusion in counting is minimized.

RESULTS

The results of the survey are shown in Table 1. 2925 eagles were observed along the Chilkat River with 73 percent being adults, 22 percent subadults, and 5 percent unclassified. An additional 62 eagles were counted at the Gravel Pit and Steel Bridge Stations on the Klehini, but a snow storm during the evening of 11 November prevented access to the remainder of the Klehini stations. The Klehini usually holds fewer than 100 eagles by second week of November with eagles being most abundant in the lower stretch of the river (Boeker et al. 1980, Boeker et al. 1981, Boeker et al. 1982).

DISCUSSION

This count yielded the second highest ground count total since counts began in 1979 and the highest count for the second week of November (Table 2). The percentage of subadults in the population was low in comparison with the 1979 and 1980 surveys. This low occurrence of subadults may be a reflection of the decreased productivity noted in

Table 2. Bald eagle ground census totals, Chilkat Valley, Alaska.

Year	Mid-November Survey			Peak Population Survey		
	Date	Number	% Subadult	Date	Number	% Subadult
1979	12 November	1067	36.7	5 December	2869	31.8
1980	14 November	2318	30.3	28 November	2724	23.7
1981	12 November	1739	20.8	5 November	3325	21.5
1983	11 November	2987	21.8			

southeast Alaska for the past several years (Hodges 1982) or may simply be a reflection of the phenology of the age structure. It has been noted in past years that the percentage of subadults in the population steadily decreases as winter deepens and the climate becomes more rigorous.

Several improvements should be made in subsequent surveys. A permanent set of survey maps should be developed showing counting stations and river segments. It was difficult to locate some stations from only the place name description. It may not be essential to count from the same station if the same river segments are used, but it would eliminate another possible source of variability.

Extreme care needs to be exercised to avoid double counting by overlapping segments, particularly when moving between stations. Recognizable landmarks need to be carefully selected and a conscious effort made to avoid overlapping segments.

A full day should be allotted to the survey. It took 6 hours to cover the Chilkat section. Undoubtedly this could have been done more rapidly by someone familiar with the stations, but an entire day will be required to count all 18 stations if reasonable accuracy is expected.

There is some unknown degree of error in aging the eagles. The most common error is classifying subadult eagles with predominantly white heads as adults. The magnitude of this error probably varies between observers, with observing conditions, and with distance.

Observers should be prepared for winter driving conditions. A four-wheel drive vehicle or one equipped with chains would allow access to the entire survey area under most circumstances. Access along the Klehini is the most difficult. If surveys are to be done only during November and December it may be best to end the count at the Steel Bridge Station. The few eagles to be found above this area on the Klehini after October do not contribute substantially to the total survey or justify the time needed to survey the upper Klehini stations.

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