ALASKA DEPARTMENT OF FISH AND GAME

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ANNUAL REPORT OF SURVEY-INVENTORY ACTIVITIES

PART IX. SMALL GAME/UPLAND GAME

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Editor's Note

In the past, the majority of the Small Game Survey-Inventory Report has been derived from the Region III Small Game Questionnaire. The questionnaire was not funded in 1985-86; therefore, this report consists only of information from GMU's 18, 22, 23, and 26A.

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SMALL GAME

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 18

GEOGRAPHICAL DESCRIPTION: Yukon-Kuskokwim Delta

PERIOD COVERED: 1 July 1985-30 June 1986

Season and Bag Limit

See Hunting Regulations No. 26.

Population Status and Trend

Because of the lack of snow over large areas of the Yukon-Kuskokwim Delta during the winter of 1985-86, it is difficult to evaluate the status of small game populations in Unit 18. Only the coastal region between Sheldon Point and Nelson Island had any significant snow cover. Hunting for small game and back-country travel by snowmachine were hampered by the poor snow conditions; reports from the public concerning small game populations were minimal.

Arctic hares are found on upland tundra along the coastal regions of Unit 18 from Kotlik to the mouth of the Kuskokwim River. Very little is known of the status of arctic hare populations; however, I believe the over-winter survival of arctic hares was good and that hunter take was lower than usual.

Flooding during spring 1985 diminished snowshoe hare numbers along the Yukon and Kuskokwim Rivers. Few snowshoe hares were observed during fall 1985 along sloughs of the Kuskokwim near Bethel, in areas where they are traditionally snared. Trappers reported scarce snowshoe hare sign where such sign had been common the previous autumn. Away from the major rivers, snowshoe hares were more abundant and were approximately midway through their cyclic pattern of recovery after a major "crash," which apparently occurred in 1982.

Fewer spruce grouse were observed in lowland areas along the Yukon and Kuskokwim in Unit 18 during fall 1985 compared with fall 1984. Observers indicated, however, that spruce grouse were more abundant in areas of riparian spruce, on tributaries distant from areas flooded in spring 1985, such as the Kasigluk River near Bethel.

Compared with last year, ruffed grouse were also lower in abundance in sloughs along the Yukon; high water in spring 1985 was the probable cause. Away from the main rivers, survival rates may have been initially higher; however, even in upland aspen and cottonwood stands near the village of Marshall on the Yukon River, ruffed grouse numbers were reported to be lower than observed in past years. Cool, wet summer weather in 1985 probably hindered chick survival.

Willow ptarmigan are the primary small game species in Unit 18. Fewer observations of ptarmigan were made during 1985-86 in Unit 18 than in the 2 previous years. The spring migration of ptarmigan past Bethel (east to west) occurred quickly in 1986. There was little snow at the time of the mid-March migration.

Ptarmigan traverse the Delta following the melt line in the spring. The annual ptarmigan migration from the mountains to the coastal regions of Unit 18 peaked on approximately 18 March 1986. The phenology of this migration resembled that observed 2 years ago. Willow ptarmigan passed through Bethel in flocks of hundreds for several days, flying to the retreating edge of the snow beyond the Johnson River.

Ptarmigan were largely absent from the Bethel vicinity by 1 April 1986, except for small resident flocks. I observed a few ptarmigan on the south side of Nunivak during the 3rd week of March 1986, but not as many as were observed during March 1985. However, several thousand ptarmigan and tracks were observed by U.S. Fish and Wildlife Service (USFWS) pilots on Nelson Island during late April in willow habitat on east-facing slopes. Nelson Island remained snow-covered during the latter part of April while Bethel and inland areas were snow-free. Late April was relatively early for ptarmigan to be present in large numbers on Nelson Island; in 1985 ptarmigan did not arrive there en masse until mid-May. I observed molting willow ptarmigan on Kigigak Island near Cape Romanzof during the 1st week of May 1986.

USFWS staff devised a method that could possibly be used to measure abundance of tundra-nesting ptarmigan during early May. From an aircraft at 500 feet, observers noted that low-angle light characteristic of late evening caused the white ptarmigan to practically "glow." Several hundred pairs were observed for miles on upland tundra between the Yukon and the large lakes north of Kasigluk. The nesting ptarmigan were paired and equally spaced, occupying open tundra for breeding.

Mortality

Most land surface area in Unit 18 is lowland tundra. Small game in Unit 18, with the exception of rock ptarmigan and arctic hare, is seasonally concentrated in riparian

corridors or willowed habitat. Density-independent environmental factors such as spring flooding can cause major population declines in small game species keyed to riparian habitat. Small game populations were affected by lowland flooding in riparian corridors along both the Yukon and Kuskokwim during spring 1985 and had not recovered by fall 1985. However, in riparian zones away from the major rivers, mortality caused by flooding was apparently minimal. The cool, rainy summer of 1985 may have further depressed small game populations. Nesting success of upland birds such as spruce and ruffed grouse is typically poor in cool, rainy seasons. These species have a high annual turnover, and a poor reproductive season can have a major impact on fall population size. However, the winter of 1985-86 was characterized by light snowfall, frequent thaws, rain, poor travel conditions, and less-than-usual hunter effort on small game. I believe over-winter survival of small game populations was good. Hunting mortality significantly affects small game populations only near settlements and villages in Unit 18.

Because snow cover in Unit 18 during the 1985-86 winter was light, spring 1986 was relatively dry and no lowland flooding occurred. Production of ptarmigan and other small game is expected to be high and populations are expected to return to normal levels by fall 1986.

Management Summary and Recommendations

Lack of snow hindered evaluation of the population status of arctic hares in Unit 18 during 1985-86; survival was assumed to be normal. The harvest by hunters was lower than normal. Flooding during spring 1985 caused substantial declines in abundance of snowshoe hares, spruce grouse, and ruffed grouse in riparian corridors along the Yukon and Kuskokwim River; along the tributaries, spruce grouse were more common, but ruffed grouse numbers were low due to poor production. Snowshoe hares in riparian willow habitat away from major rivers were approximately midway through their cyclic pattern of recovery from a major "crash."

There were fewer observations of ptarmigan during 1985-86 than in previous years; this decrease is most likely related to poor snow conditions, and perhaps to poor production related to cool, rainy summer weather.

Spring 1986 was characterized by relatively dry conditions; no flooding occurred along the Yukon and Kuskokwim Rivers. Production in small game populations is expected to recover given continued favorable weather. I do not believe hunting is a significant mortality factor affecting small game populations in Unit 18; no regulatory changes are recommended.

Acknowledgments

USFWS biologists M. Rearden, C. Hunt, and D. Strom are gratefully acknowledged for their assistance in preparing this report.

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SMALL GAME

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 22

GEOGRAPHICAL DESCRIPTION: Seward Peninsula

PERIOD COVERED: 1 July 1985-30 June 1986

Season and Bag Limit

See Hunting Regulations No. 26.

Population Status and Trend

Excluding waterfowl, Unit 22 presently has 4 species of small game: willow ptarmigan, rock ptarmigan, snowshoe hare, and arctic hare. Both species of ptarmigan are once again abundant in most drainages of Unit 22 following the extremely low densities observed during the prior 4 years. In a few major drainages in Subunit 22A ptarmigan numbers are still low. Flocks ranging in size from 20 to 1,000 birds were regularly seen during March and April. Both snowshoe and arctic hare populations remain low or nonexistent throughout the unit, a trend which has been ongoing for the past 3 years.

Population Composition

No surveys were conducted to determine the status or composition of any small game populations within Unit 22.

Mortality

The impacts of natural and man-induced mortality on small game populations of the Seward Peninsula have not been evaluated. Although hunting is believed to have significant impact on small game numbers in the immediate vicinity of communities, the overall hunting mortality of small game populations appears to be insignificant.

Management Summary and Recommendations

Annual surveys were not conducted on small game populations in Unit 22. All information on the status of these species was gathered from biologists engaged in other field activities and from reports volunteered by hunters and trappers. Additional information was also provided by trappers responding to the

1985-86 Unit 22 Trapper Questionnaire. Since quantitative harvest information is presently nonexistent, additional efforts are needed to gather these data.

Although hunting does affect densities of small game in areas adjacent to villages, I believe its impact unit-wide is minimal. Major changes in small game densities on the Seward Peninsula are probably related to weather, natural predation, or natural cyclic phenomena. No changes in seasons or bag limits are recommended at this time.

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SMALL GAME

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 23

GEOGRAPHICAL DESCRIPTION: Kotzebue Sound

PERIOD COVERED: 1 July 1985-30 June 1986

Season and Bag Limit

See Hunting Regulations No. 26.

Population Status and Trend

No information was collected on grouse populations during this reporting period. Historically, grouse have been less widespread and abundant than ptarmigan in Unit 23.

Snowshoe hare abundance in Unit 23 has remained at a low level. Reports from the public and from agency personnel suggest that hares are moderately abundant in localized areas on the northern Seward Peninsula. Elsewhere in the unit, snowshoe hares are not noticeably more abundant than last year, and many areas still do not have significant numbers of hares. Recovery from the current cyclic low should manifest itself within the next 1-3 years.

Ptarmigan populations in some areas of Unit 23 appear to be recovering from a cyclic low. Ptarmigan sightings recorded during moose surveys are shown in Table 1. These data should provide a rough index of ptarmigan population trends in the future.

No information on arctic hares is available.

Mortality

No effort has been made to document or estimate small game harvest. Except for localized areas around some communities, hunting probably has an insignificant impact on small game populations in Unit 23.

Management Summary and Recommendations

A minimal survey-inventory program for small game is appropriate at this time because higher priority programs exist in Unit

23. The current level of monitoring is sufficient to detect gross population problems that would require a more active program.

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Table 1. Sightings of ptarmigan recorded during moose surveys in Unit 23, fall 1985 and spring 1986.

Date	Location	Total sightings	Total birds	Birds per sighting	Birds per hour
7 Apr 1986	Noatak River	--	95	--	17
26 Apr 1986	Kobuk River	0	0	0	0
28 Oct 1985, 22 Apr 1986	Selawik River	11	647	59	16
6-10 Mar 1986	Buckland River	18	800	44	66
9 Mar 1986, 27 Mar 1986, 1-2 Apr 1986	Northern Seward Peninsula	11	191	17	10

SMALL GAME

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 26A

GEOGRAPHICAL DESCRIPTION: Western Arctic Slope

PERIOD COVERED: 1 July 1985-30 June 1986

Season and Bag Limit

See Hunting Regulations No. 26.

Population Status and Trend

Willow ptarmigan are the only conspicuous small game found in Subunit 26A. These birds inhabit willow bottoms on the Colville River and other drainages on the North Slope, and regularly occur inland on the Meade and Inaru Rivers near Barrow. Small flocks spend some of the winter months on the windswept bluff edges of the Beaufort and Chukchi Sea coastline. No ptarmigan counts were conducted during the reporting period; however, ptarmigan tracks and flocks of birds continued to appear relatively abundant in the Colville River drainage. These observations were made during 20-24 April in conjunction with late-winter moose and wolf track surveys.

Mortality

Ptarmigan were probably harvested by residents of most communities on the western North Slope. However, most of this harvest appears to be sporadic and incidental to other activities such as snowmachine travel between communities. No harvest data are available.

Management Summary and Recommendations

I believe that willow ptarmigan populations are unaffected by hunter harvest on the western North Slope. Although more precise information on harvest levels and population status is desirable, these needs cannot compete with other, more pressing management issues in Subunit 26A.

Greater conformity between the present seasons and bag limits and the actual harvests that occur in Subunit 26A is desirable. Ptarmigan harvest continues well past the April 30 closure in at least several arctic slope communities. This apparent anomaly does not contribute to the Department's credibility

among Unit 26 residents. The problem and ways of addressing it are appropriate for discussion at local Advisory Committee and Regional Council meetings.

No changes in seasons or bag limits are recommended at this time.

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