

FALL SURVEY OF EMPEROR GEESE FROM HOOPER BAY TO UNIMAK ISLAND AND ALONG THE
SOUTH ALASKA PENINSULA FROM UNIMAK ISLAND TO WIDE BAY - October 3-8, 1981.

TRIP REPORT

by

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Bering Sea: Yukon-Kuskokwim Delta, Bristol Bay,
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Abundance, distribution

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The "annual" fall survey of Emperor Geese was flown during 3-8 October 1981. As with previous surveys in fall, the purpose was to count all geese along coastal areas from Kuskokwim Bay to Izembek Lagoon. During the survey this fall the coverage was expanded to include the south side of the Alaska Peninsula and the Yukon-Kuskokwim Delta from the mouth of the Kuskokwim River north to Hooper Bay. The Survey crew consisted of: Rodney King (Pilot/Biologist), Dirk Derksen (Migratory Bird Specialist), both with Wildlife Operations, and Robert Gill (Wildlife Biologist) with Research. The survey was flown in a Dehavilland Beaver (N728) on amphibious floats. The survey began on the Y-K Delta on 3 October, followed the coastline, and included all estuarine and littoral areas (with exceptions due to turbulence, see beyond) from the tide line to approximately 2 km inland of the vegetated shoreline (Figure 1). The airplane was flown at approximately 100 mph (80 knots) and at an altitude of 500 feet (154 m). The survey was concluded on 7 October following four consecutive days of flying during which all areas in Bristol Bay and approximately 70% of the mainland of the south side of the Alaska Peninsula were surveyed. Weather during the survey was generally favorable with mostly clear skies and light to moderate NW winds prevailing. Steady NW winds of 30+ knots precluded our surveying several bays along the south Alaska Peninsula on 6 October.

The survey produced a total of 63156 Emperor Geese (see survey summary + Table 1). The great majority of birds (30585 or 48%) was found in Nelson Lagoon, followed by 12%, each, in Port Heiden and Izembek Lagoon. Some 5690 geese (9%) were found along the south side of the Alaska Peninsula, the majority occurring on intertidal flats in six of the 20 + bays surveyed. The few geese found on the Y-K Delta indicated that by the time of this survey the population had all but moved from its breeding and molting areas to its staging and wintering grounds. Our observations of 30% fewer geese on this and other fall surveys (Table 1) compared to those recorded in the spring 1981 survey suggests that a large number of birds probably moves through the survey area and into the Aleutian Islands before October. This movement might occur beginning as early as late August and is probably composed in part of nonbreeding birds coming from molting areas on St. Lawrence Island.

Another factor to be considered in attempting to enumerate and determine the distribution of a population of Emperor Geese in fall and spring is the extent of use by birds of small nearshore and larger offshore islands along the south Alaska Peninsula. While the two most recent surveys of the south Alaska Peninsula (spring 1981 and this survey) covered a large portion of the area, there remained a significant amount of habitat, mostly on islands but also on the mainland east of Wide Bay, that was not surveyed. Our observations of large numbers of geese using rocky littoral areas on several small nearshore islands on the south side of the Alaska Peninsula suggest that use of this habitat by geese is probably widespread. We do not, however, believe that it represents more than an additional few thousand birds.

From the three surveys in early October 1979, 1980, and 1981 a fall population index has been established for the survey area. To refine this index and to better understand the timing of movements of geese in fall and the extent of their use of the Aleutian Islands, it would be worthwhile to: 1) conduct a survey in late August or early September to determine use (both extent and numbers) of the survey area during early fall migration, and 2) monitor the movement of birds into the Aleutian Islands in September by

placing observers at Unimak Pass and/or at Cape Glazenap in Izembek Lagoon. Aerial surveys in spring should be continued until an index similar to that in fall has been established. Passage of geese in spring from the Aleutian Islands to the Alaska Peninsula should also be assessed from one or more sites on Unimak Island.

SURVEY SUMMARY

Start: October 3, 1981 @ 1300 hrs.

Leg 1: Tuntutuliak to Kongiganak @ 1342 hrs.
Emperor Goose: 6

Leg 2: Kongiganak to Qwingillingok @ 1355 hrs.
Emperor Goose: 22

Leg 3: Kwingillingok to Kipnuk @ 1420 hrs.
Emperor Goose: 42

Leg 4: Kipnuk to Tununuk @ 1527 hrs.
Emperor Goose: 35

Leg 5: Tununuk to Hooper Bay @ 1640 hrs.
Emperor Goose: 0

October 4, 1981 @ 1140

Leg 6: E. side of Kuskokwim Rv. @ 60° N to Quinhagak @ 1219 hrs.
Emperor Goose: 0

Leg 7: Quinhagak to Jacksmith Bay @ 1236 hrs.
Emperor Goose: 0

Leg 8: Jacksmith Bay to Carter Bay @ 1256 hrs.
Emperor Goose: 0

Leg 9: Carter Bay to Goodnews Bay @ 1301 hrs.
Emperor Goose: 0

Leg 10: Goodnews Bay to Chagvan Bay @ 1357 hrs.
Emperor Goose: 1

Leg 11: Nanvak Bay @ 1414 hrs.
Emperor Goose: 25

Leg 12: Nanvak Bay to Naknek @ 1821 hrs.
Emperor Goose: 0

October 5, 1981 @ 1215 hrs.

- Leg 13: S. Naknek to Egegik Bay @ 1244 hrs.
Emperor Goose: 0
- Leg 14: Egegik Bay @ 1244 hrs.
Emperor Goose: 2288
- Leg 15: Egegik Bay to Ugashik Bay @ 1321 hrs.
Emperor Goose: 0
- Leg 16: Ugashik Bay @ 1321 Hrs.
Emperor Goose: 2405
- Leg 17: Ugashik Bay to Cinder River Lagoon @ 1400 hrs.
Emperor Goose: 0
- Leg 18: Cinder River Lagoon @ 1400 hrs.
Emperor Goose: 1626
- Leg 19: Cinder River Lagoon to Port Heiden @ 1600 hrs.
Emperor Goose: 0
- Leg 20: Port Heiden @ 1600 hrs. (tide low)
Emperor Goose: 7284
- Leg 21: Port Heiden to Seal Islands @ 1646 hrs.
Emperor Goose: 15
- Leg 22: Seal Islands @ 1646 hrs.
Emperor Goose: 5552
- Leg 23: Seal Islands to Port Moller @ 1739 hrs.
Emperor Goose: 0
- Leg 24: Port Moller (Pt. Divide to Hot Springs) @ 1739 hrs.
Emperor Goose: 769
- Leg 25: Mud Bay @ 1747 hrs. (tide very high)
Emperor Goose: 3914
- Leg 26: Nelson Lagoon @ 1808 hrs. (tide very high)
Emperor Goose: 25902
- Leg 27: Nelson Lagoon to Moffit Lagoon @ 1945 hrs.
Emperor Goose: 0

October 6, 1981 @ 1400 hrs.

- Leg 28: Kinzaroff Lagoon @ 1405 hrs.
Emperor Goose: 66
- Leg 29: Moffit Lagoon @ 1417 hrs. (tide high)
Emperor Goose: 4430
- Leg 30: Izembek Lagoon @ 1441 hrs. (only 80% coverage)
Emperor Goose: 2047
- Leg 31: Applegate Cove @ 1449 hrs.
Emperor Goose: 258
- Leg 32: Big and Hook lagoons @ 1453 hrs.
Emperor Goose: 151
- Leg 33: Morzhovoi Bay @ 1455 hrs.
Emperor Goose: 884
- Leg 34: Bechevin Bay @ 1500 hrs.
Emperor Goose: 623
- Leg 35: Swanson Lagoon @ 1510 hrs.
Emperor Goose: 0
- Leg 36: Urilia Bay @ 1520 hrs.
Emperor Goose: 5
- Leg 37: S. side of Unimak Island @ 1700 hrs. (Cape Luke to Cape Aksit)
Emperor Goose: 0
- Leg 38: Otter Cove @ 1730 hrs.
Emperor Goose: 25
- Leg 39: Ikatan Bay to Kenmore Head @ 1745 hrs.
Emperor Goose: 4
- Leg 40: Kenmore Head to Thin Point @ 1750 hrs.
Emperor Goose: 98
- Leg 41: Thin Pt. to Cold Bay @ 1809 hrs.
Emperor Goose: 412

October 7, 1981 @ 1105 hrs.

- Leg 42: Cold Bay to King Cove @ 1140 hrs.
Emperor Goose: 45
- Leg 43: King Cove to Pavlof Bay @ 1140 hrs.
Emperor Goose: 45

Leg 44: Pavlof Bay @ 1140 hrs.
Emperor Goose: 667

Leg 45: Canoe Bay @ 1220 hrs.
Emperor Goose: 385

Leg 46: Balboa Bay @ 1229 hrs.
Emperor Goose: 0

Leg 47: Doranoi Bay @ 1240 hrs.
Emperor Goose: 0

October 7, 1981

Leg 48: American Bay @ 1247 hrs.
Emperor Goose: 0

Leg 49: Ramsey Bay @ 1300 hrs.
Emperor Goose: 25

Leg 50: Ivanoff Bay @ 1336 hrs.
Emperor Goose: 445

Leg 51: Chignik Lagoon @ 1418 hrs.
Emperor Goose: 1303

Leg 52: Chignik Bay @ 1425 hrs.
Emperor Goose: 104

Leg 53: Kajulik Bay @ 1444 hrs.
Emperor Goose: 7

Leg 54: Aniakchak Bay @ 1457 hrs.
Emperor Goose: 0

Leg 55: Amber Bay @ 1503 hrs.
Emperor Goose: 0

Leg 56: Yantarni Bay @ 1514 hrs.
Emperor Goose: 0

Leg 57: Port Wrangel @ 1531 hrs.
Emperor Goose: 79

Leg 58: Agripina Bay @ 1535 hrs.
Emperor Goose: 455

Leg 59: Wide Bay @ 1550 hrs.
Emperor Goose: 856

End Survey

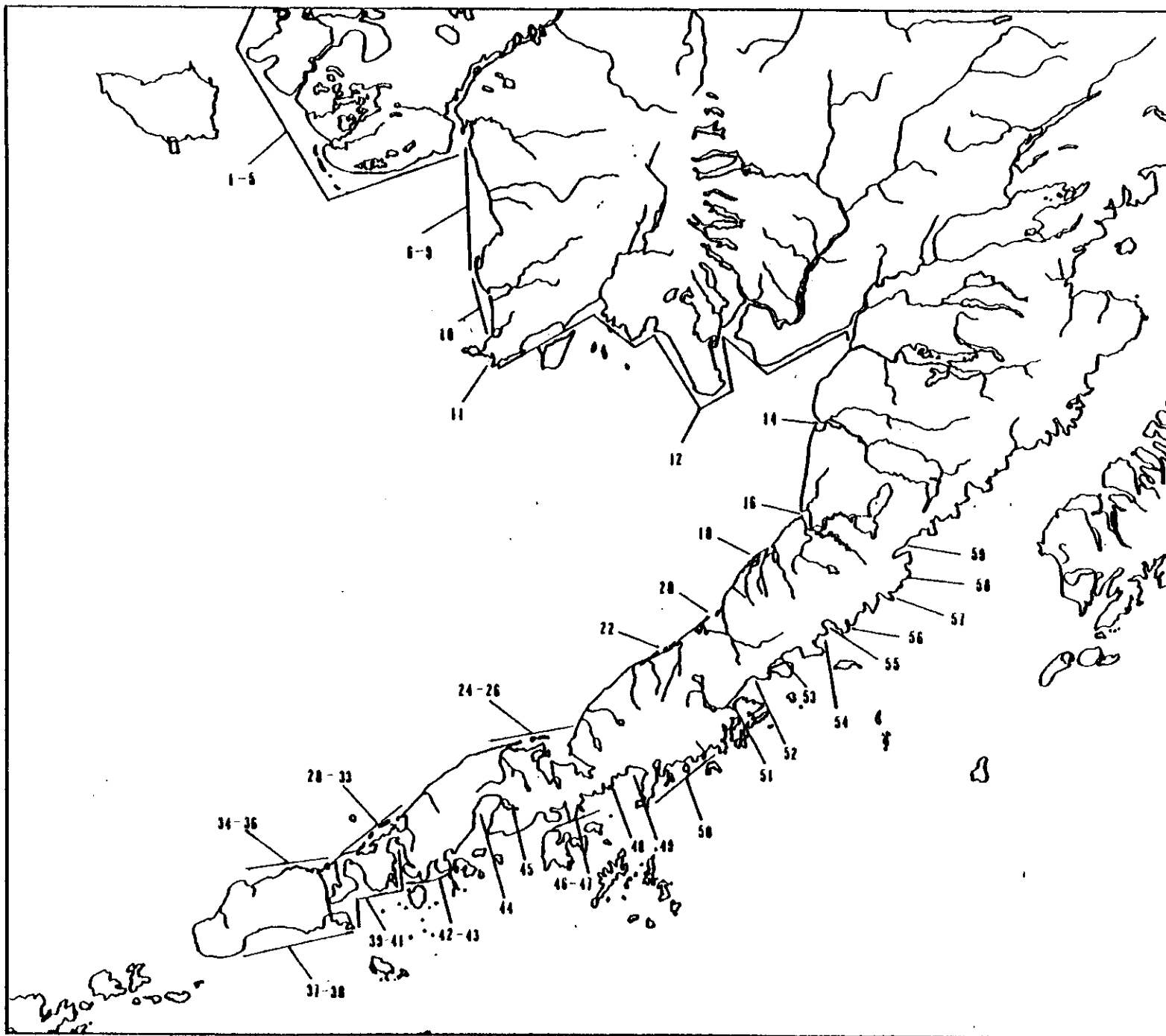


Figure 1. Survey legs of Emperor Goose survey, October 3-8, 1981.

Table 1. Numbers of Emperor Geese.

Area	1-4 Oct. 1979	1-9 Oct. 1980	3-8 Oct. 1981	23-27 Apr. 1981
Yukon Delta	-	-	105 ¹	2492 ¹
Chagvan Bay	0	8	1	9804
Nanvak Bay	0	0	25	373
N. Bristol Bay ²	0	0	0	199
Egegik Bay	60	588	2288	1765
Ugashik Bay	84	322	2405	834
Cinder R. Lagoon	3255	5284	1626	6329
Port Heiden	28603	9695	7299	25647
Seal Islands	6719	4064	5552	13941
Nelson Lagoon ³	13067	35481	30585	23598
Izembek Lagoon	7326	7649	7580 ⁴	3448
S. Ak. Peninsula ⁵	-	-	5690	2803
Total	59114	63083	63156	91233

¹ Not surveyed in fall 1979 and 1980. Surveyed in fall 1981 from Hooper Bay to mouth of the Kuskokwim River. Surveyed in spring 1981 from the mouth of the Kuskokwim River to Chagvan Bay. The area north of the mouth of the Kuskokwim River was snow covered and not available to geese during April 1981.

² From Nanvak Bay to South Naknek (Leg 12, Figure 1).

³ Includes Legs 24-26.

⁴ Includes Legs 28-32 and 34-36. Approximately the same area was covered in fall 1979 and 1980.

⁵ Includes Legs 33 and 37-59. This area was not surveyed in fall 1979 and 1980.