

Breeding Bird Atlas
of
Fort Richardson, Alaska

by

Brad A. Andres

U.S. Fish and Wildlife Service
Migratory Bird Management
1011 East Tudor Road
Anchorage, Alaska 99503

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Study Area

Fort Richardson is located 16 km (\approx 10 miles) north of Anchorage, Alaska ($61^{\circ}20'N$, $149^{\circ}40'W$), and encompasses 24,300 ha (60,050 acres) of training and cantonment areas (Figure 1). Rising from sea level to 1,585 m (5,200 feet), Fort Richardson contains a wide range of vegetation types, which, because of its geographical location, contain a unique mix of Aleutian Island, interior Alaska, and southeastern Alaska plant elements (R. Lipkin, Alaska Natural Heritage Program, personal communication). Broad vegetation types, however, are typical of northern regions and include tidal wetlands, muskegs, lakes and ponds, broadleaf and coniferous forests, shrublands, and alpine. Intensity, duration, and type (mechanized or infantry) of training has created a variable disturbance regime among training areas on Fort Richardson, and burning associated with homesteading in the 1930s and 1940s has produced young deciduous forests on the northern part of the installation (W. Quirk, U.S. Army, personal communication). Despite these disturbances, Fort Richardson contains the largest continuous block of natural, low-elevation (<150 m, [492 feet]) vegetation in the Anchorage Bowl.

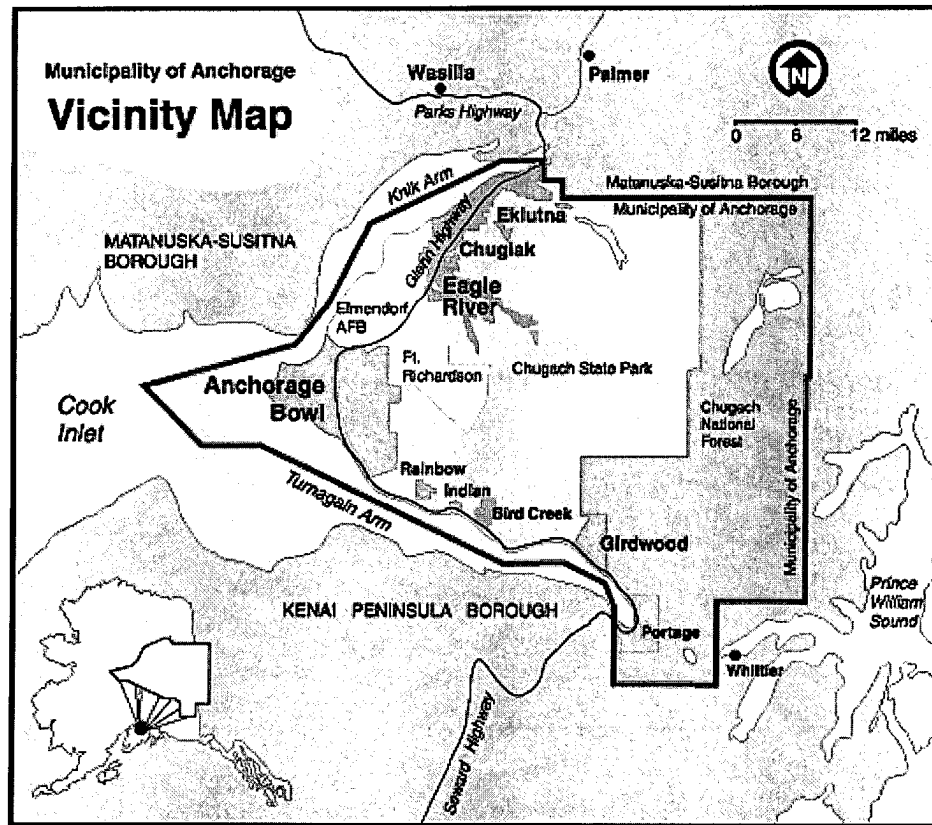


Figure 1. Location of Fort Richardson in south-central Alaska.

Methods

Atlas procedures

Information on bird distribution and abundance was obtained by visiting all designated training areas on Fort Richardson. Two of the smaller, adjacent training areas (8A/B, 6A/B) were combined to produce a total of 33 unique areas (Figure 2). Additional information from Eagle River Flats (area 20, Figure 2), depicted as presence/absence, was included. Almost all areas were visited in multiple years between 1994 and 1999. Main atlas effort was undertaken between 1996 and 1998.

Effort was recorded as the number of person-hours spent in each training area (the sum of the number of hours each observer surveyed). If two observers surveyed a training area together, the effort was calculated as 1.5 times the hours surveyed together. Effort was allocated proportional to the size of the training area with a minimum target of four person-hours per spent in each area. Coverage of a training area was dictated somewhat by access, but observers attempted to survey all broad vegetation types in each training area. Surveys were generally conducted between 4 June and 24 July.

We used birds' behavior to determine breeding evidence for species encountered in a training area (Table 1). Specific behaviors were recorded during surveys, but four broad classes (observed, possible, probable or confirmed; Table 1) were used to describe the breeding status of every species observed on Fort Richardson. Definitions of breeding status generally followed recommendations of the North American Ornithological Atlas Committee (1990) and have been used in many state breeding bird atlases (e.g., Brauning 1992). We strove to confirm breeding by as many species as possible on the installation.

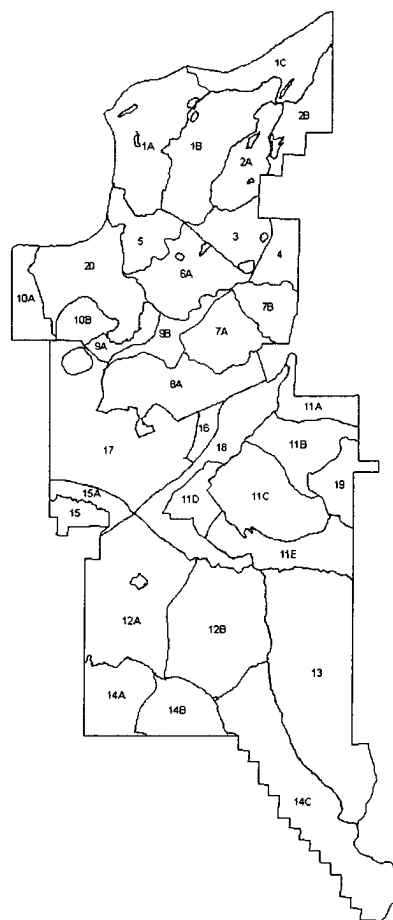


Figure 2. Location of training areas on Fort Richardson, Alaska.

Table 1. Descriptions and codes of breeding status of birds recorded on training areas of Fort Richardson, Alaska, 1994–99.

Status	Description
Observed	Male or female observed, but did not show evidence of breeding, was not in suitable nesting habitat, or was an obvious migrant.
Possible	Species (male or female) heard or seen in suitable nesting habitat but no further evidence of breeding noted; included soaring birds (raptors) over suitable habitat.
Probable (any of the following behaviors)	<p data-bbox="378 567 1317 604">Pair observation – Male and female simultaneously observed in suitable habitat.</p> <p data-bbox="378 625 1403 716">Permanent territory – Permanent territory presumed by observation of multiple, well-spaced, singing males (indicated territory holders). Also, if chases of individuals of the same species were seen.</p> <p data-bbox="378 737 1409 806">Courtship behavior – Male-female behavior observed indicative of breeding or observed copulation; included aerial displays of pipits, longspurs, and shorebirds.</p> <p data-bbox="378 827 1370 863">Agitated behavior – Adults seen exhibiting anxiety behavior, including distress calls.</p>
Confirmed (any of the following behaviors)	<p data-bbox="378 932 1354 1001">Carrying nesting material – Adult observed transporting nest building items such as sticks</p> <p data-bbox="378 1022 1143 1058">Nest building – Adults seen constructing nest at singular nest site.</p> <p data-bbox="378 1079 1398 1169">Occupied nest – Adults observed repeatedly entering or leaving a nest site with food items or long bouts of nest occupation (contents of treetop or cavity nests that could not be directly observed).</p> <p data-bbox="378 1190 1403 1260">Distraction display – Adults observed feigning injury (used by ground-nesting species to deter predators from detecting nest or young).</p> <p data-bbox="378 1281 932 1316">Nest with eggs – Nest found that contained eggs.</p> <p data-bbox="378 1337 1344 1373">Nest with young – Live young seen or heard; dead, identifiable hatchlings in a nest.</p> <p data-bbox="378 1394 1317 1463">Precocial young – Flightless young observed in the immediate nest area and were dependent on adults or had limited development.</p> <p data-bbox="378 1484 997 1520">Carrying food – Adults seen delivering food to young.</p> <p data-bbox="378 1541 1382 1631">Recently fledged young – Young birds (either precocial or altricial) observed that were incapable of sustained flight and were restricted to the natal area by dependence on adults or by limited mobility.</p> <p data-bbox="378 1652 1386 1722">Feeding recently fledged young – Adult observed feeding recently fledged young (those incapable of sustained flight) away from nest site.</p>

To provide information on abundance that extended beyond mere occurrence, categorical abundances, based on encounters per hour, were developed (Table 2). Kessel (1989) used a similar birds per hour metric to describe differences in bird abundance among habitats on the Seward Peninsula, Alaska, and this method has been used for other breeding bird inventories in Alaska (Andres et al. 1999). Categorical abundances were calculated for each training area and for the entire installation, although abundance definitions varied somewhat depending on the scale (Table 3). Categories for mean bird abundance were constructed so that the distribution of abundance ranks generally followed a truncated lognormal distribution (Preston 1980).

In addition to specific atlas surveys, information on nest box occupancy by Boreal Owls (*Aegolius funereus*) and Northern Saw-whet Owls (*A. acadicus*) collected by other observers (T. Swem, U.S. Fish and Wildlife Service, unpublished data) and counts from breeding owl and waterfowl surveys conducted in 1997 and 1998 were considered. Incidental observations made while conducting other landbird fieldwork were included as was information collected by other observers working on Eagle River Flats. I hope inclusion of all possible information will give the most complete picture of bird distribution and abundance on Fort Richardson.

Table 2. Abundance ranks, and their descriptions, for breeding birds found on training areas of Fort Richardson, Alaska, 1994–99.

Abundance rank	Description (per area-day¹)
1	1 individual per day
2	2-4 individuals per day, <1 individual per hour
3	5-9 individuals per day, 1 individual per hour
4	10-49 individuals per day, 2-5 individuals per hour
5	≥50 individuals per day, ≥6 individuals per hour

¹ day = eight person-hours.

Table 3. Range of breeding bird abundance ranks and categorical abundance for individual training areas and for the entirety of Fort Richardson, Alaska, 1994–99.

Descriptive abundance category	Range for individual training areas	Range for entire Fort Richardson
rare	≤1.00	≤0.50
uncommon	1.01–1.99	0.51–1.25
fairly common	2.00–2.49	1.26–2.50
common	>2.50	>2.50

Species accounts

Species accounts were generated for all species observed in more than three training areas and included the following information. Information on distribution and abundance for breeding species observed in three or fewer training areas is summarized in Table 5.

English and scientific name. Nomenclature follows the current American Ornithologists' Union's checklist (<<http://www.aou.org/checklist/index.php3>>).

Breeding status. The most convincing evidence of breeding recorded anywhere on Fort Richardson (see Table 1 for definitions).

Overall abundance. Abundance across the entirety of Fort Richardson (see Table 3 for category definitions).

Nest site. Location of nest site as described by Armstrong (1995) and Ehrlich et al. (1988).

Training area occurrence. Percentage of training areas where the species was recorded ($n = 33$ without Eagle River Flats, which is denoted as present or absent).

Distribution map. Abundance plotted by training area (see Table 3 for category definitions).

General habitat. Vegetation types where species most likely occurs. Based on observers' impressions and Armstrong (1995).

Abundance by vegetation type. Abundance determined from point counts (unlimited distance within the designated vegetation type) conducted in 12 vegetation types, based on Viereck et al. (1992), in 1998 and 1999 (see Andres and Browne 2001 for details on point count procedures). Vegetation types and numbers of points surveyed in each type are provided in Table 4.

Breeding Bird Survey routes. Route density (based on the number/50-stops) and percentage of stops for two routes surveyed on Fort Richardson between 1994 and 1999 — North Base (50 stops) and Alpenglow (30 stops).

Regional summer abundance. Breeding abundance in the eastern Upper Cook Inlet region described by Scher (1992) and summer abundance in central Alaska from Armstrong (1995).

Population trend. Population trend on Breeding Bird Survey (BBS) routes in the Northwestern Interior Forest Bird Conservation Region, 1980–2003 (Sauer et al. 2004) reported as stable ($P > 0.20$), increase/decrease ($0.20 \leq P < 0.10$), or significant increase/decrease ($P \leq 0.10$). Trends coded as unreliable by BBS analysts were not reported. Trends for waterfowl in Alaska, Yukon Territory, and Old Crow Flats survey strata were reported from the U.S. Fish and Wildlife Service (2004). If BBS or waterfowl trends were not available, trend published in the bird conservation plans (see below) were reported and were indicated by a superscript^c.

Conservation status. National or continental status as reported by the U.S. Shorebird Conservation Plan (U.S. Shorebird Conservation Plan 2004), Partners in Flight North American Landbird Conservation Plan (Rich et al. 2004), the North American Waterbird Conservation Plan (Kushlan et al. 2002), or the North American Waterfowl Management Plan (U.S. Department of the Interior et al. 2004).

Migration system. Wintering grounds of Nearctic-breeding birds were indicated as resident, Nearctic, Neotropical, or Antarctic regions or are residents year-round (Scher 1992, Armstrong 1995, DeGraaf and Rappole 1995).

Table 4. Numbers of point counts conducted in various vegetation types on Fort Richardson, Alaska, 1998–99. Poplar forest consists of cottonwoods and aspen (*Populus* spp.)

Vegetation type	Number of points	Vegetation type	Number of points
Herbaceous	20	Open mixed spruce-poplar	25
Dwarf alpine shrub	43	Open mixed spruce-birch	35
Low alpine shrub	22	Closed mixed spruce-poplar	48
Low non-alpine shrub	33	Closed mixed spruce-birch	92
Tall willow shrub	19	Dwarf spruce forest	14
Tall alder shrub	30	Open spruce forest	22
Closed poplar forest	18	Closed spruce forest	26
Closed birch forest	76		

Results

From 1996 to 1998, 441 person-hours were spent in specific atlas surveys; at least a portion of all 33 designated areas were visited. Since 1994, a total of 122 species have been recorded during the breeding season on Fort Richardson. Seventeen of these species (14%) were considered migrants or visitants (Table 6). Of the remaining 105 species, 94 species (89%) were determined to be confirmed or probable breeders on the installation; breeding was confirmed for 89 species. Across Fort Richardson (excluding Eagle River Flats), the Dark-eyed Junco (100% of the training areas) and the Common Redpoll (97% of the training areas) were the most widely distributed species. Other widespread species (>85% of the training areas) included the Alder Flycatcher, Black-capped Chickadee, Boreal Chickadee, Swainson's Thrush, Hermit Thrush, Orange-crowned Warbler, Yellow-rumped Warbler, and Lincoln's sparrow. Breeding was confirmed for several species on Fort Richardson that are casual or rare breeders in the eastern Upper Cook Inlet (Scher 1992): Gadwall, Ring-necked Duck, Bald Eagle, Red-tailed Hawk, Golden Eagle, Merlin, Rock Ptarmigan, Sandhill Crane, Wandering Tattler, American Three-toed Woodpecker, Black-backed Woodpecker, Northern Wheatear, Townsend's Solitaire, and Bohemian Waxwing. Including probable breeders, 82% of all bird species breeding in eastern Upper Cook Inlet were found on Fort Richardson; with the inclusion of possible breeders, the percentage increases to 91%. Clearly, the wide variety of bird habitats located on Fort Richardson support a diverse and rich breeding avifauna.

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Table 5. Possible, probable, or confirmed breeding species occurring in three or less training areas on Fort Richardson, Alaska, 1994–99. All species are rarely encountered. Specific locations of observations on Fort Richardson and eastern Upper Cook Inlet breeding abundance (Scher 1992) are provided.

Common name	Scientific name	Fort Richardson			Eastern Upper Cook Inlet breeding status
		breeding status	areas	general habitat	
Gadwall	<i>Anas strepera</i>	confirmed	Eagle River Flats, Otter Lake	lakes/ponds, marshes	casual
Northern Shoveler	<i>Anas clypeata</i>	possible	McVeigh Marsh, Otter Lake	lakes/ponds, marshes	common
Canvasback	<i>Aythya valisineria</i>	confirmed	Otter Lake	lakes/ponds, marshes	uncommon
Greater Scaup	<i>Aythya marila</i>	possible	Otter Lake	lakes/ponds, marshes	common
Harlequin Duck	<i>Histrionicus histrionicus</i>	confirmed	Ship Creek	rivers/creeks	very rare
Barrow's Goldeneye	<i>Bucephala islandica</i>	possible	Gwen Lakes	wooded lakes/ponds	uncommon
Common Merganser	<i>Mergus merganser</i>	possible	Ship Creek	rivers/creeks	fairly common
Rock Ptarmigan	<i>Lagopus mutus</i>	confirmed	Snowhawk, Arctic Valleys	alpine dwarf shrub	rare
White-tailed Ptarmigan	<i>Lagopus leucurus</i>	confirmed	Snowhawk, Arctic Valleys	alpine dwarf shrub	uncommon
Golden Eagle	<i>Aquila chrysaetos</i>	confirmed	Snowhawk, Arctic Valleys	alpine cliffs	rare
Peregrine Falcon	<i>Falco peregrinus</i>	possible	Snowhawk Valley	alpine cliffs	rare visitor
Wandering Tattler	<i>Heteroscelus incanus</i>	confirmed	Snowhawk Valley	alpine lakes/ponds	rare
Least Sandpiper	<i>Calidris minutilla</i>	confirmed	Malamute, Otter Lake	wet meadows, lakes/ponds	common
Short-billed Dowitcher	<i>Limnodromus griseus</i>	confirmed	Eagle River Flats, Gwen Lakes, Otter Lake	wet meadows, muskegs	uncommon
Red-necked Phalarope	<i>Phalaropus lobatus</i>	confirmed	Eagle River Flats, Otter Lake	lakes/ponds, marshes	common

Common name	Scientific name	Fort Richardson		Eastern Upper Cook Inlet breeding status
		breeding status	areas	
Rock Pigeon	<i>Columba livia</i>	possible	Glenn Highway	buildings common
Black-backed Woodpecker	<i>Picoides arcticus</i>	confirmed	Eagle River Flats (west)	mixed, spruce forests casual visitor
Say's Phoebe	<i>Sayornis saya</i>	possible	Arctic Valley	alpine dwarf shrub very rare
Northern Shrike	<i>Lanius excubitor</i>	confirmed	Arctic Valley, Malamute	tall alder shrub uncommon
Steller's Jay	<i>Cyanocitta stelleri</i>	possible	Moose Run area	mixed forest rare
Bank Swallow	<i>Riparia riparia</i>	confirmed	Eagle River, Eagle River Flats, Otter Lake	cutbanks common
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	confirmed	Cantonment	buildings uncommon
American Dipper	<i>Cinclus mexicanus</i>	confirmed	Ship Creek	rviers/creeks uncommon
Northern Wheatear	<i>Oenanthe oenanthe</i>	confirmed	Snowhawk, Arctic Valleys	alpine rocks/cliffs very rare
Townsend's Solitaire	<i>Myadestes townsendii</i>	confirmed	Arctic Valley	alpine low shrub (coniferous) very rare
Gray-cheeked Thrush	<i>Catharus minimus</i>	possible	Moose Run, north-central	tall shrubs rare
American Tree Sparrow	<i>Spizella arborea</i>	probable	Snowhawk, Arctic Valleys	alpine low shrub rare
Song Sparrow	<i>Melospiza melodia</i>	probable	Ship Creek Valley	low-tall shrub uncommon
Rusty Blackbird	<i>Euphagus carolinus</i>	confirmed	Eagle River Flats, Otter Lake, Waldon Lake	tall shrub, lakes/ponds common
Gray-crowned Rosy-Finch	<i>Leucosticte tephrocotis</i>	possible	Snowhawk Valley	alpine rocks/cliffs rare
Pine Grosbeak	<i>Pinicola enucleator</i>	possible	northern section	spruce forest uncommon

Table 6. Species that occurred as summer visitants or migrants on Fort Richardson, Alaska, 1994–99. Breeding abundance in eastern Upper Cook Inlet (Scher 1992) is also provided.

Common name	Scientific name	Eastern Upper Cook Inlet breeding status
Trumpeter Swan	<i>Cygnus buccinator</i>	casual
Ring-necked Pheasant	<i>Phasianus colchicus</i>	released
Pacific Loon	<i>Gavia pacifica</i>	uncommon
Horned Grebe	<i>Podiceps auritus</i>	common
Osprey	<i>Pandion haliaetus</i>	casual?
Gyr Falcon	<i>Falco rusticolus peregrinus</i>	casual
Whimbrel	<i>Numenius phaeopus</i>	rare visitor
Semipalmated Sandpiper	<i>Calidris pusilla</i>	uncommon migrant
Western Sandpiper	<i>Calidris mauri</i>	fairly common migrant
Pectoral Sandpiper	<i>Calidris melanotos</i>	uncommon migrant
Wilson's Phalarope	<i>Phalaropus tricolor</i>	casual
Glaucous-winged Gull	<i>Larus glaucescens</i>	common
Caspian Tern	<i>Sterna caspia</i>	accidental visitor
Winter Wren	<i>Troglodytes troglodytes</i>	casual (fall) visitor
Arctic Warbler	<i>Phylloscopus borealis</i>	accidental visitor
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	rare
Red Crossbill	<i>Loxia curvirostra</i>	casual visitor

Species Accounts

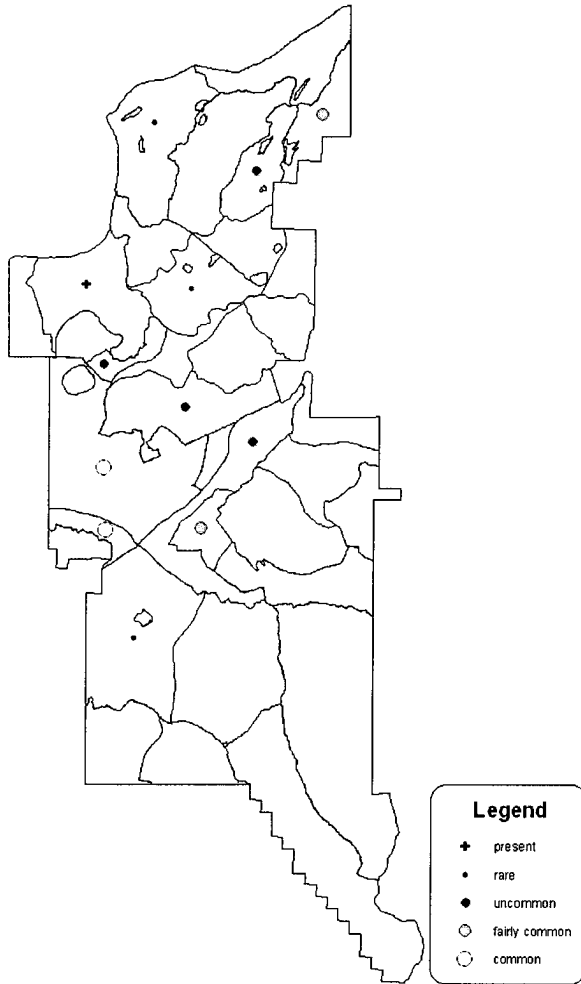
Individual species summaries follow.

Canada Goose
Branta canadensis

Breeding status: confirmed
Nest site: ground

Overall abundance: uncommon
Training area occurrence: 36%

General habitat: lakes, ponds, marshes



Abundance by vegetation type	
	Birds/pt.
Herbaceous	2.35
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	0.09
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	0.05
Open mixed spruce-poplar	--
Open mixed spruce-birch	0.25
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	0.27
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	4.4	2.6
Alpenglow	1.2	2.5

Regional summer abundance

Cook Inlet: common
Interior Alaska: common

Population trend: stable

Conservation status: low concern

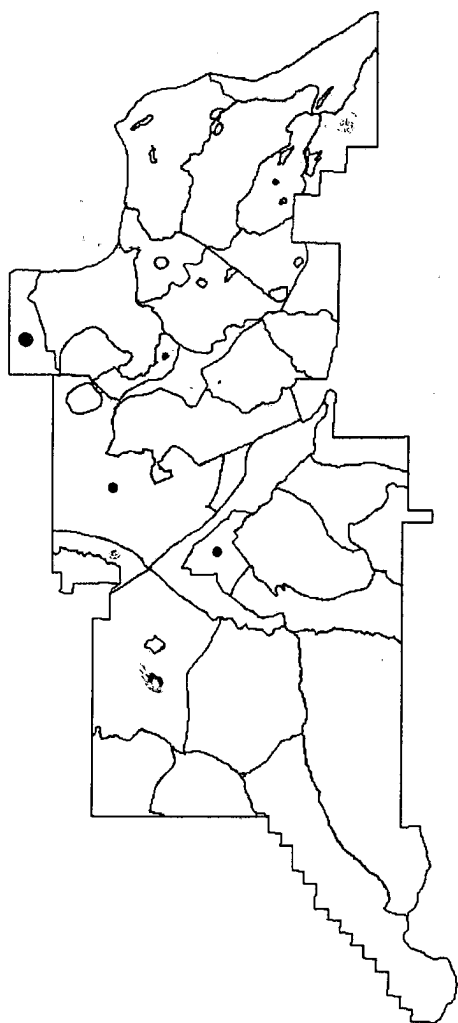
Migration system: Nearctic

American Wigeon
Anas americana

Breeding status: confirmed
Nest site: ground

Overall abundance: rare
Training area occurrence: 18%

General habitat: lakes, ponds, marshes, wet meadows



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.10
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	0.03
Tall willow shrub	0.05
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	1.1	1.1
Alpenglow	--	--

Regional summer abundance

Cook Inlet: common
Interior Alaska: common

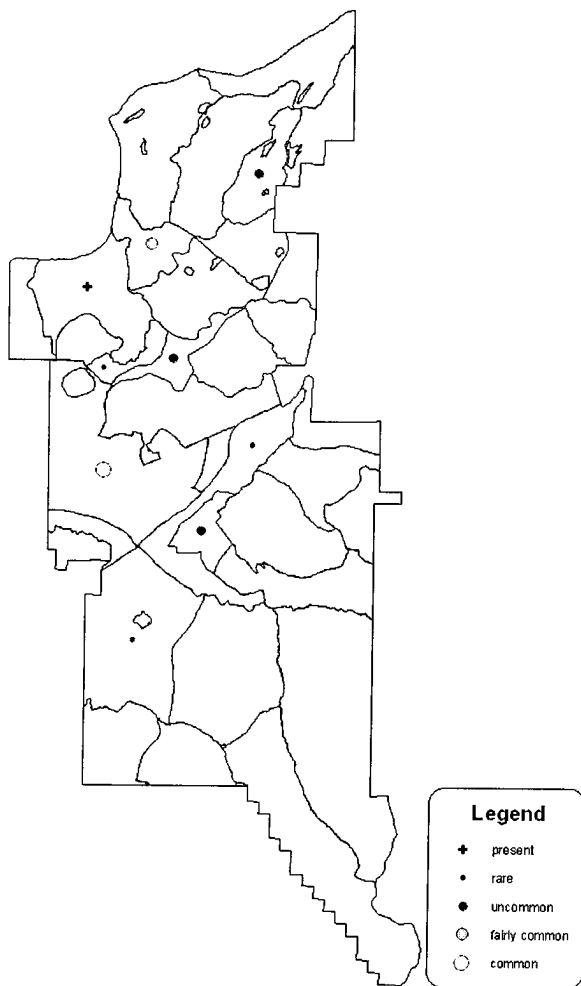
Population trend: significant increase
Conservation status: moderate concern
Migration system: Neotropical (partial)

Mallard
Anas platyrhynchos

Breeding status: confirmed
Nest site: ground

Overall abundance: uncommon
Training area occurrence: 27%

General habitat: lakes, ponds, marshes, wet meadows



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.25
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	0.3	0.3
Alpenglow	--	--

Regional summer abundance

Cook Inlet: common

Interior Alaska: common

Population trend: significant increase

Conservation status: low concern

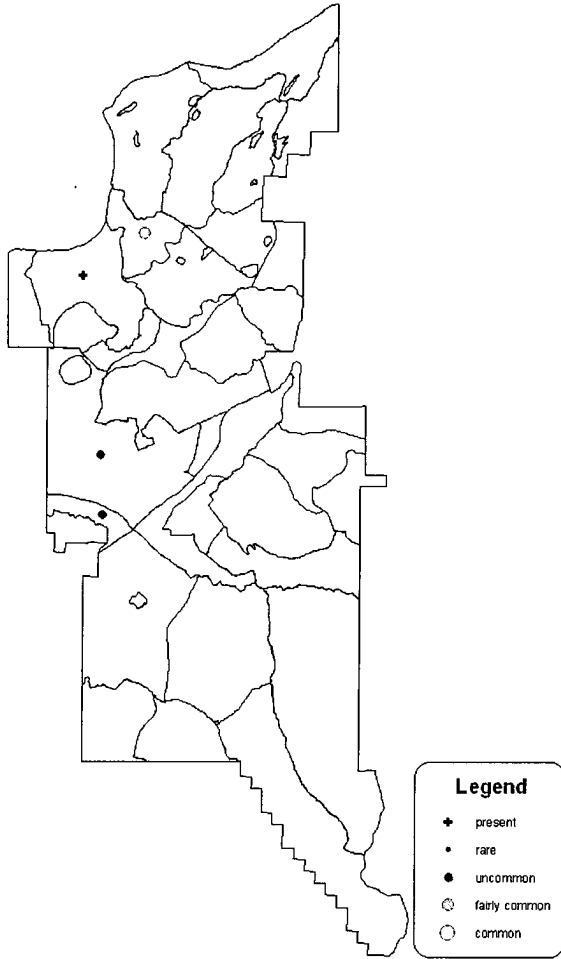
Migration system: Neotropical (partial)

Northern Pintail *Anas acuta*

Breeding status: confirmed
Nest site: ground

Overall abundance: rare
Training area occurrence: 12%

General habitat: lakes, ponds, marshes, wet meadows



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.55
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	--	--
Alpenglow	--	--

Regional summer abundance

Cook Inlet: common

Interior Alaska: common

Population trend: stable

Conservation status: high concern

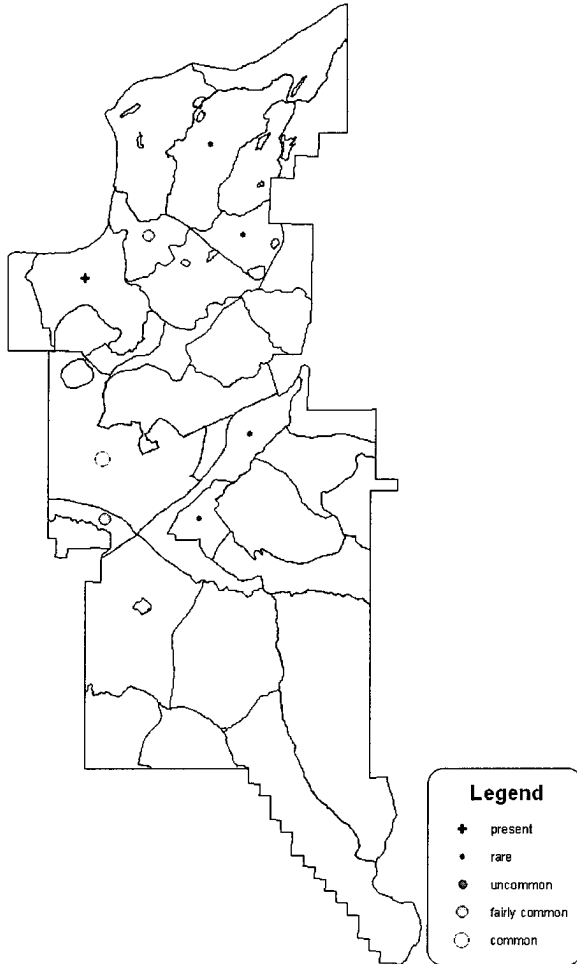
Migration system: Neotropical (partial)

Green-winged Teal *Anas crecca*

Breeding status: confirmed
Nest site: ground

Overall abundance: uncommon
Training area occurrence: 24%

General habitat: lakes, ponds, marshes, wet meadows



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.05
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	0.05
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	--	--
Alpenglow	--	--

Regional summer abundance

Cook Inlet: common
Interior Alaska: common

Population trend: significant increase

Conservation status: low concern

Migration system: Neotropical (partial)

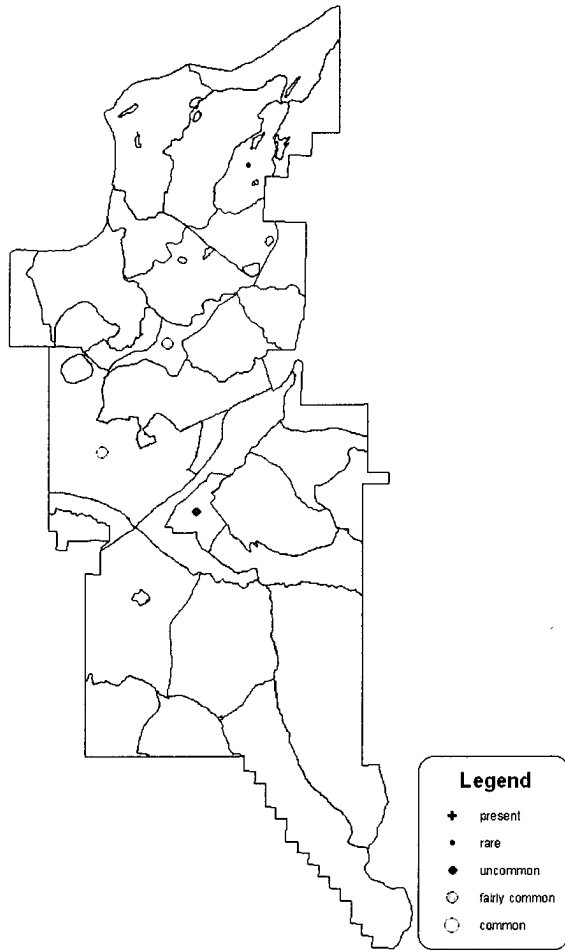
Ring-necked Duck

Aythya collaris

Breeding status: confirmed
Nest site: ground

Overall abundance: rare
Training area occurrence: 12%

General habitat: lakes, ponds, marshes



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	0.58
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	--	--
Alpenglow	--	--

Regional summer abundance

Cook Inlet: rare
 Interior Alaska: uncommon

Population trend: stable

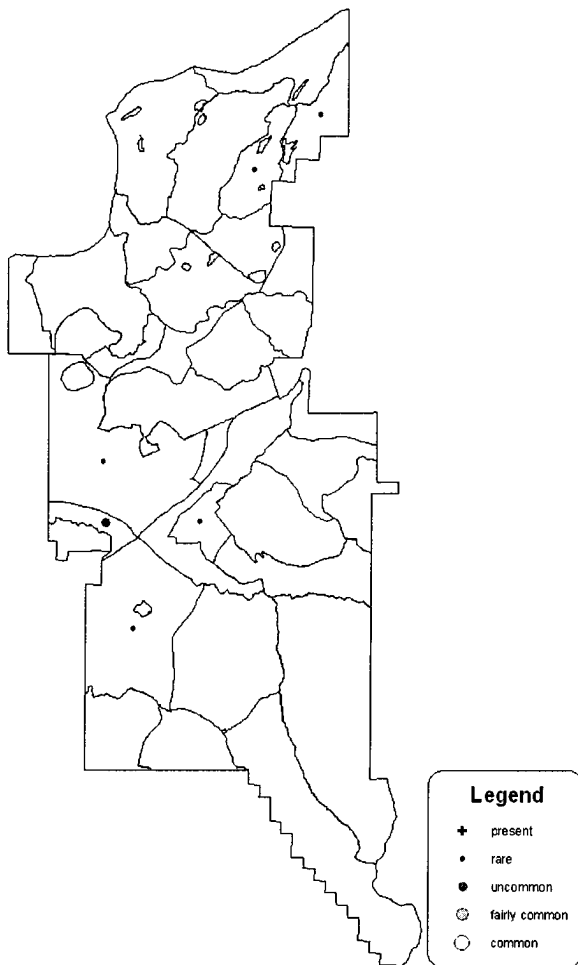
Conservation status: low concern

Migration system: Neotropical (partial)

Common Goldeneye *Bucephala clangula*

Breeding status: confirmed
Nest site: tree cavity

Overall abundance: rare
Training area occurrence: 18%



General habitat: forested lakes and ponds, marshes

Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.10
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	0.3	0.3
Alpenglow	--	--

Regional summer abundance

Cook Inlet: fairly common
Interior Alaska: common

Population trend: stable

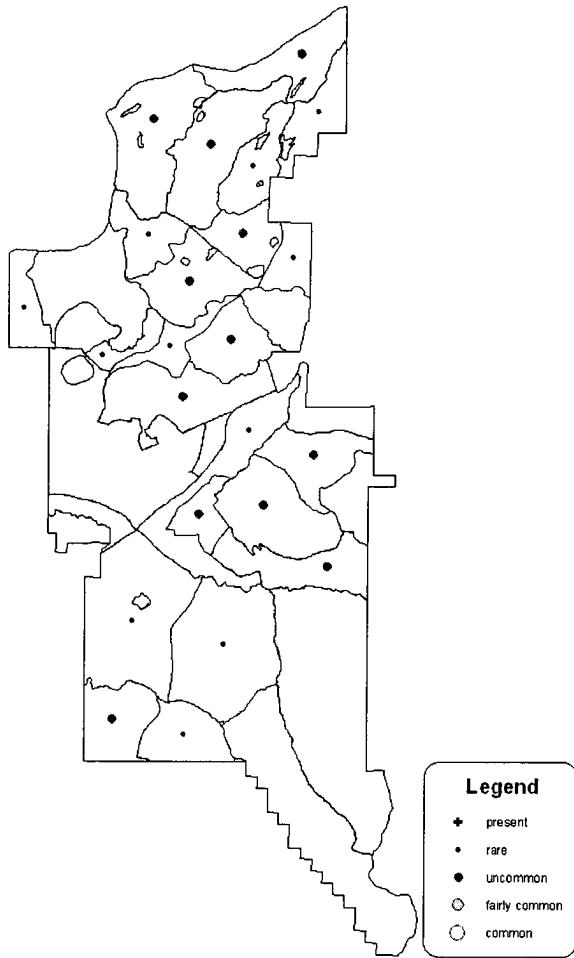
Conservation status: low concern

Migration system: Nearctic

Spruce Grouse *Falcipectes canadensis*

Breeding status: confirmed
Nest site: ground

Overall abundance: uncommon
Training area occurrence: 70%



General habitat: mixed, spruce-broadleaf and spruce forests

Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	0.01
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	0.15

Breeding Bird Survey routes		
	birds/route	% stops
North Base	0.3	0.6
Alpenglow	--	--

Regional summer abundance

Cook Inlet: common

Interior Alaska: common

Population trend: significant increase^c

Conservation status: low concern

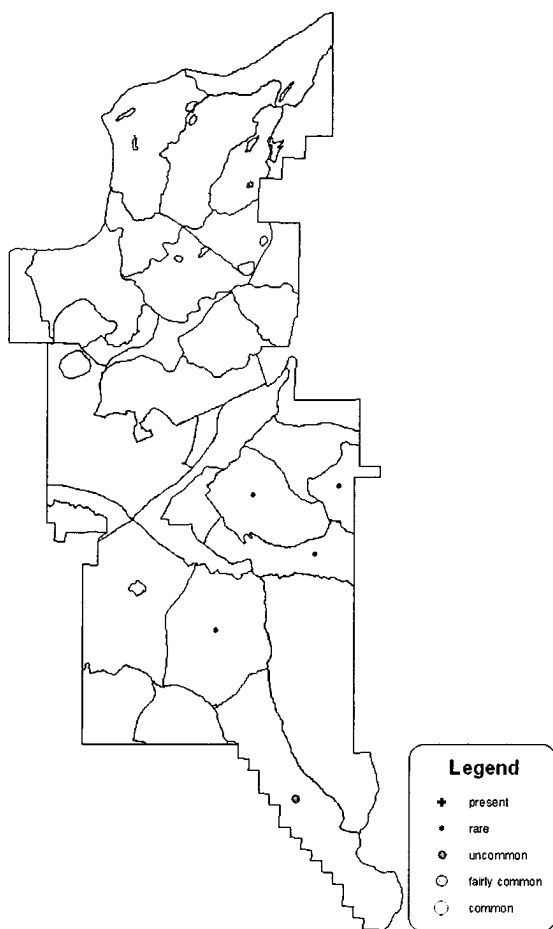
Migration system: resident

Willow Ptarmigan *Lagopus lagopus*

Breeding status: confirmed
Nest site: ground

Overall abundance: rare
Training area occurrence: 15%

General habitat: Dwarf and low alpine shrubs



Legend

- + present
- rare
- uncommon
- fairly common
- ◉ common

Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	--	--
Alpenglow	--	--

Regional summer abundance

Cook Inlet: uncommon
Interior Alaska: common

Population trend: stable^c

Conservation status: low concern

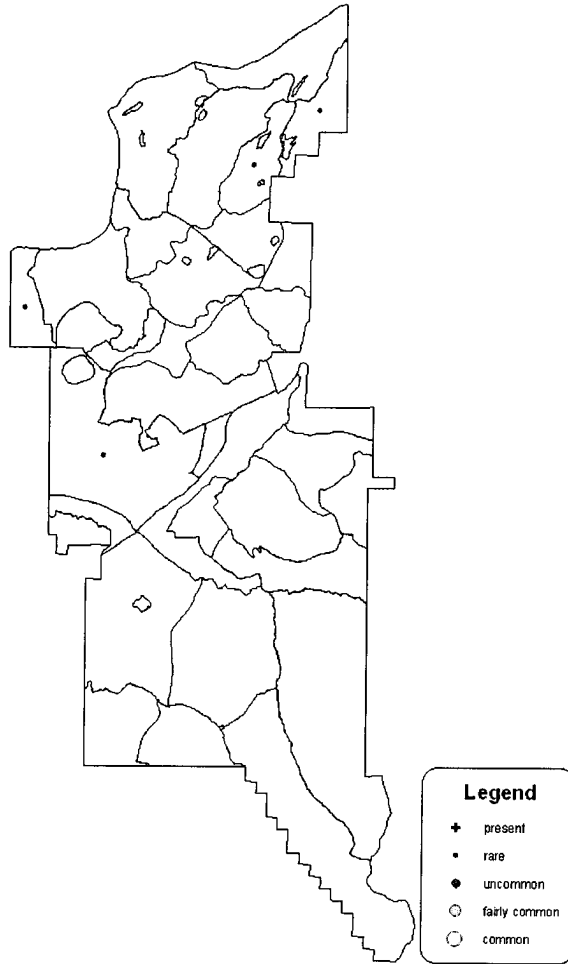
Migration system: resident

Common Loon
Gavia immer

Breeding status: confirmed
Nest site: ground

Overall abundance: rare
Training area occurrence: 12%

General habitat: forested lakes



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	0.03
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	0.01
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	2.4	3.7
Alpenglow	--	--

Regional summer abundance

Cook Inlet: uncommon
Interior Alaska: common

Population trend: stable

Conservation status: moderate concern

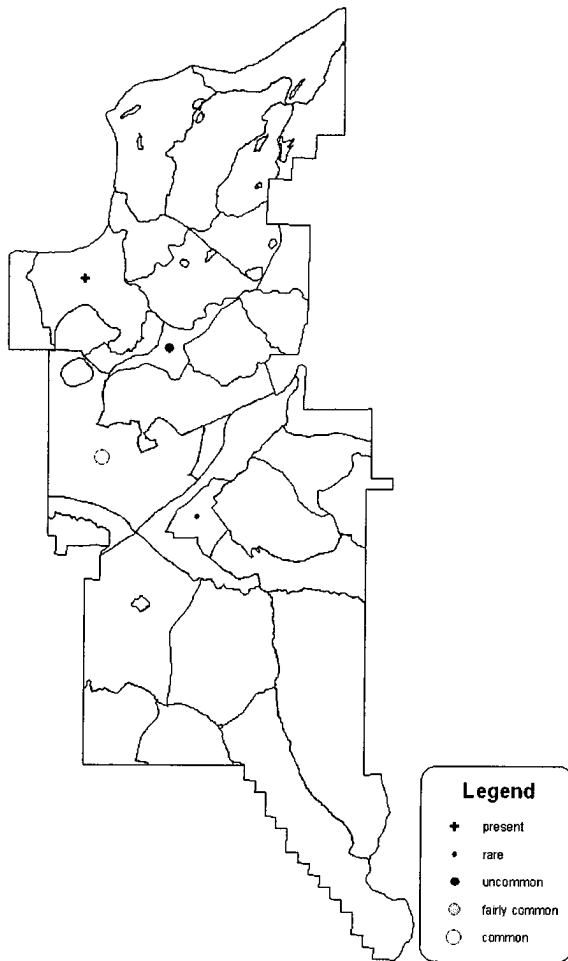
Migration system: Nearctic

Red-necked Grebe
Podiceps grisegena

Breeding status: confirmed
Nest site: floating

Overall abundance: rare
Training area occurrence: 12%

General habitat: lakes, ponds, marshes



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	6.4	6.6
Alpenglow	--	--

Regional summer abundance

Cook Inlet: common
Interior Alaska: common

Population trend: stable

Conservation status: moderate concern

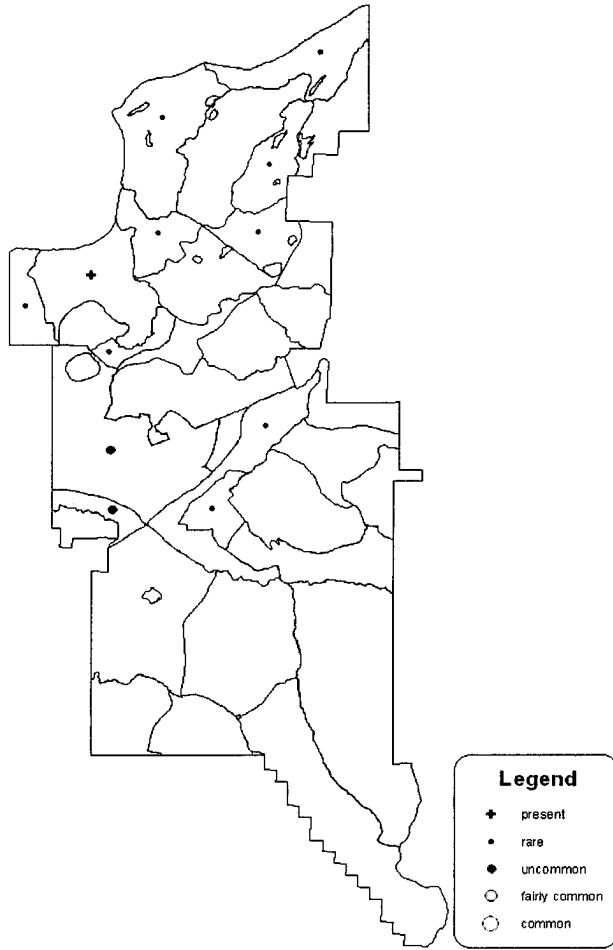
Migration system: Nearctic

Bald Eagle
Haliaeetus leucocephalus

Breeding status: confirmed
Nest site: broadleaf tree

Overall abundance: uncommon
Training area occurrence: 36%

General habitat: forested lakes and ponds, rivers and creeks



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.05
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	0.03
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	0.01
Dwarf spruce forest	--
Open spruce forest	0.05
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	0.1	0.3
Alpenglow	0.5	0.8

Regional summer abundance

Cook Inlet: rare

Interior Alaska: uncommon

Population trend: significant increase^c

Conservation status: moderate concern

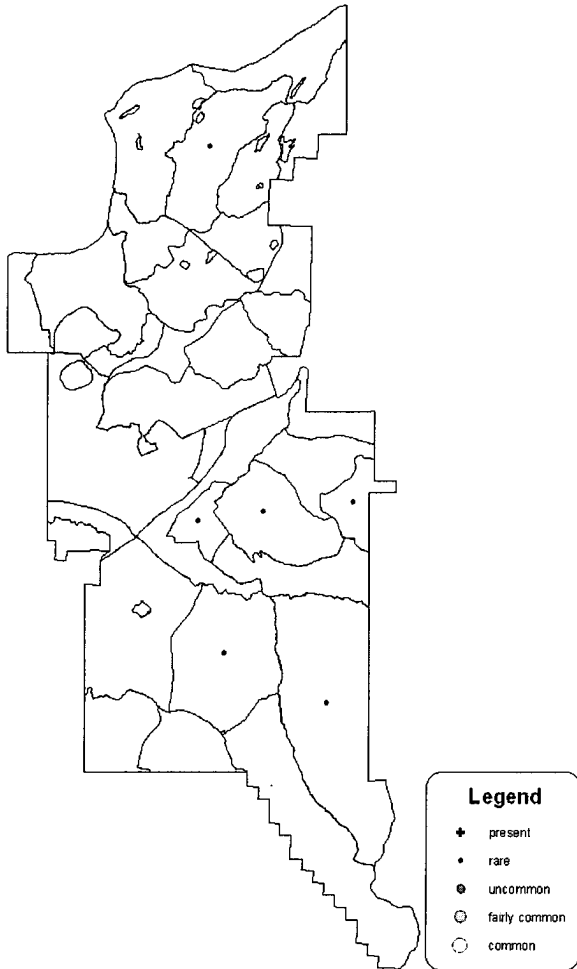
Migration system: Nearctic

Northern Harrier
Circus cyaneus

Breeding status: confirmed
Nest site: ground

Overall abundance: rare
Training area occurrence: 18%

General habitat: meadows, dwarf and low alpine shrubs



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.05
Dwarf alpine shrub	0.02
Low alpine shrub	0.05
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	0.07
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	0.02
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	--	--
Alpenglow	--	--

Regional summer abundance

Cook Inlet: uncommon
Interior Alaska: uncommon

Population trend: stable

Conservation status: moderate concern

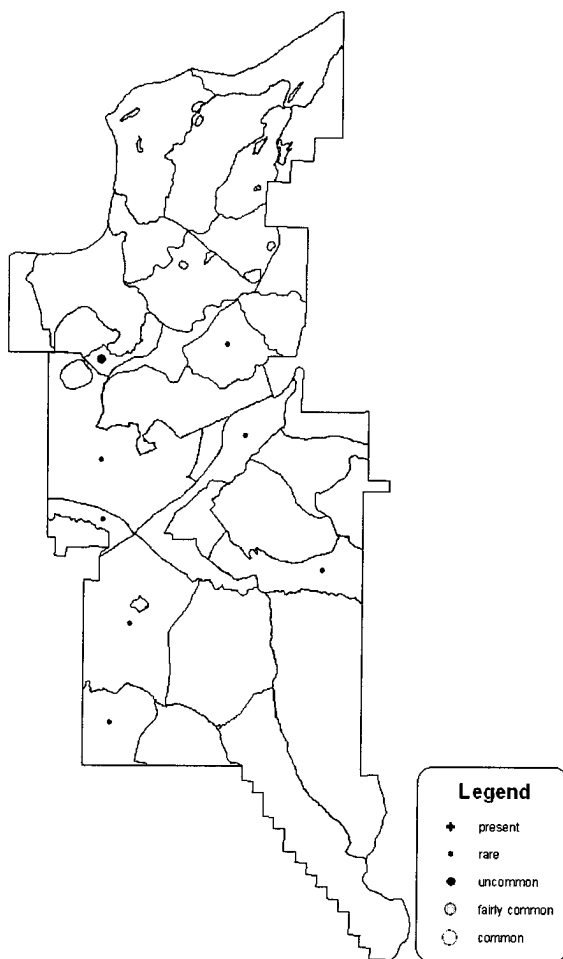
Migration system: Neotropical (partial)

Sharp-shinned Hawk *Accipiter striatus*

Breeding status: confirmed
Nest site: spruce tree

Overall abundance: rare
Training area occurrence: 24%

General habitat: mixed spruce-broadleaf and spruce forests



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	0.01
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	--	--
Alpenglow	--	--

Regional summer abundance

Cook Inlet: uncommon
Interior Alaska: common

Population trend: increase^c

Conservation status: low concern

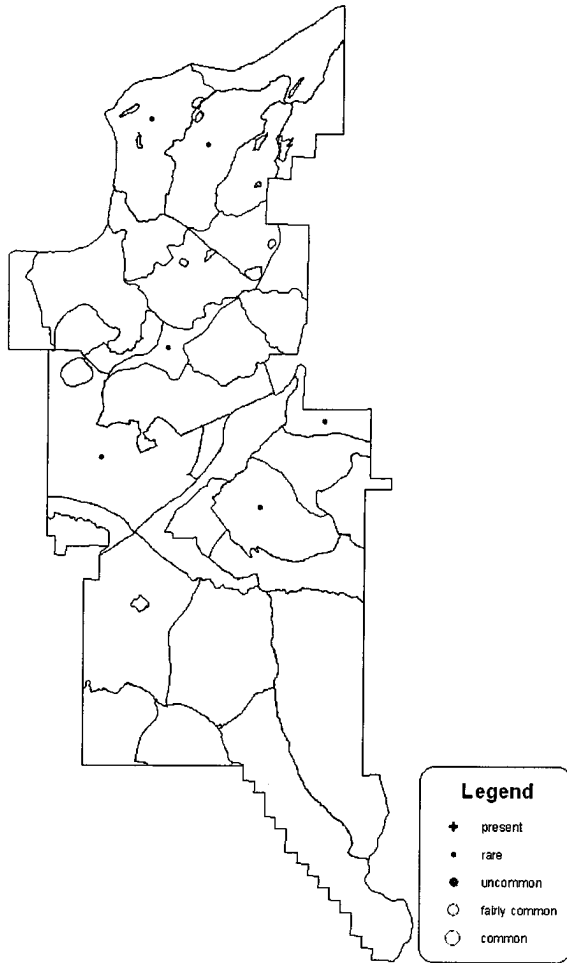
Migration system: Neotropical (partial)

Northern Goshawk
Accipiter gentilis

Breeding status: probable
Nest site: spruce tree

Overall abundance: rare
Training area occurrence: 18%

General habitat: mixed spruce-broadleaf and spruce forests



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	0.05
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	--	--
Alpenglow	--	--

Regional summer abundance

Cook Inlet: rare
Interior Alaska: uncommon

Population trend: stable^c

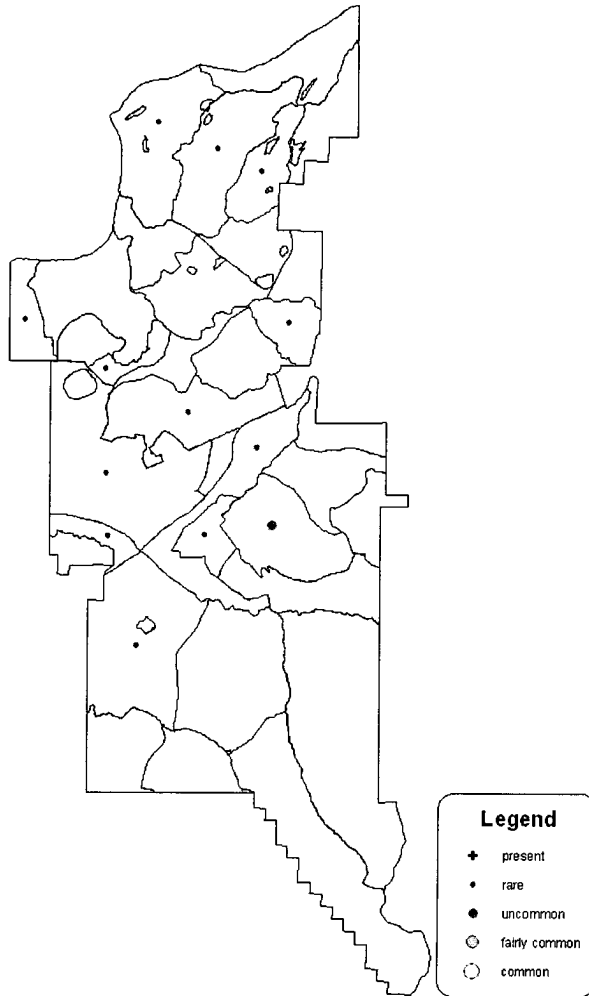
Conservation Status: moderate concern

Migration system: resident/Nearctic

Red-tailed Hawk
Buteo jamaicensis

Breeding status: confirmed
Nest site: tree

Overall abundance: rare
Training area occurrence: 39%



General habitat: mixed spruce-broadleaf and spruce forests

Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	0.02
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	0.6	1.1
Alpenglow	--	--

Regional summer abundance

Cook Inlet: rare
Interior Alaska: common

Population trend: stable

Conservation status: low concern

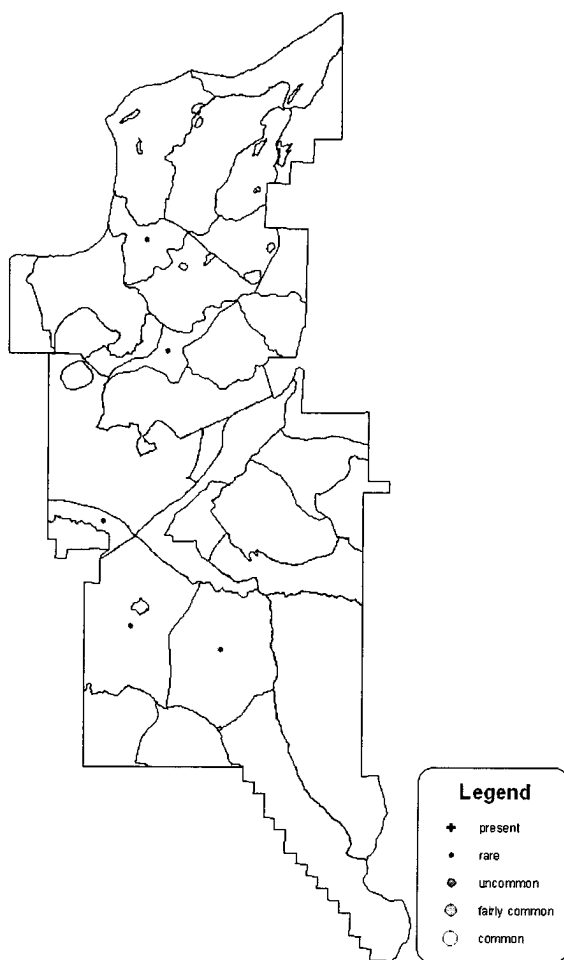
Migration system: Nearctic

Merlin
Falco columbarius

Breeding status: confirmed
Nest site: tree (corvid nests), cliffs

Overall abundance: rare
Training area occurrence: 15%

General habitat: mixed spruce-broadleaf and spruce forests



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	0.03
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	0.01
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	--	--
Alpenglow	--	--

Regional summer abundance

Cook Inlet: rare
Interior Alaska: uncommon

Population trend: stable

Conservation status: low concern

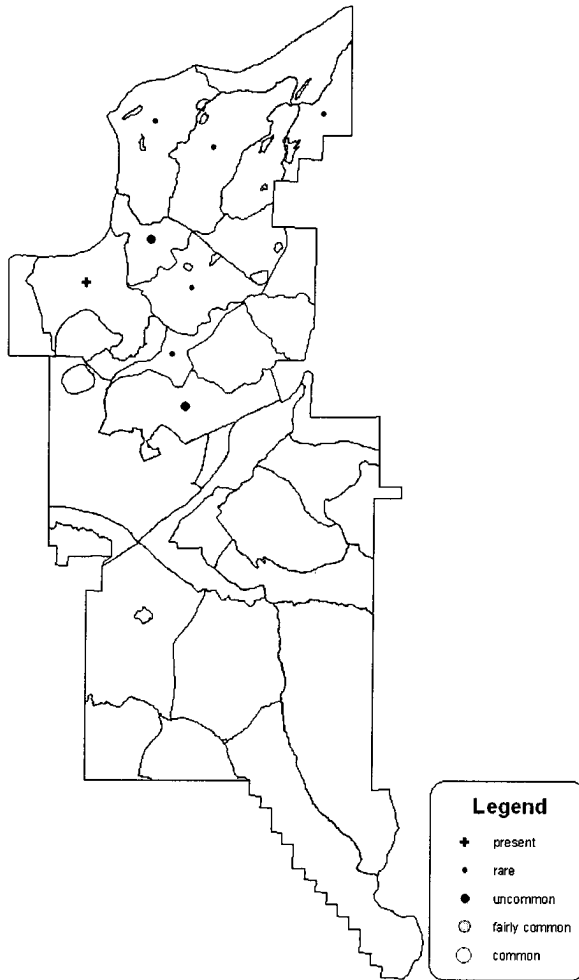
Migration system: Neotropical

Sandhill Crane
Grus canadensis

Breeding status: confirmed
Nest site: ground

Overall abundance: rare
Training area occurrence: 24%

General habitat: wet meadows, ponds



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.30
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	0.15
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	0.06
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	0.05
Dwarf spruce forest	--
Open spruce forest	0.09
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	3.4	3.7
Alpenglow	--	--

Regional summer abundance

Cook Inlet: rare
Interior Alaska: uncommon

Population trend: stable^c

Conservation status: low concern

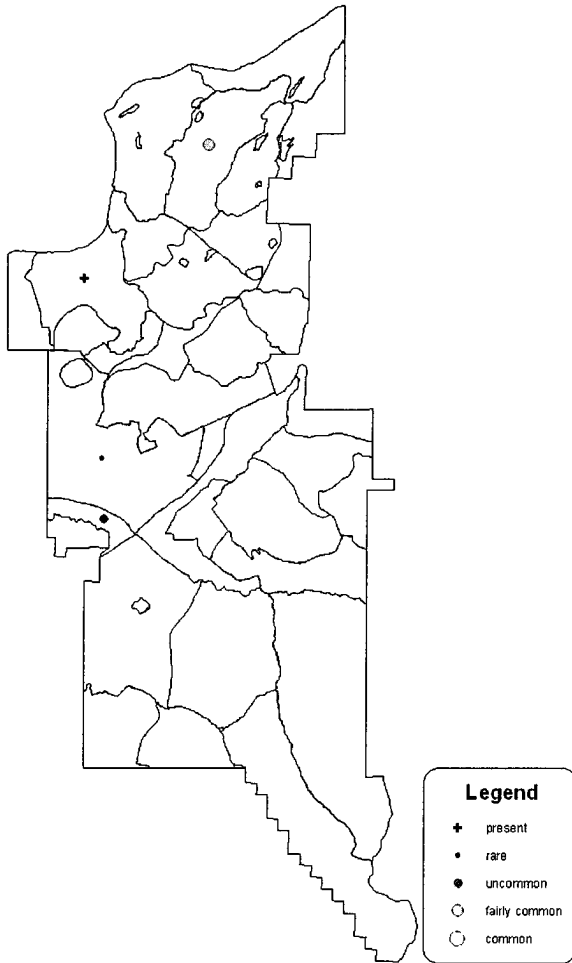
Migration system: Neotropical (partial)

Semipalmated Plover
Charadrius semipalmatus

Breeding status: confirmed
Nest site: ground

Overall abundance: rare
Training area occurrence: 12%

General habitat: gravel, sand or gravel beaches, lakes, ponds



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.10
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	0.03
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	0.02
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	--	--
Alpenglow	--	--

Regional summer abundance

Cook Inlet: common
Interior Alaska: common

Population trend: stable

Conservation status: low concern

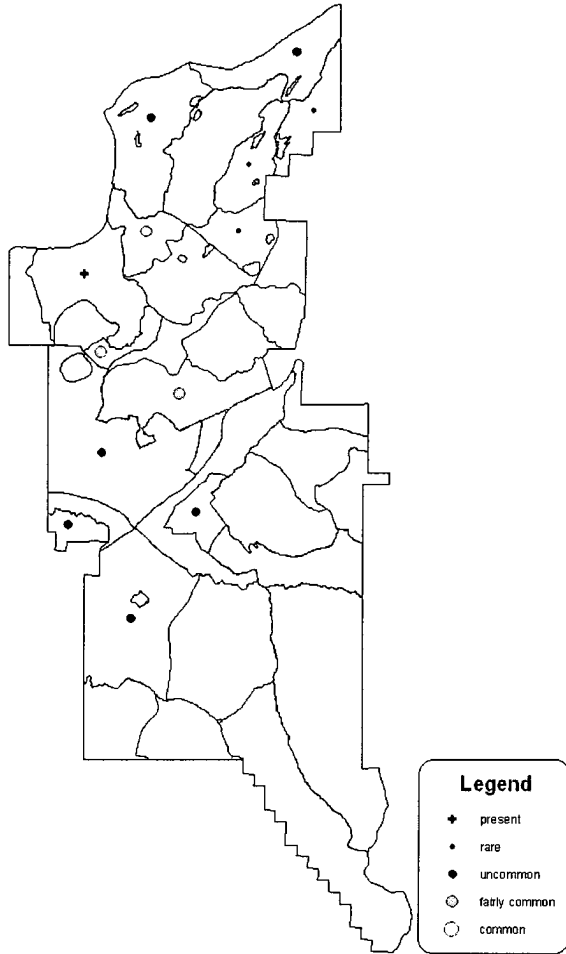
Migration system: Nearctic-Neotropical

Greater Yellowlegs
Tringa melanoleuca

Breeding status: confirmed
Nest site: ground

Overall abundance: uncommon
Training area occurrence: 39%

General habitat: muskegs, marshes, lakes, ponds



Abundance by vegetation type	
(Yellowlegs spp.)	Birds/pt.
Herbaceous	0.90
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	1.18
Tall willow shrub	0.05
Tall alder shrub	--
Closed poplar forest	0.06
Closed birch forest	0.08
Open mixed spruce-poplar	0.12
Open mixed spruce-birch	--
Closed mixed spruce-poplar	0.15
Closed mixed spruce-birch	0.07
Dwarf spruce forest	0.86
Open spruce forest	0.27
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	5.1	6.6
Alpenglow	--	--

Regional summer abundance

Cook Inlet: common
Interior Alaska: rare

Population trend: stable

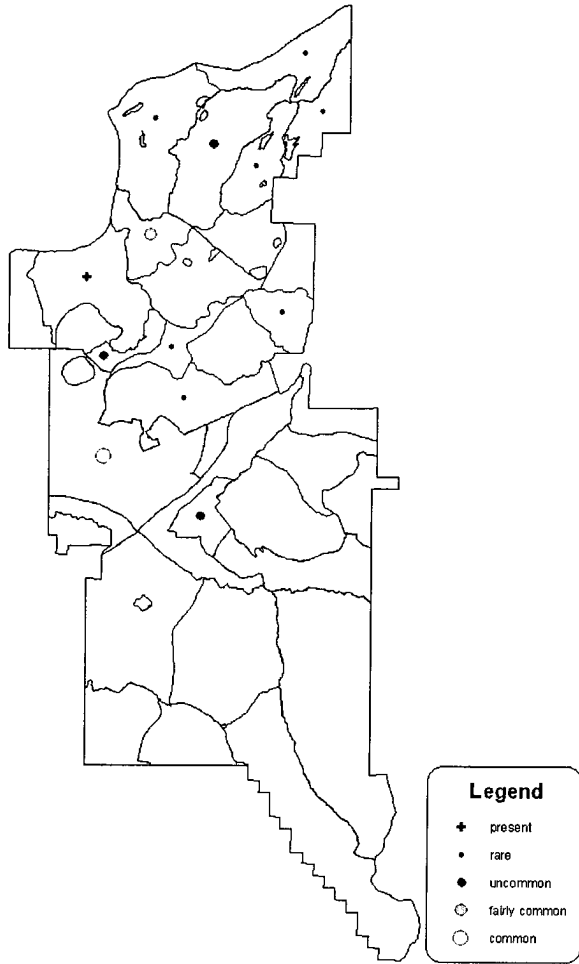
Conservation status: moderate concern

Migration system: Neotropical (partial)

Lesser Yellowlegs
Tringa flavipes

Breeding status: confirmed
Nest site: ground

Overall abundance: uncommon
Training area occurrence: 39%



General habitat: muskegs, marshes, lakes, ponds

Abundance by vegetation type	
(Yellowlegs spp.)	Birds/pt.
Herbaceous	0.90
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	1.18
Tall willow shrub	0.05
Tall alder shrub	--
Closed poplar forest	0.06
Closed birch forest	0.08
Open mixed spruce-poplar	0.12
Open mixed spruce-birch	--
Closed mixed spruce-poplar	0.15
Closed mixed spruce-birch	0.07
Dwarf spruce forest	0.86
Open spruce forest	0.27
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	4.7	6.0
Alpenglow	1.7	1.7

Regional summer abundance

Cook Inlet: common
Interior Alaska: common

Population trend: decreasing^c

Conservation status: moderate concern

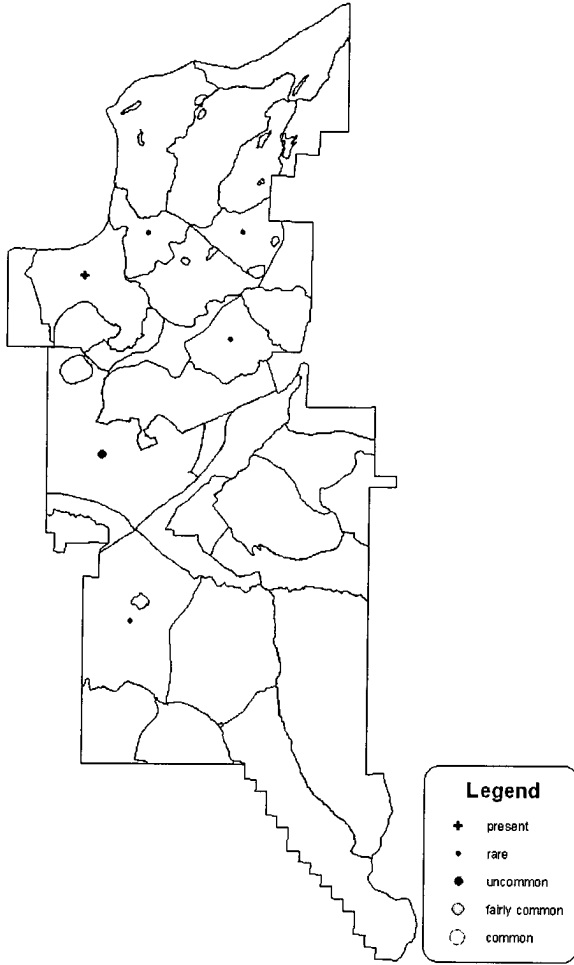
Migration system: Neotropical

Solitary Sandpiper *Tringa solitaria*

Breeding status: confirmed
Nest site: used passerine nests

Overall abundance: rare
Training area occurrence: 18%

General habitat: muskegs, marshes, lakes, ponds



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	0.1	0.3
Alpenglow	--	--

Regional summer abundance

Cook Inlet: uncommon

Interior Alaska: uncommon

Population trend: decreasing

Conservation status: high concern

Migration system: Neotropical

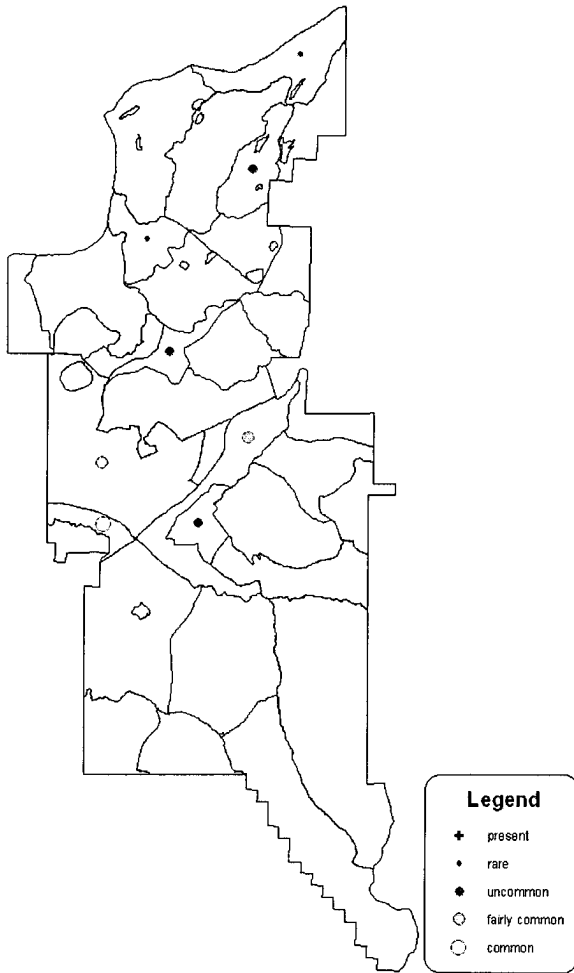
Spotted Sandpiper

Actitis macularia

Breeding status: confirmed
Nest site: ground

Overall abundance: uncommon
Training area occurrence: 24%

General habitat: lakes, ponds, creeks, rivers



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	0.6	1.1
Alpenglow	--	--

Regional summer abundance

Cook Inlet: common
 Interior Alaska: common

Population trend: stable

Conservation status: low concern

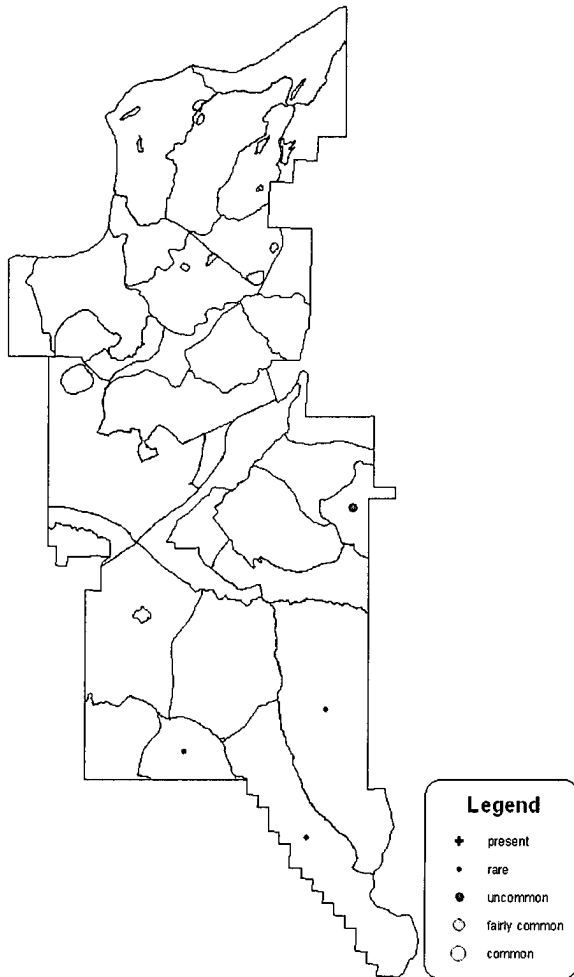
Migration system: Neotropical

Surfbird
Aphriza virgata

Breeding status: confirmed
Nest site: ground

Overall abundance: rare
Training area occurrence: 12%

General habitat: rocky dwarf alpine shrub



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	--	--
Alpenglow	--	--

Regional summer abundance

Cook Inlet: rare
Interior Alaska: uncommon

Population trend: decreasing^c

Conservation status: high concern

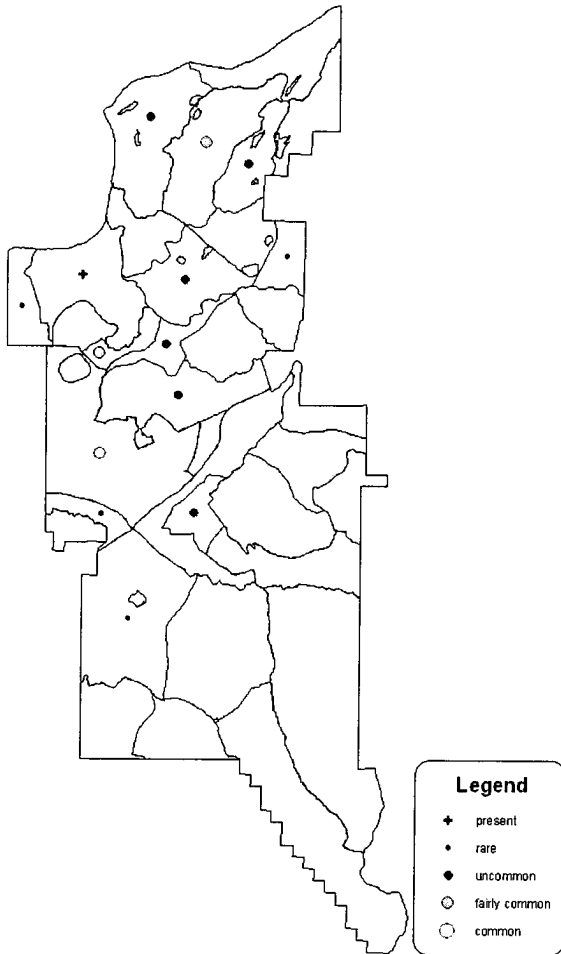
Migration system: Neotropical (partial)

Wilson's Snipe
Gallinago delicata

Breeding status: confirmed
Nest site: ground

Overall abundance: uncommon
Training area occurrence: 42%

General habitat: lakes, ponds, wet meadows, muskegs



Abundance by vegetation type	
	Birds/pt.
Herbaceous	1.00
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	0.48
Tall willow shrub	--
Tall alder shrub	0.07
Closed poplar forest	0.06
Closed birch forest	0.05
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	0.02
Closed mixed spruce-birch	0.04
Dwarf spruce forest	0.29
Open spruce forest	0.18
Closed spruce forest	0.04

Breeding Bird Survey routes		
	birds/route	% stops
North Base	4.1	6.6
Alpenglow	1.7	3.3

Regional summer abundance

Cook Inlet: common

Interior Alaska: common

Population trend: stable

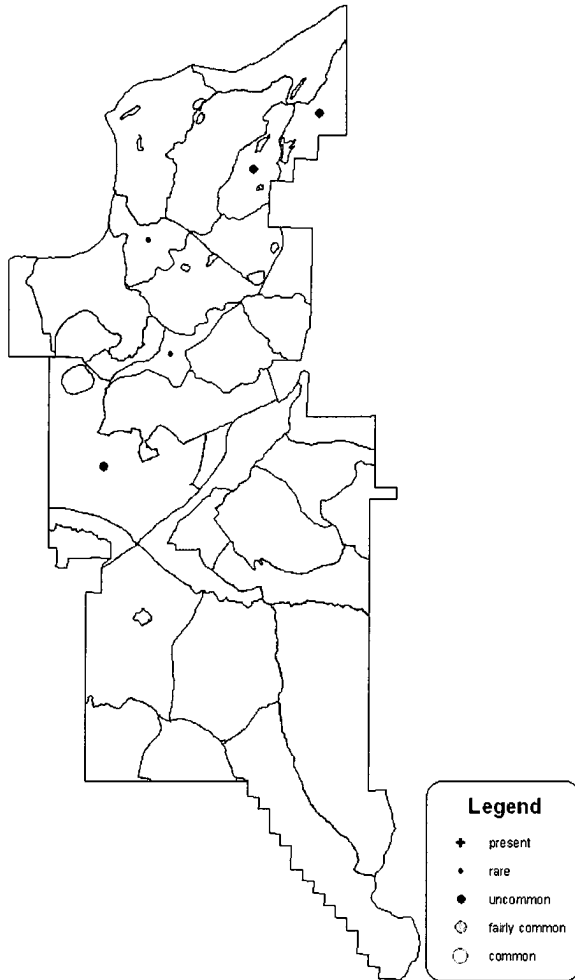
Conservation status: moderate concern

Migration system: Neotropical (partial)

Bonaparte's Gull *Larus philadelphia*

Breeding status: probable
Nest site: spruce

Overall abundance: rare
Training area occurrence: 15%



General habitat: lakes, ponds, wet meadows with spruce

Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.05
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	0.01
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	--	--
Alpenglow	--	--

Regional summer abundance

Cook Inlet: common

Interior Alaska: uncommon

Population trend: unknown^c

Conservation status: moderate concern

Migration system: Neotropical (partial)

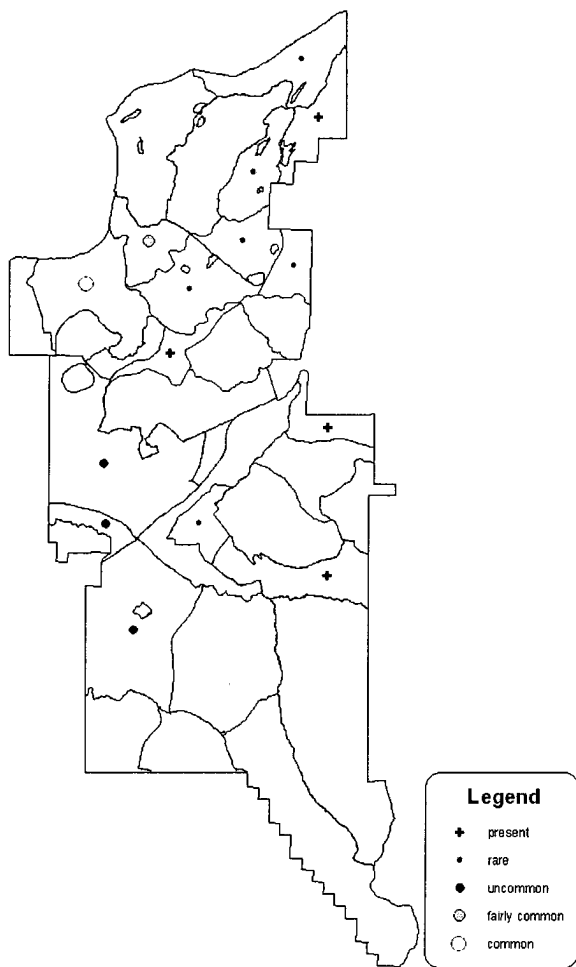
Mew Gull

Larus canus

Breeding status: confirmed
Nest site: ground, spruce trees

Overall abundance: uncommon
Training area occurrence: 45%

General habitat: lakes, ponds, muskegs, marshes



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.65
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	0.30
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	0.08
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	12.4	7.1
Alpenglow	6.2	4.2

Regional summer abundance

Cook Inlet: common

Interior Alaska: common

Population trend: decreasing^c

Conservation status: low concern

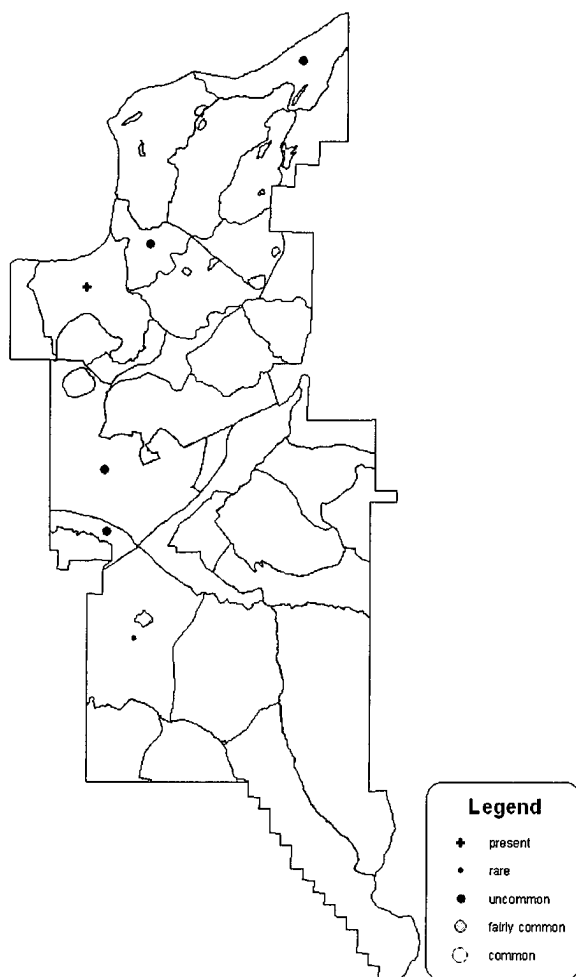
Migration system: Nearctic

Herring Gull *Larus argentatus*

Breeding status: confirmed
Nest site: ground

Overall abundance: rare
Training area occurrence: 18%

General habitat: lakes, ponds, marshes



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.55
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	0.03
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	0.08
Closed mixed spruce-birch	0.05
Dwarf spruce forest	0.14
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	--	--
Alpenglow	--	--

Regional summer abundance

Cook Inlet: uncommon
Interior Alaska: uncommon

Population trend: stable

Conservation status: low concern

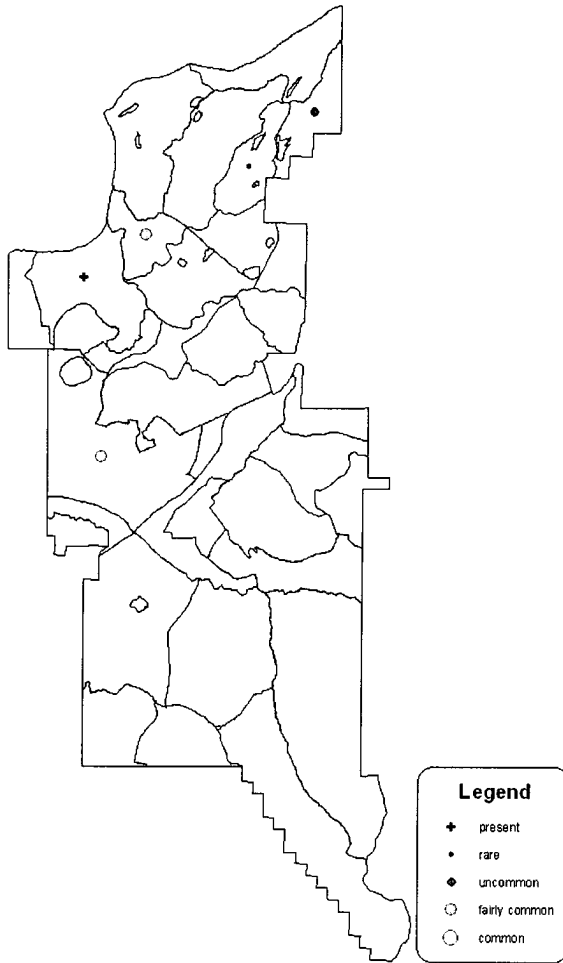
Migration system: Nearctic

Arctic Tern
Sterna paradisaea

Breeding status: confirmed
Nest site: ground

Overall abundance: rare
Training area occurrence: 15%

General habitat: lakes, ponds, marshes



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.15
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	0.05
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	1.0	1.4
Alpenglow	--	--

Regional summer abundance

Cook Inlet: common
Interior Alaska: uncommon

Population trend: decreasing^c

Conservation status: high concern

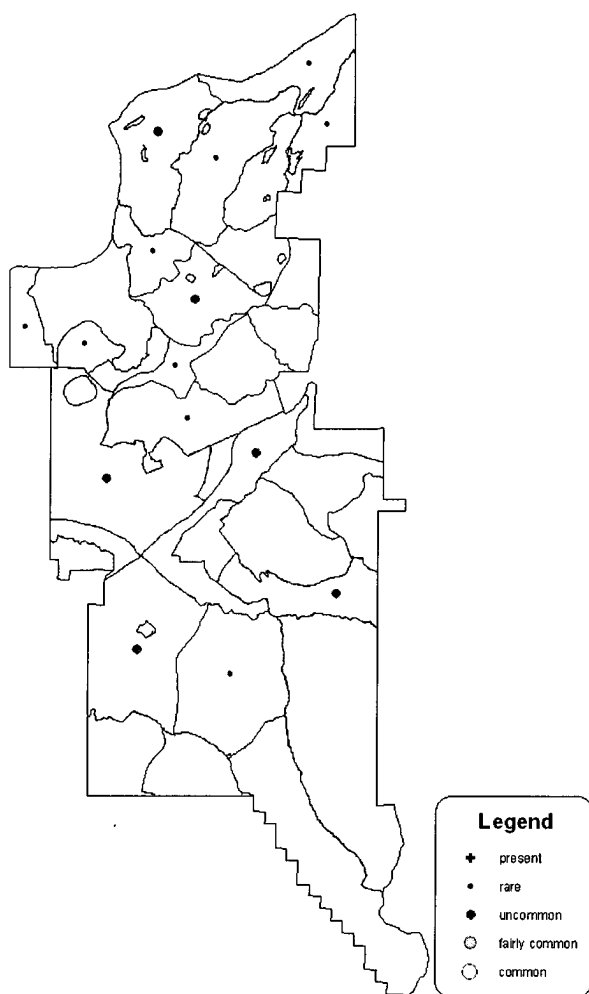
Migration system: Antarctic

Great Horned Owl *Bubo virginianus*

Breeding status: confirmed
Nest site: tree, used hawk nests

Overall abundance: uncommon
Training area occurrence: 45%

General habitat: broadleaf, mixed spruce-broadleaf, and spruce forests



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	--
Closed polar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-polar	--
Closed mixed spruce-birch	--
Spruce dwarf forest	--
Open spruce forest	--
Closed spruce forest	0.04

Breeding Bird Survey routes		
	birds/route	% stops
North Base	--	--
Alpenglow	--	--

Regional summer abundance

Cook Inlet: uncommon
 Interior Alaska: common

Population trend: stable

Conservation status: low concern

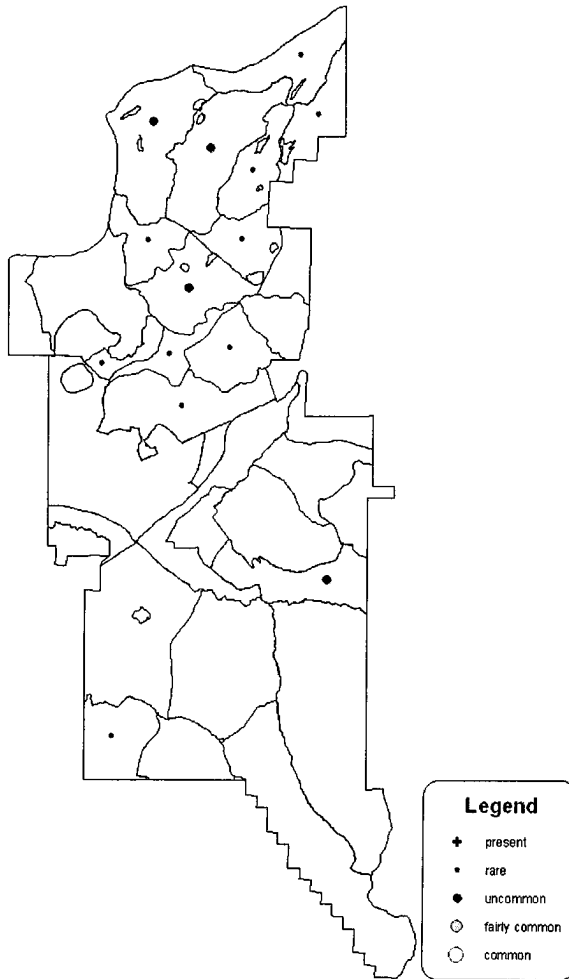
Migration system: resident

Boreal Owl
Aegolius funereus

Breeding status: confirmed
Nest site: tree cavity

Overall abundance: uncommon
Training area occurrence: 42%

General habitat: mixed spruce-broadleaf and spruce forests



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	--	--
Alpenglow	--	--

Regional summer abundance

Cook Inlet: uncommon
Interior Alaska: common

Population trend: stable^c

Conservation status: moderate concern

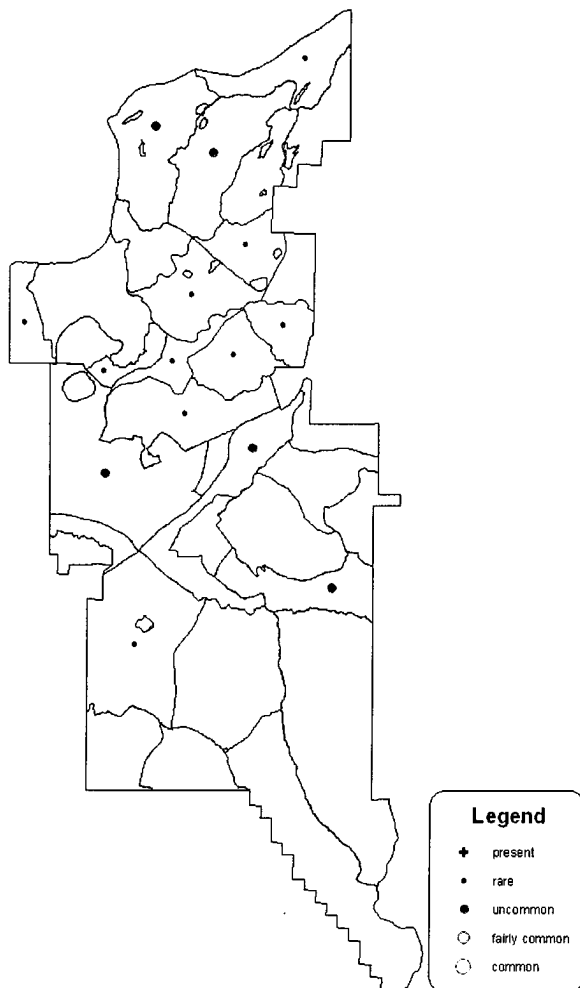
Migration system: resident

Northern Saw-whet Owl *Aegolius acadicus*

Breeding status: confirmed
Nest site: tree cavity

Overall abundance: uncommon
Training area occurrence: 45%

General habitat: mixed spruce-broadleaf and spruce forests



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	--	--
Alpenglow	--	--

Regional summer abundance

Cook Inlet: uncommon
Interior Alaska: casual

Population trend: increase^c

Conservation status: low concern

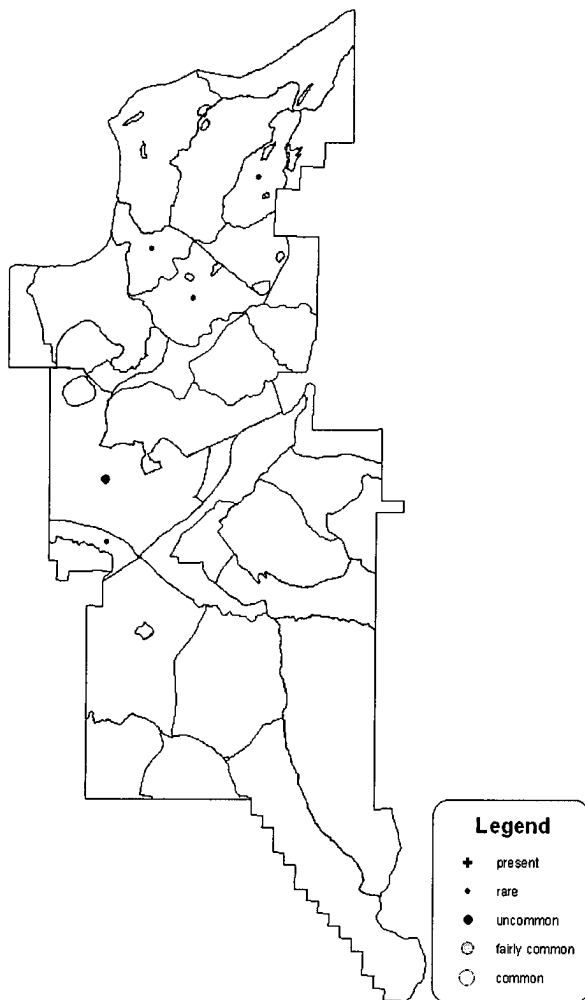
Migration system: resident/Nearctic

Belted Kingfisher *Ceryle alcyon*

Breeding status: confirmed
Nest site: burrow

Overall abundance: rare
Training area occurrence: 15%

General habitat: creeks, rivers, lakes, and ponds; gravel or sandy banks



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	0.03
Closed mixed spruce-poplar	0.02
Closed mixed spruce-birch	--
Dwarf spruce forest	0.01
Open spruce forest	--
Closed spruce forest	0.04

Breeding Bird Survey routes		
	birds/route	% stops
North Base	0.3	0.6
Alpenglow	--	--

Regional summer abundance

Cook Inlet: uncommon
Interior Alaska: common

Population trend: stable

Conservation status: moderate concern

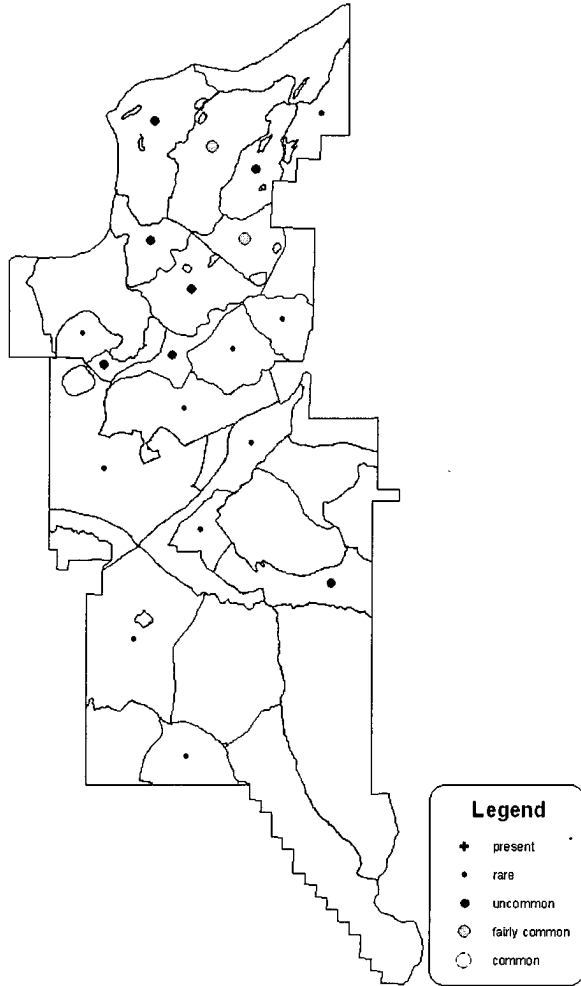
Migration system: Neotropical (partial)

Downy Woodpecker
Picoides pubescens

Breeding status: confirmed
Nest site: tree cavity

Overall abundance: uncommon
Training area occurrence: 58%

General habitat: broadleaf, mixed spruce-broadleaf, and spruce forests



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	0.10
Closed poplar forest	--
Closed birch forest	0.08
Open mixed spruce-poplar	0.08
Open mixed spruce-birch	0.03
Closed mixed spruce-poplar	0.04
Closed mixed spruce-birch	0.01
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	0.04

Breeding Bird Survey routes		
	birds/route	% stops
North Base	1.4	2.9
Alpenglow	0.5	0.8

Regional summer abundance

Cook Inlet: uncommon

Interior Alaska: uncommon

Population trend: stable

Conservation status: low concern

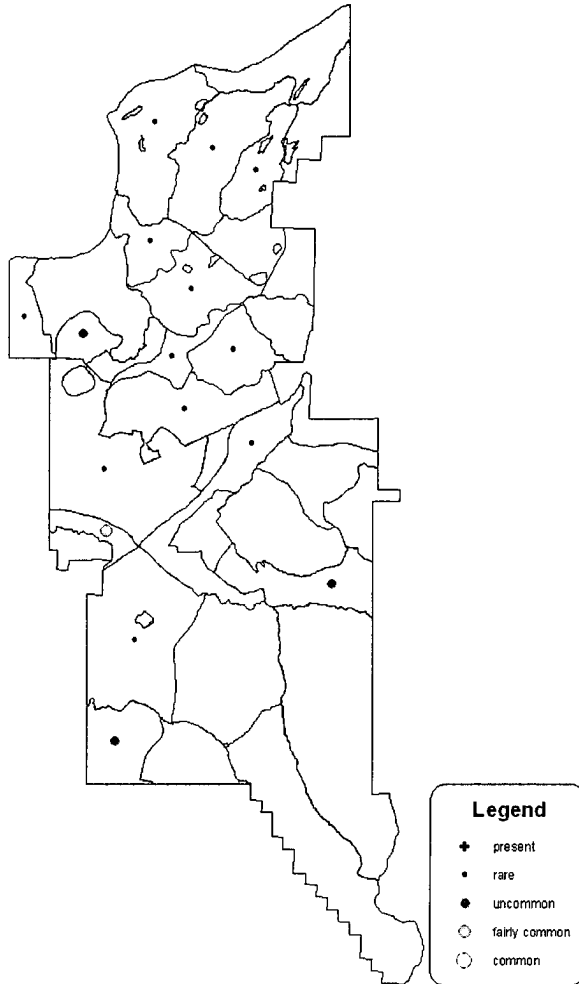
Migration system: resident

Hairy Woodpecker *Picoides villosus*

Breeding status: confirmed
Nest site: tree cavity

Overall abundance: uncommon
Training area occurrence: 48%

General habitat: broadleaf, mixed spruce-broadleaf, and spruce forests



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	0.03
Open mixed spruce-poplar	0.04
Open mixed spruce-birch	--
Closed mixed spruce-poplar	0.02
Closed mixed spruce-birch	0.01
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	0.6	1.1
Alpenglow	--	--

Regional summer abundance

Cook Inlet: uncommon

Interior Alaska: uncommon

Population trend: increase

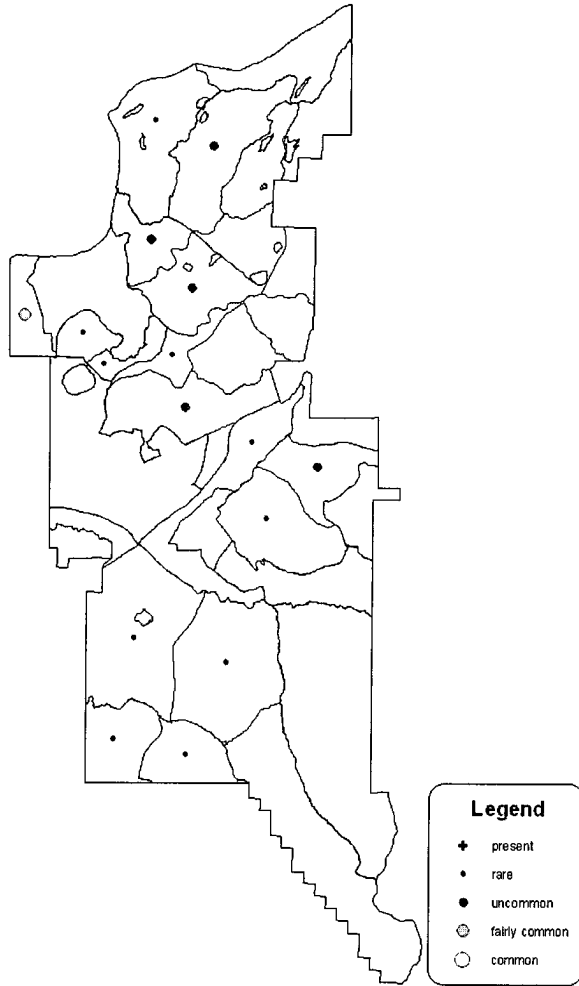
Conservation status: low concern

Migration system: resident

American Three-toed Woodpecker
Picoides dorsalis

Breeding status: confirmed
Nest site: tree cavity

Overall abundance: uncommon
Training area occurrence: 48%



General habitat: mixed spruce-broadleaf forests

Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	0.07
Closed poplar forest	0.06
Closed birch forest	0.03
Open mixed spruce-poplar	0.20
Open mixed spruce-birch	0.06
Closed mixed spruce-poplar	0.06
Closed mixed spruce-birch	0.13
Dwarf spruce forest	--
Open spruce forest	0.05
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	0.1	0.3
Alpenglow	--	--

Regional summer abundance

Cook Inlet: rare

Interior Alaska: uncommon

Population trend: stable

Conservation status: low concern

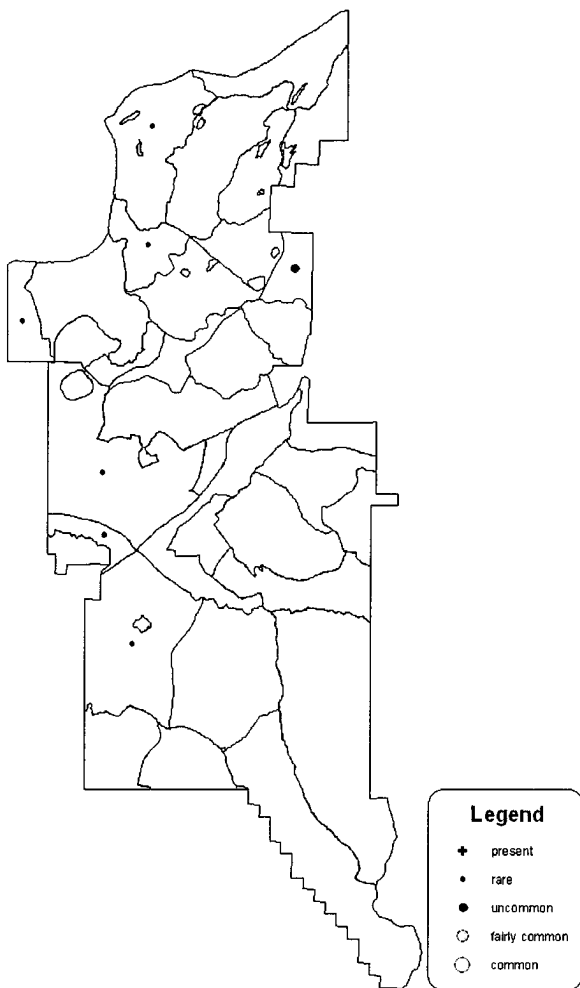
Migration system: resident

Northern Flicker *Colaptes auratus*

Breeding status: probable
Nest site: tree cavity

Overall abundance: rare
Training area occurrence: 21%

General habitat: broadleaf and mixed spruce-broadleaf forests



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	0.01
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	0.01
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	0.6	0.9
Alpenglow	--	--

Regional summer abundance

Cook Inlet: uncommon
Interior Alaska: common

Population trend: stable

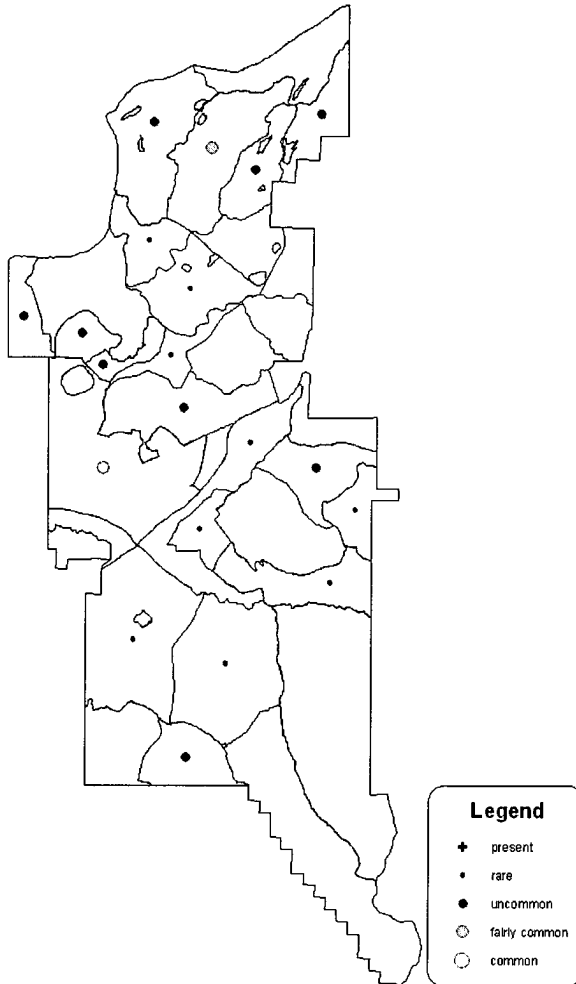
Conservation status: low concern

Migration system: Nearctic

Olive-sided Flycatcher *Contopus cooperi*

Breeding status: confirmed
Nest site: spruce tree

Overall abundance: uncommon
Training area occurrence: 61%



General habitat: open forests,
dwarf spruce forest

Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.10
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	0.09
Tall willow shrub	0.05
Tall alder shrub	0.10
Closed poplar forest	0.11
Closed birch forest	0.05
Open mixed spruce-poplar	0.28
Open mixed spruce-birch	0.06
Closed mixed spruce-poplar	0.19
Closed mixed spruce-birch	0.16
Dwarf spruce forest	0.36
Open spruce forest	0.36
Closed spruce forest	0.12

Breeding Bird Survey routes		
	birds/route	% stops
North Base	6.3	9.7
Alpenglow	1.7	3.3

Regional summer abundance

Cook Inlet: uncommon
Interior Alaska: uncommon

Population trend: stable

Conservation status: moderate concern

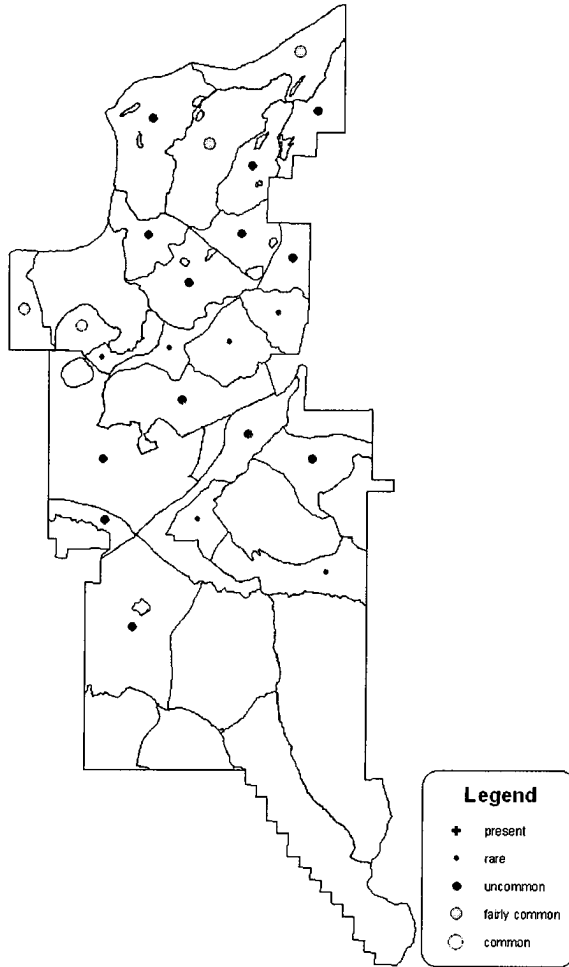
Migration system: Neotropical

Western Wood-Pewee
Contopus sordidulus

Breeding status: confirmed
Nest site: tree

Overall abundance: fairly common
Training area occurrence: 70%

General habitat: poplar forest, open forests



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.05
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	0.09
Tall willow shrub	--
Tall alder shrub	0.13
Closed poplar forest	0.50
Closed birch forest	0.04
Open mixed spruce-poplar	0.48
Open mixed spruce-birch	0.06
Closed mixed spruce-poplar	0.23
Closed mixed spruce-birch	0.03
Dwarf spruce forest	--
Open spruce forest	0.18
Closed spruce forest	0.04

Breeding Bird Survey routes		
	birds/route	% stops
North Base	7.9	11.1
Alpenglow	--	--

Regional summer abundance

Cook Inlet: uncommon
Interior Alaska: uncommon

Population trend: stable

Conservation status: moderate concern

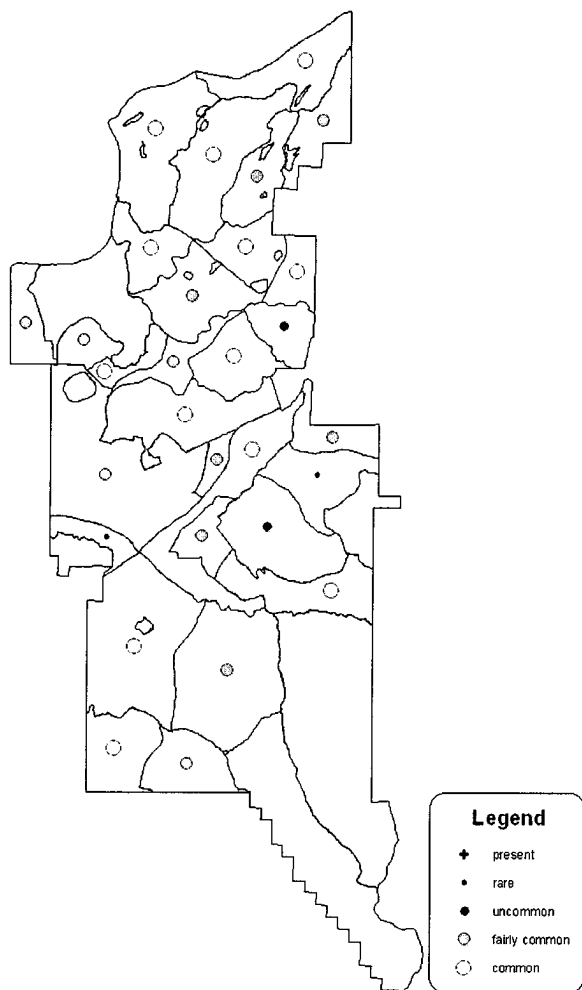
Migration system: Neotropical

Alder Flycatcher
Empidonax alnorum

Breeding status: confirmed
Nest site: alder, willow shrub

Overall abundance: common
Training area occurrence: 88%

General habitat: low to tall shrubs, poplar forest understory, open forests, shrubby wetland edges



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.75
Dwarf alpine shrub	--
Low alpine shrub	0.14
Low non-alpine shrub	1.27
Tall willow shrub	0.95
Tall alder shrub	1.67
Closed poplar forest	0.83
Closed birch forest	0.38
Open mixed spruce-poplar	0.68
Open mixed spruce-birch	0.49
Closed mixed spruce-poplar	0.71
Closed mixed spruce-birch	0.39
Dwarf spruce forest	0.29
Open spruce forest	0.77
Closed spruce forest	0.08

Breeding Bird Survey routes		
	birds/route	% stops
North Base	68.4	63.1
Alpenglow	37.2	45.0

Regional summer abundance

Cook Inlet: common
Interior Alaska: common

Population trend: increase^c

Conservation status: low concern

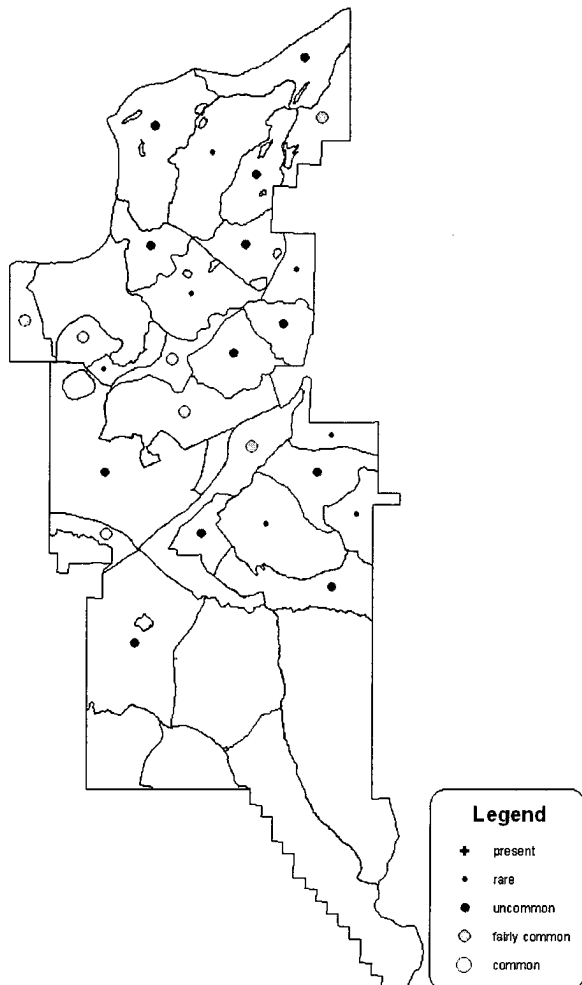
Migration system: Neotropical

Gray Jay
Perisoreus canadensis

Breeding status: confirmed
Nest site: spruce tree

Overall abundance: fairly common
Training area occurrence: 79%

General habitat: spruce and mixed spruce-broadleaf forests



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.05
Dwarf alpine shrub	--
Low alpine shrub	0.09
Low non-alpine shrub	0.06
Tall willow shrub	0.05
Tall alder shrub	0.23
Closed poplar forest	0.17
Closed birch forest	0.08
Open mixed spruce-poplar	0.28
Open mixed spruce-birch	0.31
Closed mixed spruce-poplar	0.21
Closed mixed spruce-birch	0.36
Dwarf spruce forest	0.36
Open spruce forest	0.41
Closed spruce forest	0.42

Breeding Bird Survey routes		
	birds/route	% stops
North Base	4.3	4.6
Alpenglow	2.2	3.3

Regional summer abundance

Cook Inlet: uncommon
Interior Alaska: common

Population trend: increase

Conservation status: low concern

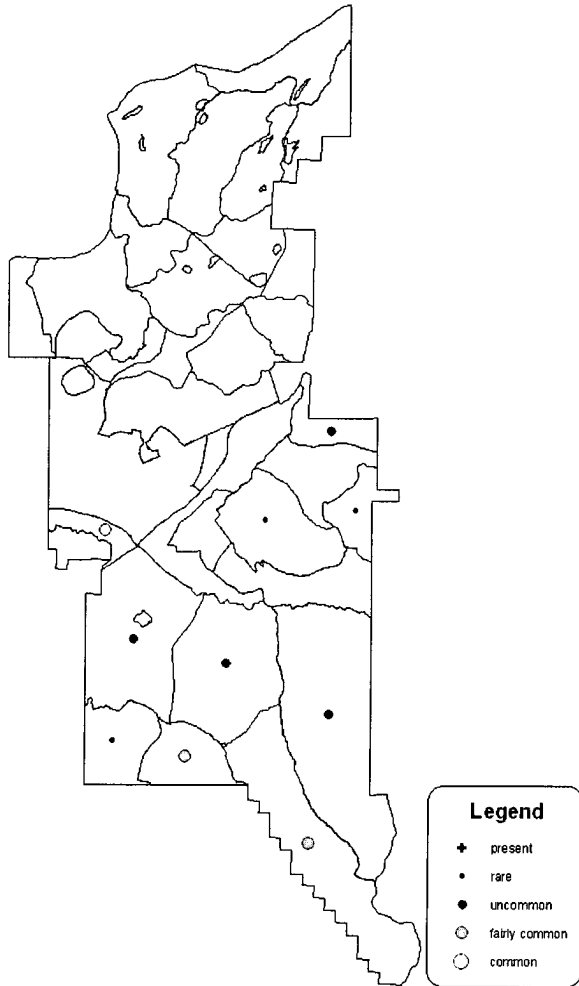
Migration system: resident

Black-billed Magpie
Pica hudsonia

Breeding status: confirmed
Nest site: shrubs, small trees

Overall abundance: uncommon
Training area occurrence: 30%

General habitat: low to tall shrubs at high elevations, riparian poplar forest



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	0.07
Low alpine shrub	0.09
Low non-alpine shrub	--
Tall willow shrub	0.05
Tall alder shrub	0.03
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	0.03
Closed mixed spruce-poplar	0.02
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	0.6	1.1
Alpenglow	2.8	5.8

Regional summer abundance

Cook Inlet: common
Interior Alaska: common

Population trend: stable

Conservation status: low concern

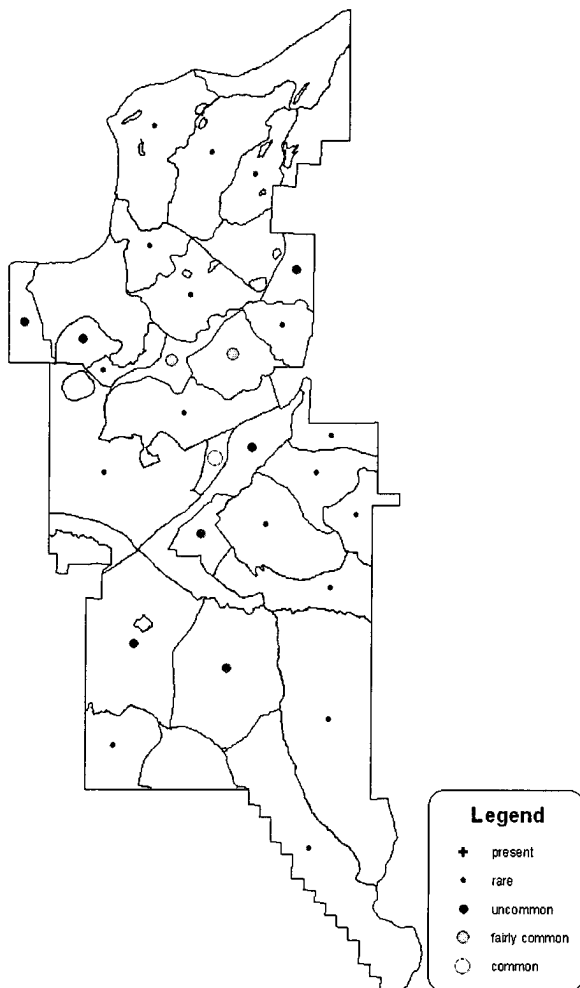
Migration system: resident

Common Raven *Corvus corax*

Breeding status: confirmed
Nest site: tree, cliff

Overall abundance: uncommon
Training area occurrence: 82%

General habitat: widespread across all vegetation types



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	0.02
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	0.89
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	0.20
Dwarf spruce forest	--
Open spruce forest	0.05
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	0.7	1.1
Alpenglow	2.8	4.1

Regional summer abundance

Cook Inlet: common
Interior Alaska: common

Population trend: stable

Conservation status: low concern

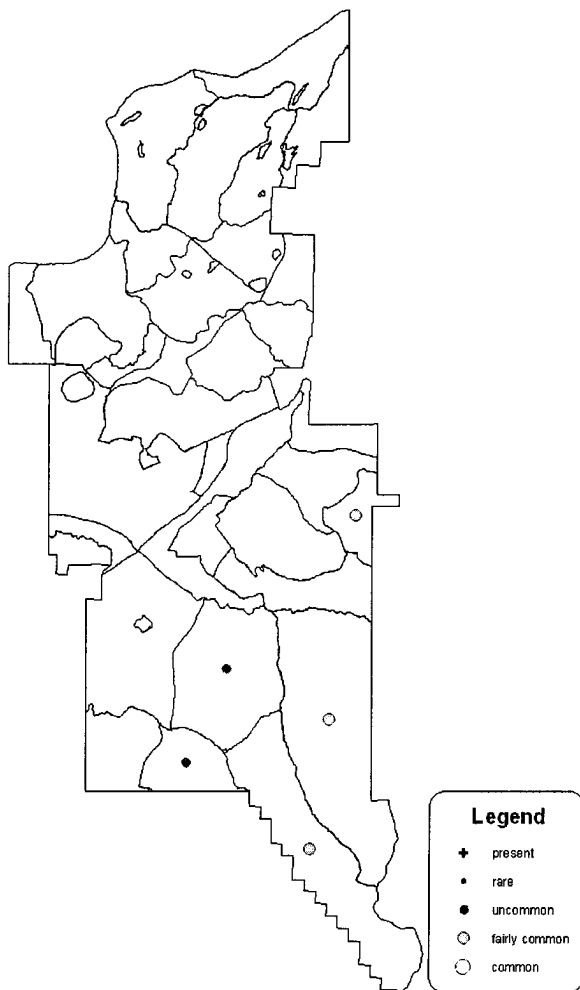
Migration system: resident

Horned Lark
Eremophila alpestris

Breeding status: confirmed
Nest site: ground

Overall abundance: rare
Training area occurrence: 15%

General habitat: well-vegetated,
dwarf alpine shrub



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	0.30
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	3.7	0.3
Alpenglow	--	--

Regional summer abundance

Cook Inlet: uncommon
Interior Alaska: common

Population trend: stable

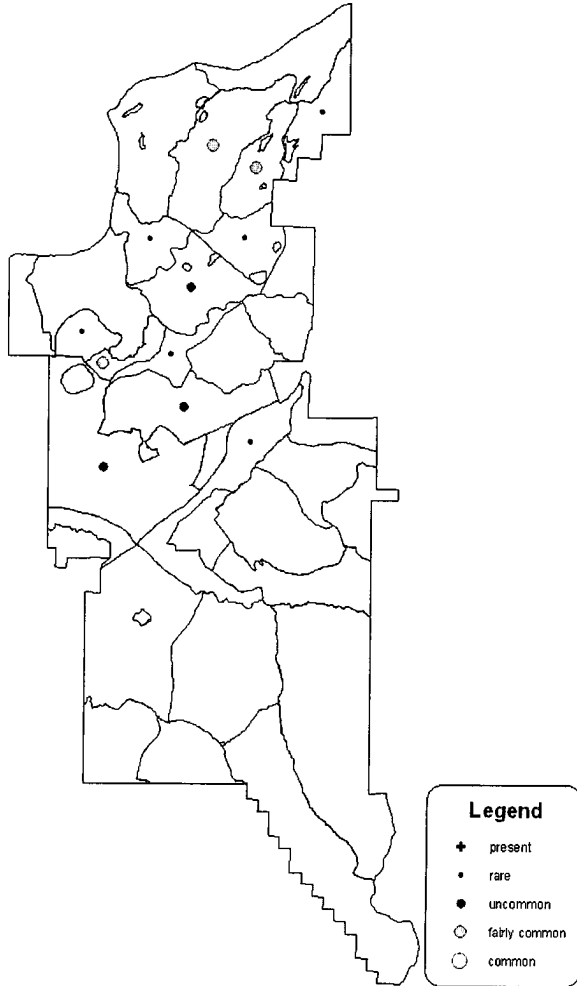
Conservation status: low concern

Migration system: Neotropical (partial)

Tree Swallow
Tachycineta bicolor

Breeding status: confirmed
Nest site: tree cavity

Overall abundance: uncommon
Training area occurrence: 36%



General habitat: snags; open water, herbaceous meadows

Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.10
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	0.03
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	0.04
Open mixed spruce-birch	--
Closed mixed spruce-poplar	0.02
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	0.09
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	1.9	2.6
Alpenglow	0.8	0.8

Regional summer abundance

Cook Inlet: common

Interior Alaska: common

Population trend: stable

Conservation status: low concern

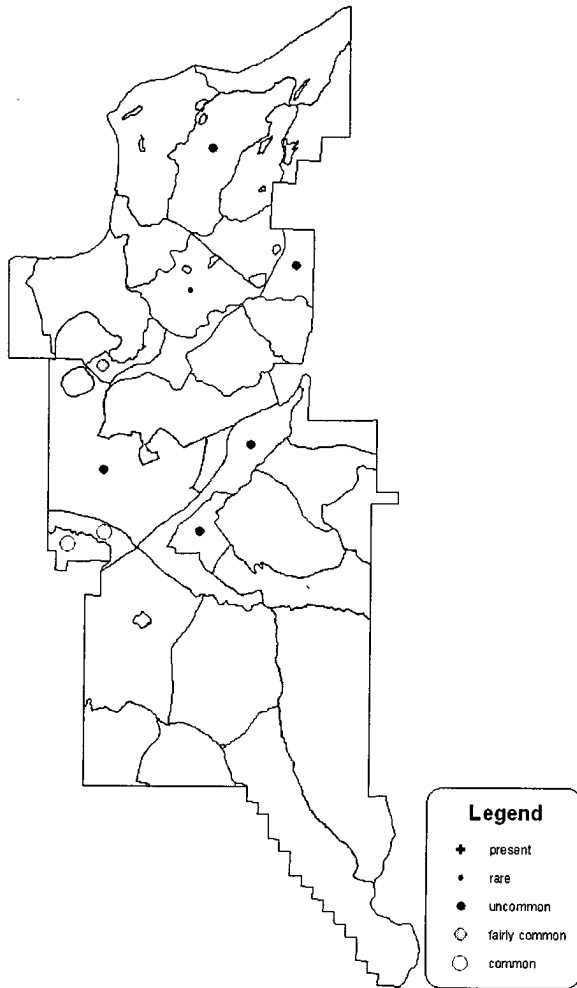
Migration system: Neotropical (partial)

Violet-green Swallow
Tachycineta thalassina

Breeding status: confirmed
Nest site: tree cavity, crevice

Overall abundance: uncommon
Training area occurrence: 27%

General habitat: snags; open water, herbaceous meadows; often near human development



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.50
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	0.12
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	0.02
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	--	--
Alpenglow	--	--

Regional summer abundance

Cook Inlet: common
Interior Alaska: common

Population trend: increase^o

Conservation status: low concern

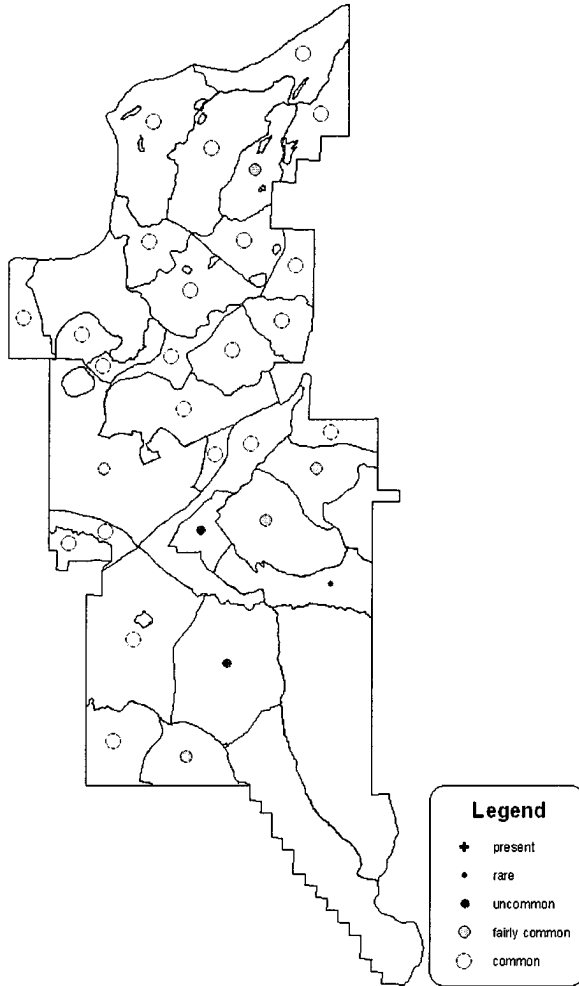
Migration system: Neotropical

Black-capped Chickadee *Poecile atricapillus*

Breeding status: confirmed
Nest site: broadleaf tree cavity

Overall abundance: common
Training area occurrence: 91%

General habitat: broadleaf and mixed spruce-broadleaf forests



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.05
Dwarf alpine shrub	--
Low alpine shrub	0.05
Low non-alpine shrub	0.09
Tall willow shrub	--
Tall alder shrub	0.13
Closed poplar forest	0.44
Closed birch forest	0.34
Open mixed spruce-poplar	0.76
Open mixed spruce-birch	0.34
Closed mixed spruce-poplar	0.42
Closed mixed spruce-birch	0.58
Dwarf spruce forest	--
Open spruce forest	0.09
Closed spruce forest	0.04

Breeding Bird Survey routes		
	birds/route	% stops
North Base	12.9	9.1
Alpenglow	6.2	9.2

Regional summer abundance

Cook Inlet: common

Interior Alaska: common

Population trend: stable

Conservation status: low concern

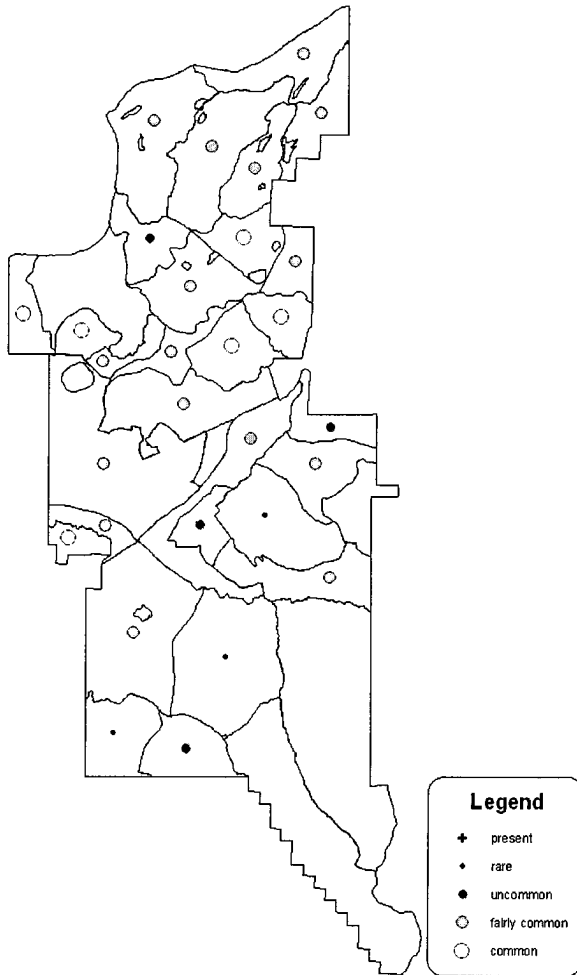
Migration system: resident

Boreal Chickadee
Poecile hudsonica

Breeding status: confirmed
Nest site: tree cavity

Overall abundance: common
Training area occurrence: 88%

General habitat: closed spruce and spruce-birch forests



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.05
Dwarf alpine shrub	--
Low alpine shrub	0.09
Low non-alpine shrub	0.12
Tall willow shrub	0.11
Tall alder shrub	0.10
Closed poplar forest	0.11
Closed birch forest	0.07
Open mixed spruce-poplar	0.28
Open mixed spruce-birch	0.11
Closed mixed spruce-poplar	0.25
Closed mixed spruce-birch	0.39
Dwarf spruce forest	0.21
Open spruce forest	0.18
Closed spruce forest	0.38

Breeding Bird Survey routes		
	birds/route	% stops
North Base	1.1	0.6
Alpenglow	0.8	0.8

Regional summer abundance

Cook Inlet: common
Interior Alaska: common

Population trend: stable

Conservation status: moderate concern

Migration system: resident

Red-breasted Nuthatch

Sitta canadensis

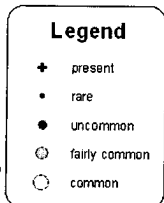
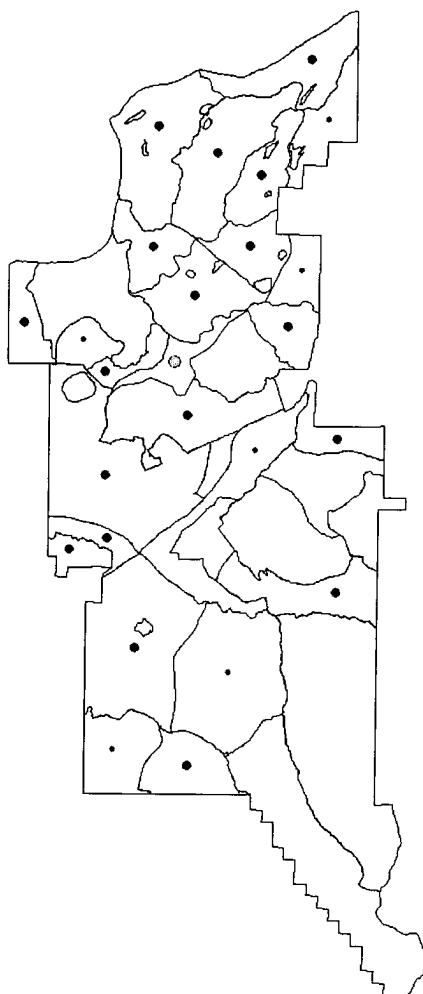
Breeding status: confirmed

Nest site: tree cavity

Overall abundance: fairly common

Training area occurrence: 76%

General habitat: mixed spruce-broadleaf forests



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	
Closed birch forest	0.05
Open mixed spruce-poplar	0.04
Open mixed spruce-birch	--
Closed mixed spruce-poplar	0.04
Closed mixed spruce-birch	0.05
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	1.0	1.7
Alpenglow	1.2	2.5

Regional summer abundance

Cook Inlet: uncommon

Interior Alaska: casual

Population trend: stable

Conservation status: low concern

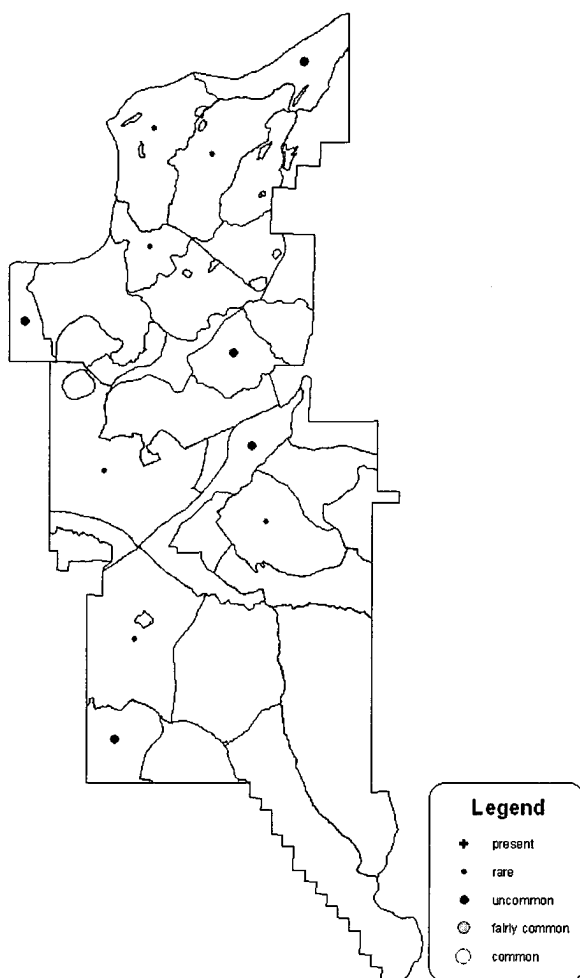
Migration system: resident/Nearctic

Brown Creeper
Certhia americana

Breeding status: confirmed
Nest site: tree, behind loose bark

Overall abundance: rare
Training area occurrence: 33%

General habitat: broadleaf and mixed spruce-broadleaf forests



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	0.06
Closed birch forest	0.11
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	0.02
Closed mixed spruce-birch	0.03
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	0.4	0.9
Alpenglow	--	--

Regional summer abundance

Cook Inlet: uncommon
Interior Alaska: rare

Population trend: stable

Conservation status: low concern

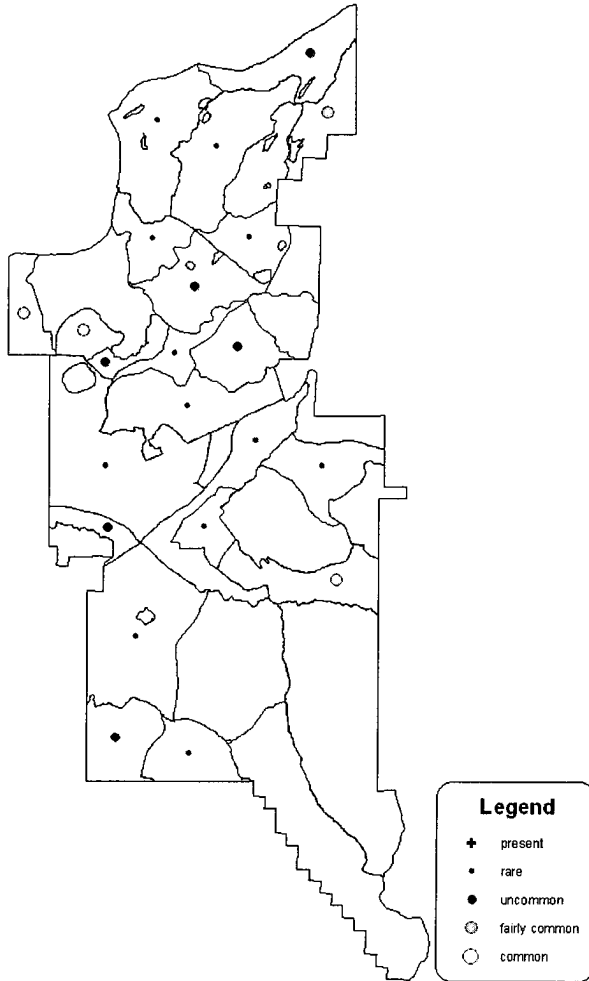
Migration system: resident/Nearctic

Golden-crowned Kinglet
Regulus satrapa

Breeding status: confirmed
Nest site: spruce tree

Overall abundance: uncommon
Training area occurrence: 67%

General habitat: closed spruce forest, open mixed spruce-broadleaf forests.



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.05
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	0.09
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	0.08
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	0.13
Closed mixed spruce-birch	0.12
Dwarf spruce forest	--
Open spruce forest	0.18
Closed spruce forest	0.31

Breeding Bird Survey routes		
	birds/route	% stops
North Base	0.3	0.6
Alpenglow	--	--

Regional summer abundance

Cook Inlet: uncommon
Interior Alaska: rare

Population trend: stable

Conservation status: low concern

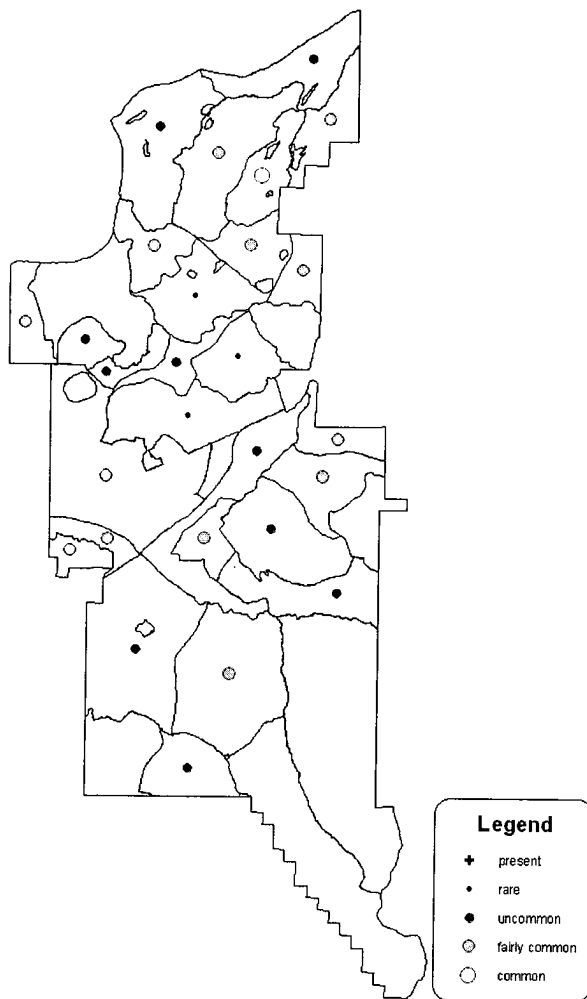
Migration system: Nearctic/resident

Ruby-crowned Kinglet
Regulus calendula

Breeding status: confirmed
Nest site: spruce tree

Overall abundance: fairly common
Training area occurrence: 82%

General habitat: spruce and mixed spruce-broadleaf forests



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.10
Dwarf alpine shrub	--
Low alpine shrub	0.09
Low non-alpine shrub	0.24
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	0.06
Closed birch forest	0.20
Open mixed spruce-poplar	0.40
Open mixed spruce-birch	0.17
Closed mixed spruce-poplar	0.63
Closed mixed spruce-birch	0.37
Dwarf spruce forest	0.43
Open spruce forest	1.00
Closed spruce forest	0.88

Breeding Bird Survey routes		
	birds/route	% stops
North Base	13.9	16.3
Alpenglow	6.2	11.7

Regional summer abundance

Cook Inlet: common

Interior Alaska: uncommon

Population trend: significant increase

Conservation status: low concern

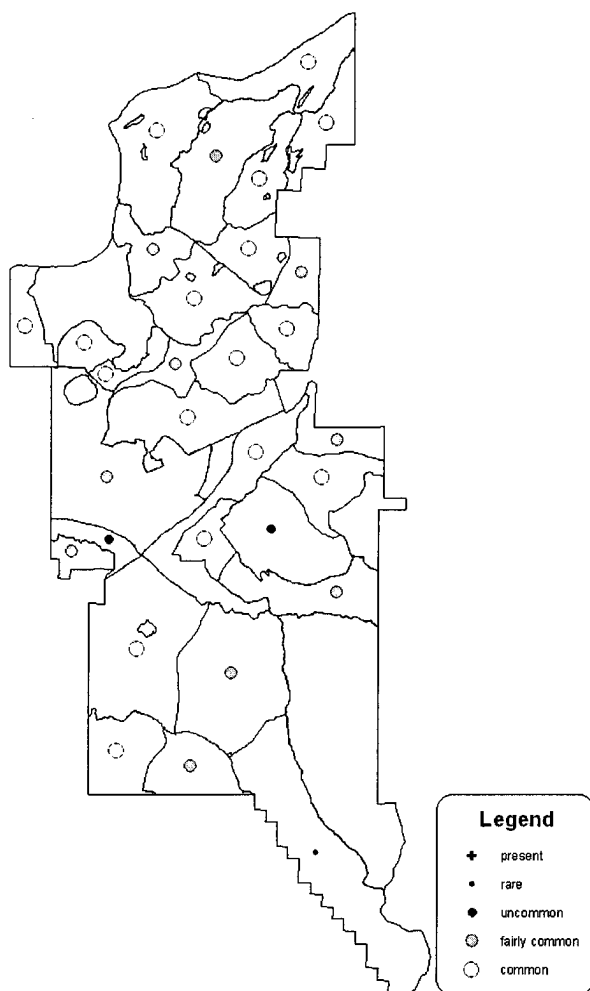
Migration system: Neotropical (partial)

Swainson's Thrush
Catharus ustulatus

Breeding status: confirmed
Nest site: shrub, tree (low)

Overall abundance: common
Training area occurrence: 91%

General habitat: broadleaf, mixed spruce-broadleaf, and spruce forests; tall alder shrub



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.25
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	0.52
Tall willow shrub	0.11
Tall alder shrub	0.83
Closed poplar forest	0.89
Closed birch forest	1.17
Open mixed spruce-poplar	1.24
Open mixed spruce-birch	1.34
Closed mixed spruce-poplar	1.38
Closed mixed spruce-birch	1.64
Dwarf spruce forest	0.57
Open spruce forest	0.82
Closed spruce forest	1.19

Breeding Bird Survey routes		
	birds/route	% stops
North Base	43.7	48.9
Alpenglow	45.5	49.2

Regional summer abundance

Cook Inlet: common

Interior Alaska: common

Population trend: stable

Conservation status: moderate concern

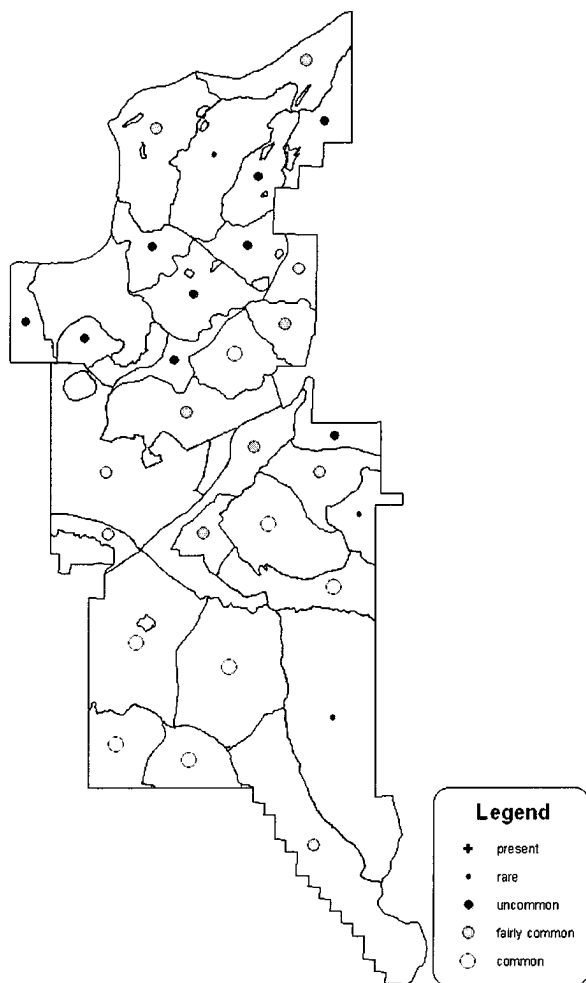
Migration system: Neotropical

Hermit Thrush *Catharus guttatus*

Breeding status: confirmed
Nest site: ground, tree (low)

Overall abundance: fairly common
Training area occurrence: 91%

General habitat: low alpine shrub, tall shrubs, forests with understory



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.05
Dwarf alpine shrub	0.02
Low alpine shrub	0.82
Low non-alpine shrub	0.15
Tall willow shrub	1.05
Tall alder shrub	0.97
Closed poplar forest	0.28
Closed birch forest	0.08
Open mixed spruce-poplar	0.40
Open mixed spruce-birch	0.26
Closed mixed spruce-poplar	0.38
Closed mixed spruce-birch	0.36
Dwarf spruce forest	0.21
Open spruce forest	0.32
Closed spruce forest	0.12

Breeding Bird Survey routes		
	birds/route	% stops
North Base	3.9	6.3
Alpenglow	25.8	31.7

Regional summer abundance

Cook Inlet: fairly common
Interior Alaska: uncommon

Population trend: stable

Conservation status: low concern

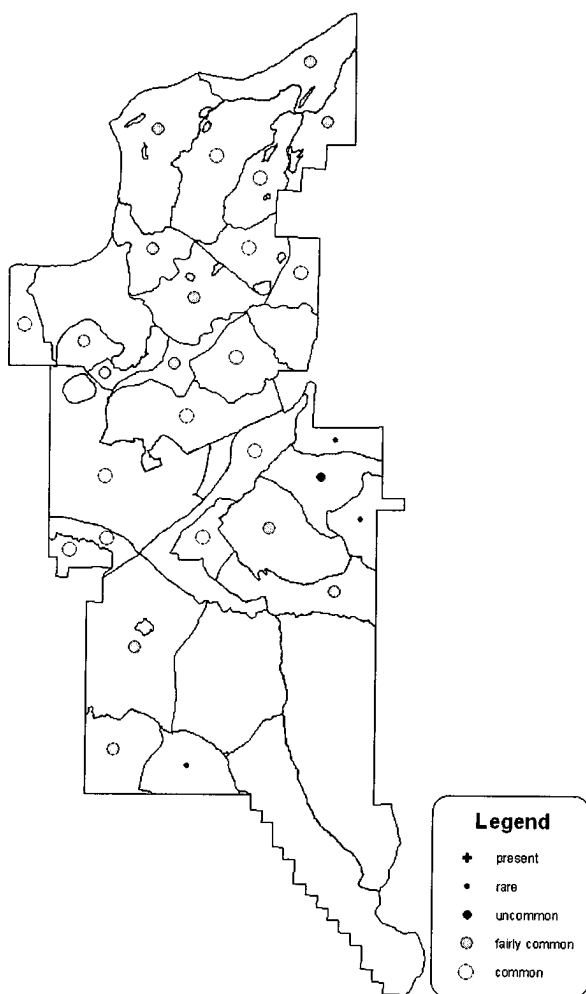
Migration system: Neotropical (partial)

American Robin
Turdus migratorius

Breeding status: confirmed
Nest site: tree (low)

Overall abundance: common
Training area occurrence: 85%

General habitat: widespread, shrubs, forests, forest edges



Abundance by vegetation type	
	Birds/pt.
Herbaceous	1.25
Dwarf alpine shrub	0.02
Low alpine shrub	0.14
Low non-alpine shrub	1.15
Tall willow shrub	0.21
Tall alder shrub	0.63
Closed poplar forest	1.06
Closed birch forest	1.24
Open mixed spruce-poplar	0.72
Open mixed spruce-birch	0.26
Closed mixed spruce-poplar	0.88
Closed mixed spruce-birch	0.83
Dwarf spruce forest	0.79
Open spruce forest	1.18
Closed spruce forest	0.88

Breeding Bird Survey routes		
	birds/route	% stops
North Base	54.6	55.1
Alpenglow	15.5	27.5

Regional summer abundance

Cook Inlet: common

Interior Alaska: common

Population trend: significant increase

Conservation status: low concern

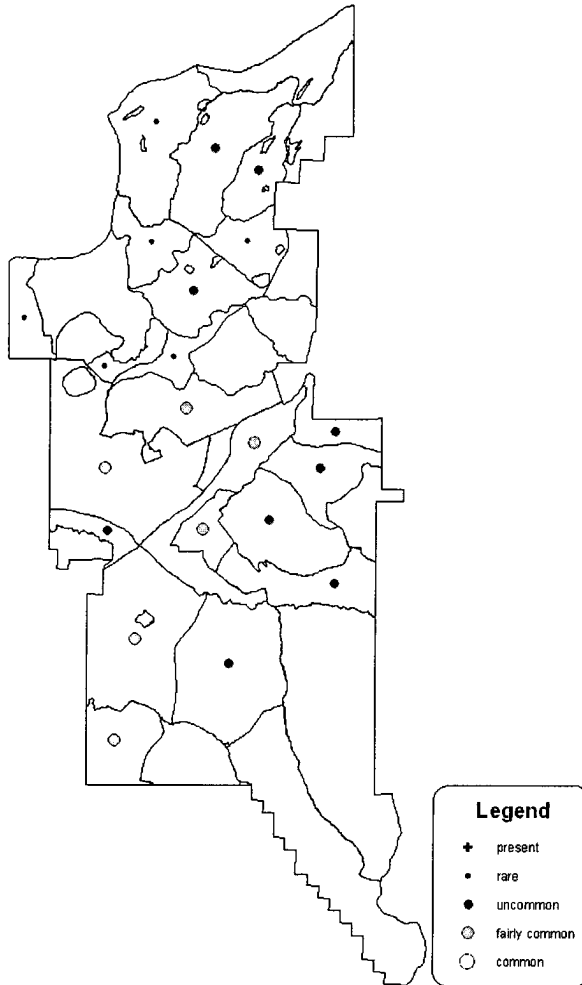
Migration system: Neotropical (partial)

Varied Thrush
Ixoreus naevius

Breeding status: confirmed
Nest site: ground, tree (low)

Overall abundance: fairly common
Training area occurrence: 64%

General habitat: broadleaf, mixed spruce-broadleaf, and spruce forests; tall shrubs



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.05
Dwarf alpine shrub	--
Low alpine shrub	0.05
Low non-alpine shrub	--
Tall willow shrub	0.11
Tall alder shrub	0.13
Closed poplar forest	0.22
Closed birch forest	0.42
Open mixed spruce-poplar	0.12
Open mixed spruce-birch	0.20
Closed mixed spruce-poplar	0.35
Closed mixed spruce-birch	0.34
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	0.31

Breeding Bird Survey routes		
	birds/route	% stops
North Base	12.9	15.1
Alpenglow	5.0	8.3

Regional summer abundance

Cook Inlet: common

Interior Alaska: common

Population trend: increase^c

Conservation status: moderate concern

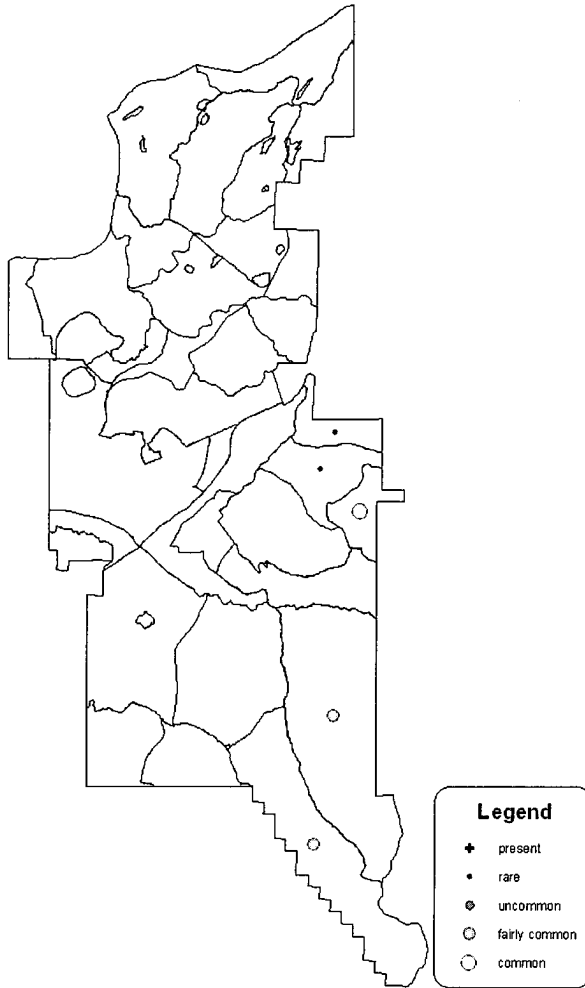
Migration system: Nearctic

American Pipit
Anthus rubescens

Breeding status: confirmed
Nest site: ground

Overall abundance: rare
Training area occurrence: 15%

General habitat: rocky dwarf alpine shrub



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	0.60
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	--	--
Alpenglow	--	--

Regional summer abundance

Cook Inlet: common
Interior Alaska: common

Population trend: increase^c

Conservation status: low concern

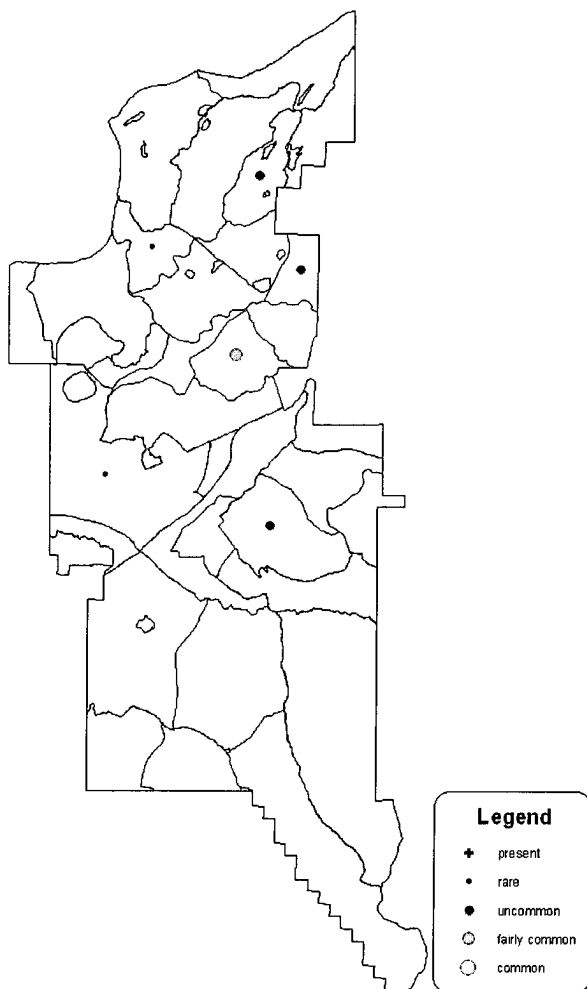
Migration system: Neotropical (partial)

Bohemian Waxwing
Bombycilla garrulus

Breeding status: confirmed
Nest site: spruce tree

Overall abundance: rare
Training area occurrence: 18%

General habitat: dwarf spruce forest



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	--	--
Alpenglow	1.7	0.8

Regional summer abundance

Cook Inlet: rare
Interior Alaska: common

Population trend: increase^c

Conservation status: low concern

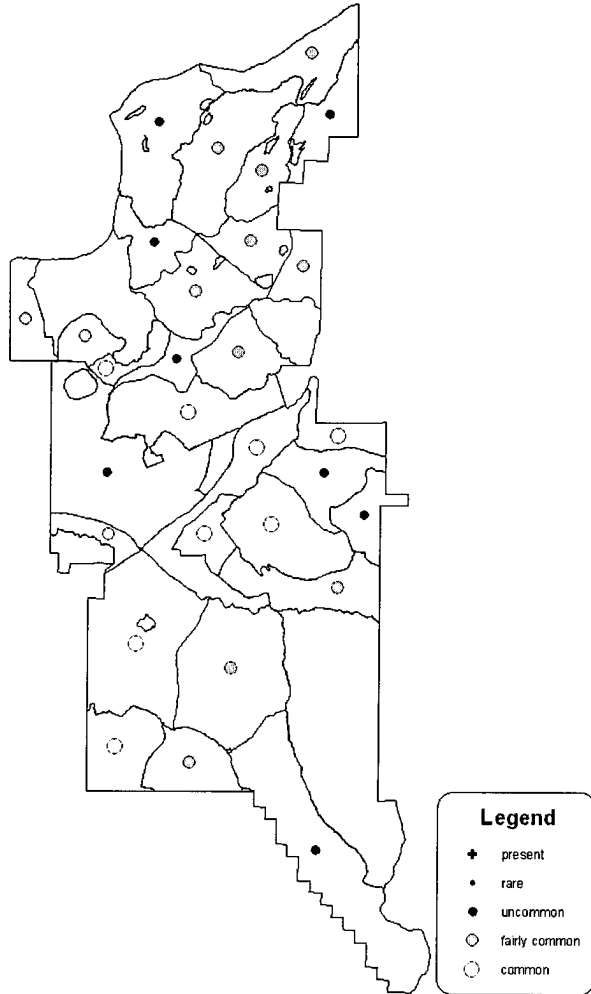
Migration system: Nearctic

Orange-crowned Warbler
Vermivora celata

Breeding status: confirmed
Nest site: ground, low shrub

Overall abundance: common
Training area occurrence: 88%

General habitat: tall shrubs, low shrubs, forest understory and edges



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.65
Dwarf alpine shrub	0.05
Low alpine shrub	1.14
Low non-alpine shrub	0.91
Tall willow shrub	2.42
Tall alder shrub	1.30
Closed poplar forest	0.50
Closed birch forest	0.37
Open mixed spruce-poplar	0.32
Open mixed spruce-birch	0.40
Closed mixed spruce-poplar	0.38
Closed mixed spruce-birch	0.50
Dwarf spruce forest	0.43
Open spruce forest	0.55
Closed spruce forest	0.19

Breeding Bird Survey routes		
	birds/route	% stops
North Base	34.6	41.1
Alpenglow	65.5	75.8

Regional summer abundance

Cook Inlet: common
Interior Alaska: common

Population trend: stable

Conservation status: low concern

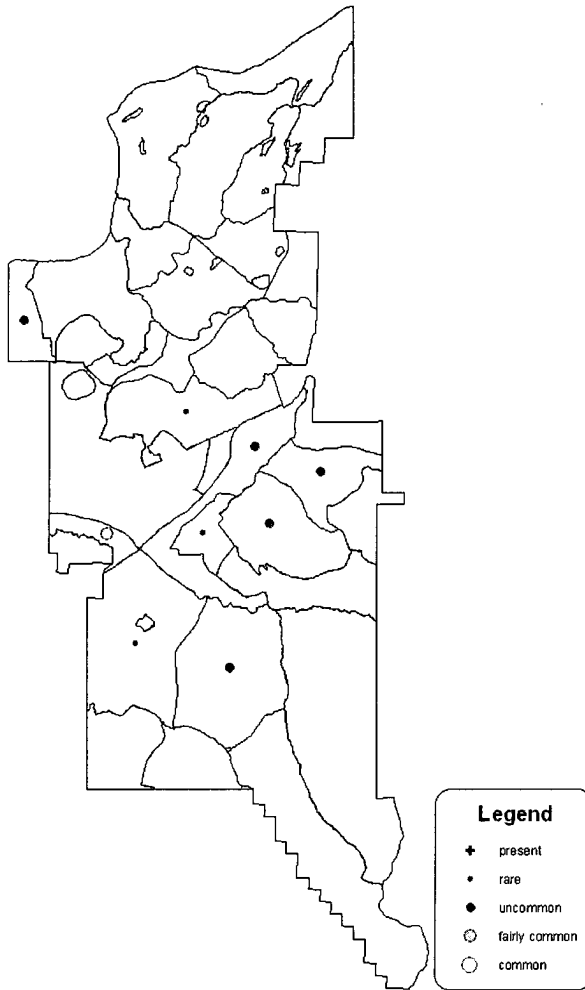
Migration system: Neotropical

Yellow Warbler
Dendroica petechia

Breeding status: confirmed
Nest site: shrub, tree (low)

Overall abundance: rare
Training area occurrence: 27%

General habitat: tall shrubs,
riparian poplar forest understory



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	0.05
Low non-alpine shrub	--
Tall willow shrub	0.47
Tall alder shrub	0.17
Closed poplar forest	0.17
Closed birch forest	0.01
Open mixed spruce-poplar	--
Open mixed spruce-birch	0.03
Closed mixed spruce-poplar	0.06
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	3.1	5.4
Alpenglow	1.7	3.3

Regional summer abundance

Cook Inlet: uncommon
Interior Alaska: common

Population trend: stable

Conservation status: low concern

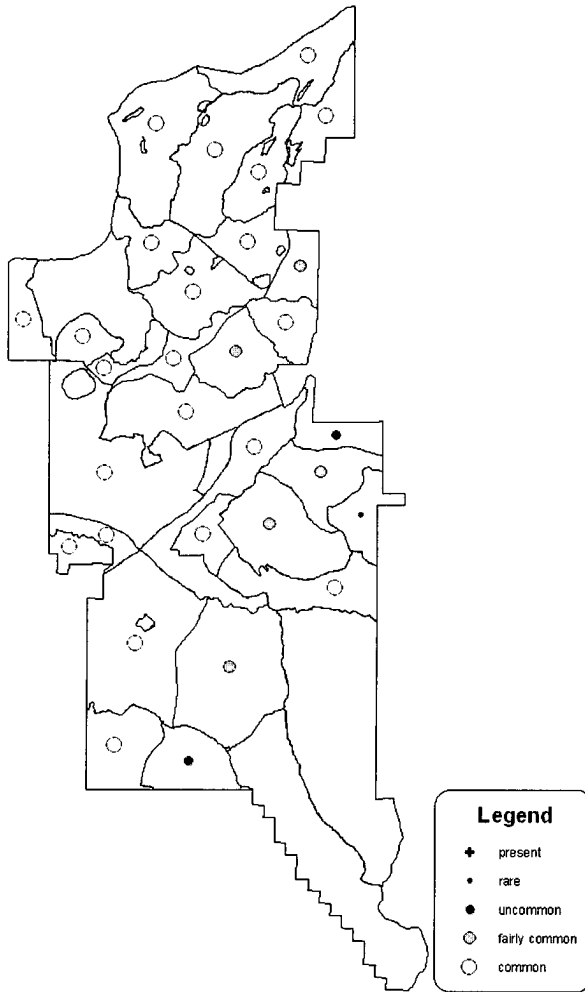
Migration system: Neotropical

Yellow-rumped Warbler *Dendroica coronata*

Breeding status: confirmed
Nest site: spruce tree

Overall abundance: common
Training area occurrence: 91%

General habitat: broadleaf, mixed spruce-broadleaf, and spruce forests



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.50
Dwarf alpine shrub	--
Low alpine shrub	0.09
Low non-alpine shrub	0.61
Tall willow shrub	0.26
Tall alder shrub	0.70
Closed poplar forest	2.00
Closed birch forest	1.89
Open mixed spruce-poplar	1.48
Open mixed spruce-birch	1.17
Closed mixed spruce-poplar	1.81
Closed mixed spruce-birch	2.34
Dwarf spruce forest	0.36
Open spruce forest	1.27
Closed spruce forest	1.23

Breeding Bird Survey routes		
	birds/route	% stops
North Base	53.6	55.7
Alpenglow	27.8	39.2

Regional summer abundance

Cook Inlet: common

Interior Alaska: common

Population trend: increase^c

Conservation status: low concern

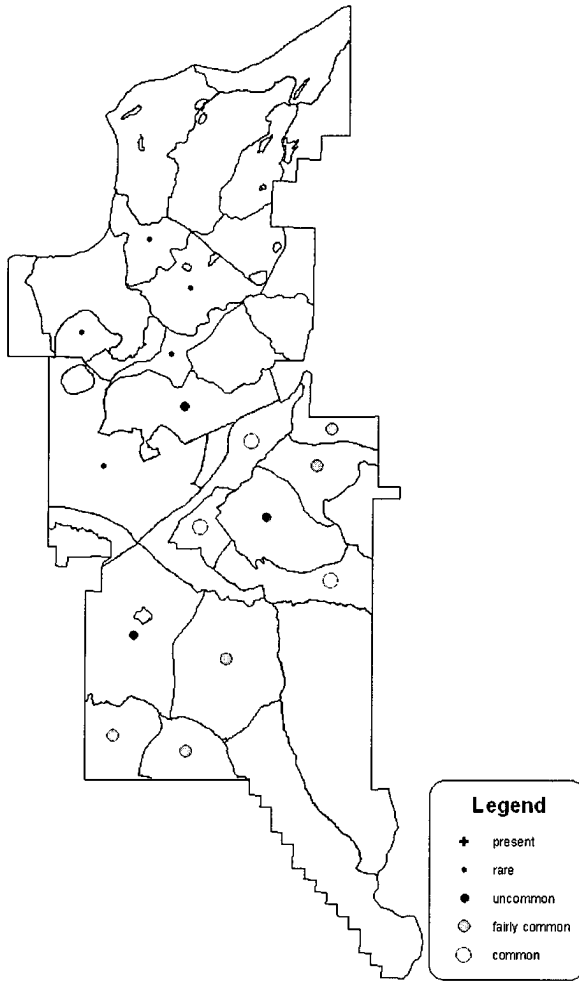
Migration system: Neotropical (partial)

Townsend's Warbler
Dendroica townsendi

Breeding status: confirmed
Nest site: spruce tree

Overall abundance: uncommon
Training area occurrence: 48%

General habitat: open mixed spruce-birch forest (slopes)



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	0.23
Low non-alpine shrub	0.06
Tall willow shrub	--
Tall alder tall shrub	0.17
Closed poplar forest	0.06
Closed birch forest	--
Open mixed spruce-aspen	0.12
Open mixed spruce-birch	0.80
Closed mixed spruce-polar	0.02
Closed mixed spruce-birch	0.20
Dwarf spruce forest	--
Open spruce forest	0.05
Closed spruce forest	0.04

Breeding Bird Survey routes		
	birds/route	% stops
North Base	--	--
Alpenglow	10.5	16.7

Regional summer abundance

Cook Inlet: uncommon
Interior Alaska: common

Population trend: decrease

Conservation status: moderate concern

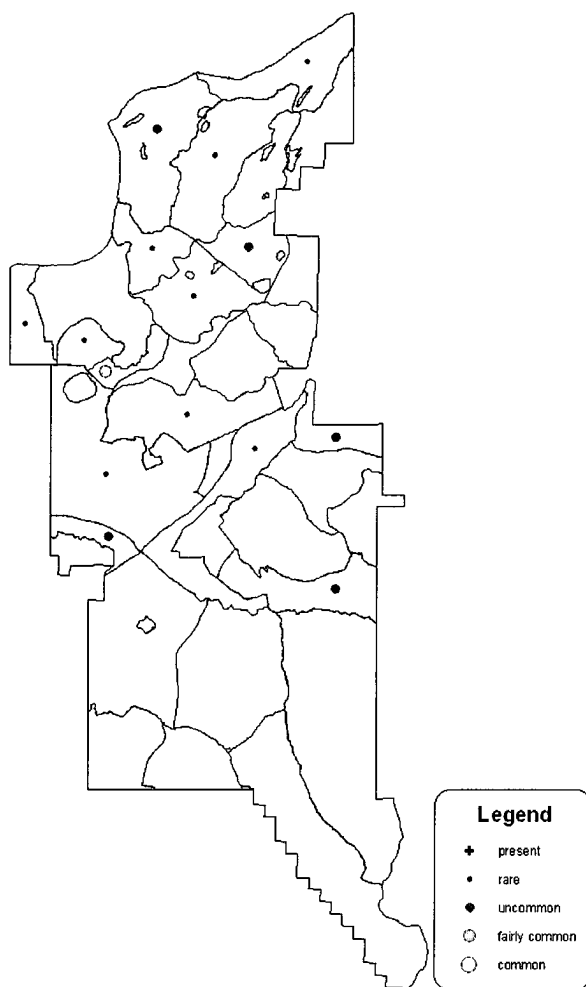
Migration system: Neotropical

Blackpoll Warbler *Dendroica striata*

Breeding status: confirmed
Nest site: ground, tree (low)

Overall abundance: uncommon
Training area occurrence: 45%

General habitat: shrubs and forest understorey



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	0.03
Tall willow shrub	--
Tall alder shrub	0.07
Closed poplar forest	0.06
Closed birch forest	0.01
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-polar	0.04
Closed mixed spruce-birch	0.03
Dwarf spruce forest	--
Open spruce forest	0.05
Closed spruce forest	0.04

Breeding Bird Survey routes		
	birds/route	% stops
North Base	4.4	6.9
Alpenglow	0.8	1.7

Regional summer abundance

Cook Inlet: uncommon

Interior Alaska: uncommon

Population trend: significant decrease

Conservation status: moderate concern

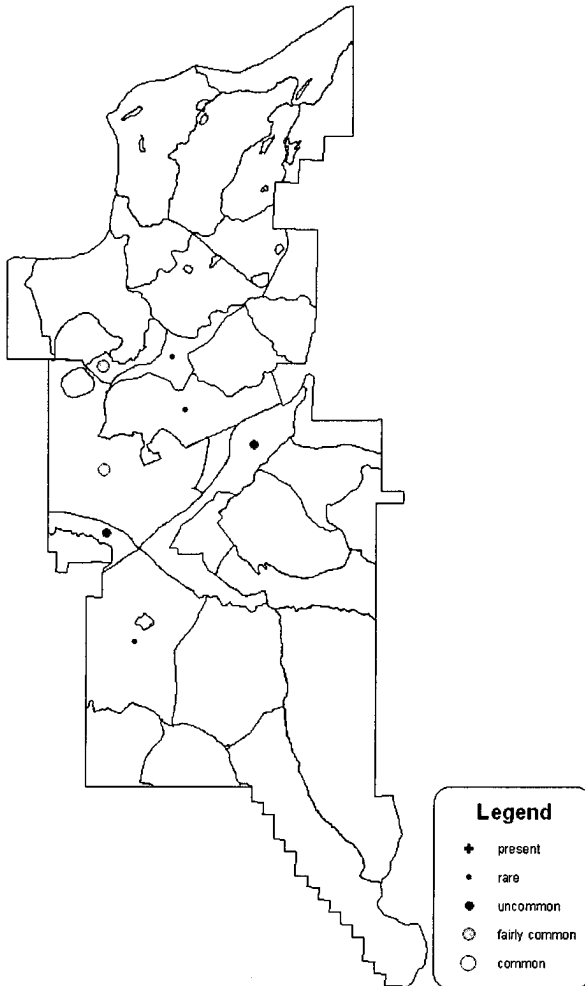
Migration system: Neotropical

Northern Waterthrush
Seiurus noveboracensis

Breeding status: confirmed
Nest site: ground

Overall abundance: rare
Training area occurrence: 21%

General habitat: shrubs and forest understory; near water



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.05
Dwarf alpine shrub	--
Low alpine shrub	--
Low non-alpine shrub	0.03
Tall willow shrub	0.05
Tall alder shrub	--
Closed poplar forest	--
Closed birch forest	0.04
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-polar	0.02
Closed mixed spruce-birch	--
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	2.0	3.4
Alpenglow	--	--

Regional summer abundance

Cook Inlet: uncommon
Interior Alaska: common

Population trend: stable^c

Conservation status: low concern

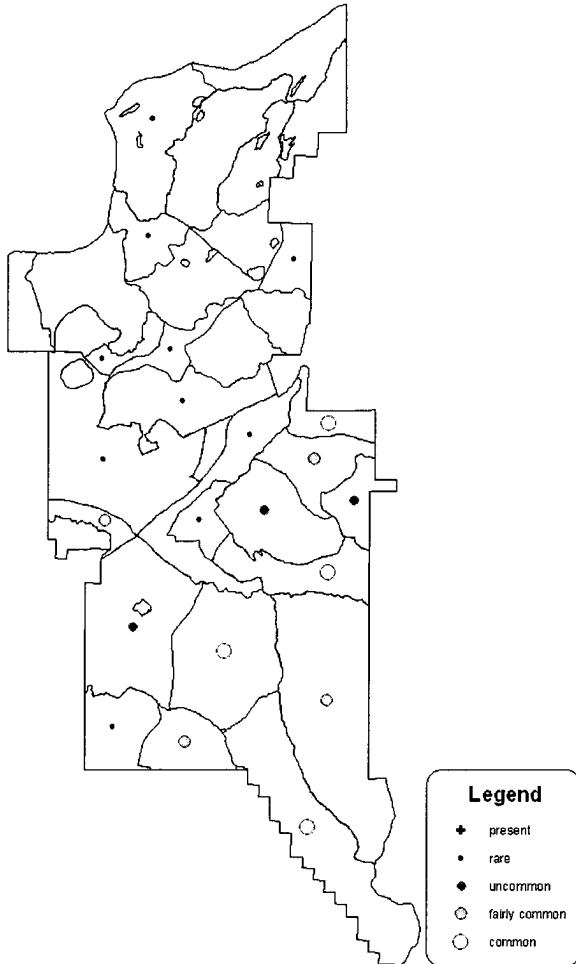
Migration system: Neotropical

Wilson's Warbler
Wilsonia pusilla

Breeding status: confirmed
Nest site: ground, low shrub

Overall abundance: fairly common
Training area occurrence: 64%

General habitat: low alpine shrub, tall shrubs, forest understory



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.15
Dwarf alpine shrub	--
Low alpine shrub	1.00
Low non-alpine shrub	0.06
Tall willow shrub	1.32
Tall alder shrub	0.37
Closed polar forest	0.06
Closed birch forest	0.05
Open mixed spruce-poplar	0.16
Open mixed spruce-birch	0.26
Closed mixed spruce-polar	0.02
Closed mixed spruce-birch	0.39
Dwarf spruce forest	0.21
Open spruce forest	0.09
Closed spruce forest	0.12

Breeding Bird Survey routes		
	birds/route	% stops
North Base	6.3	8.9
Alpenglow	11.2	15.0

Regional summer abundance

Cook Inlet: common
Interior Alaska: common

Population trend: decrease^c

Conservation status: moderate concern

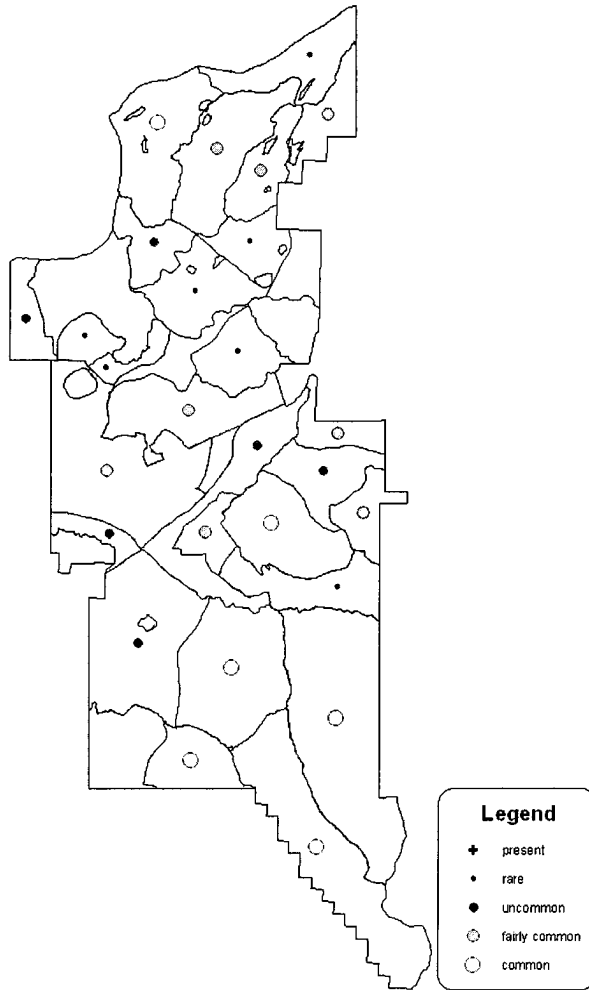
Migration system: Neotropical

Savannah Sparrow
Passerculus sandwichensis

Breeding status: confirmed
Nest site: ground

Overall abundance: fairly common
Training area occurrence: 82%

General habitat: dwarf alpine shrub, low shrubs, herbaceous meadows, tall shrubs



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.50
Dwarf alpine shrub	0.65
Low alpine shrub	1.86
Low non-alpine shrub	0.42
Tall willow shrub	0.47
Tall alder shrub	0.23
Closed poplar forest	0.06
Closed birch forest	0.01
Open mixed spruce-polar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	0.01
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	3.3	4.3
Alpenglow	8.3	11.7

Regional summer abundance

Cook Inlet: common

Interior Alaska: common

Population trend: decrease

Conservation status: low concern

Migration system: Neotropical (partial)

Fox Sparrow
Passerella iliaca

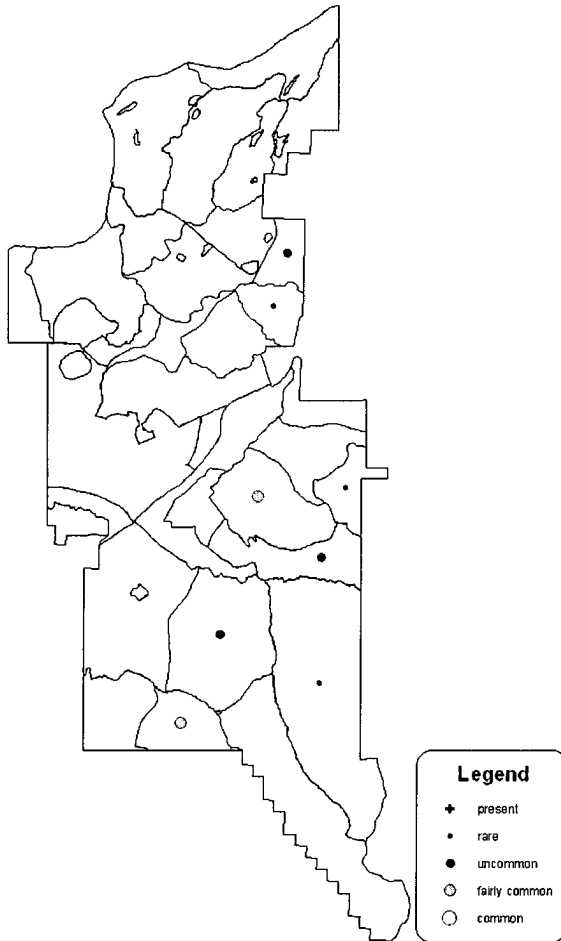
Breeding status: confirmed

Overall abundance: rare

Nest site: ground; shrub, tree (low)

Training area occurrence: 24%

General habitat: tall alder shrub, open mixed spruce-broadleaf forest understory



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	0.05
Low non-alpine shrub	0.03
Tall willow shrub	--
Tall alder shrub	0.20
Closed poplar forest	--
Closed birch forest	0.01
Open mixed spruce-poplar	0.04
Open mixed spruce-birch	0.37
Closed mixed spruce-poplar	0.02
Closed mixed spruce-birch	0.02
Dwarf spruce forest	--
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	0.7	1.1
Alpenglow	7.5	12.5

Regional summer abundance

Cook Inlet: common

Interior Alaska: common

Population trend: increase

Conservation status: low concern

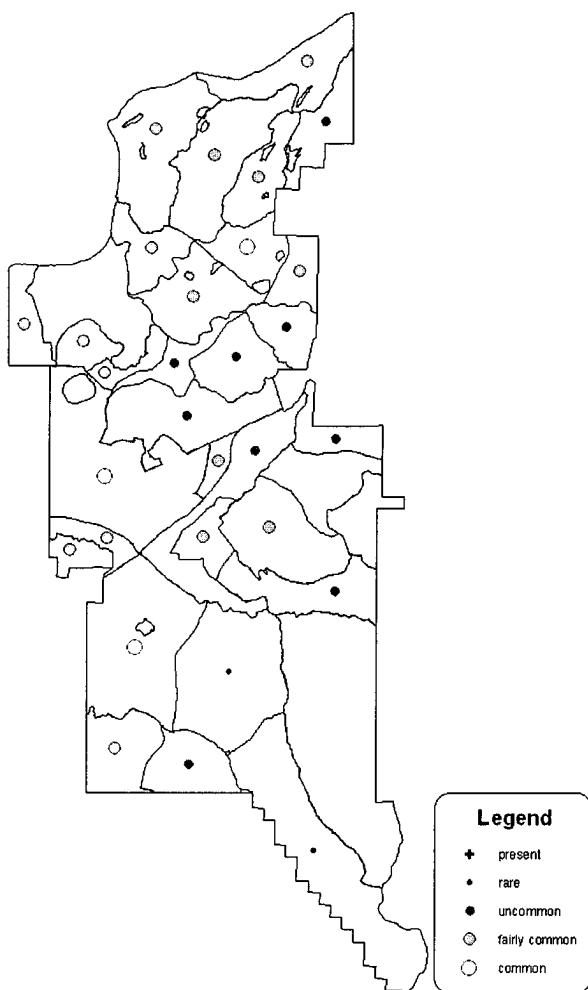
Migration system: Nearctic

Lincoln's Sparrow
Melospiza lincolnii

Breeding status: confirmed
Nest site: ground

Overall abundance: fairly common
Training area occurrence: 91%

General habitat: herbaceous wet meadows, low and tall shrubs, open forest understory



Abundance by vegetation type	
	Birds/pt.
Herbaceous	1.50
Dwarf alpine shrub	--
Low alpine shrub	0.36
Low non-alpine shrub	0.73
Tall willow shrub	1.11
Tall alder shrub	0.27
Closed poplar forest	0.11
Closed birch forest	0.03
Open mixed spruce-poplar	0.04
Open mixed spruce-birch	0.09
Closed mixed spruce-polar	0.21
Closed mixed spruce-birch	0.20
Dwarf spruce forest	0.29
Open spruce forest	0.50
Closed spruce forest	0.08

Breeding Bird Survey routes		
	birds/route	% stops
North Base	8.9	11.7
Alpenglow	1.7	3.3

Regional summer abundance

Cook Inlet: common

Interior Alaska: common

Population trend: stable

Conservation status: low concern

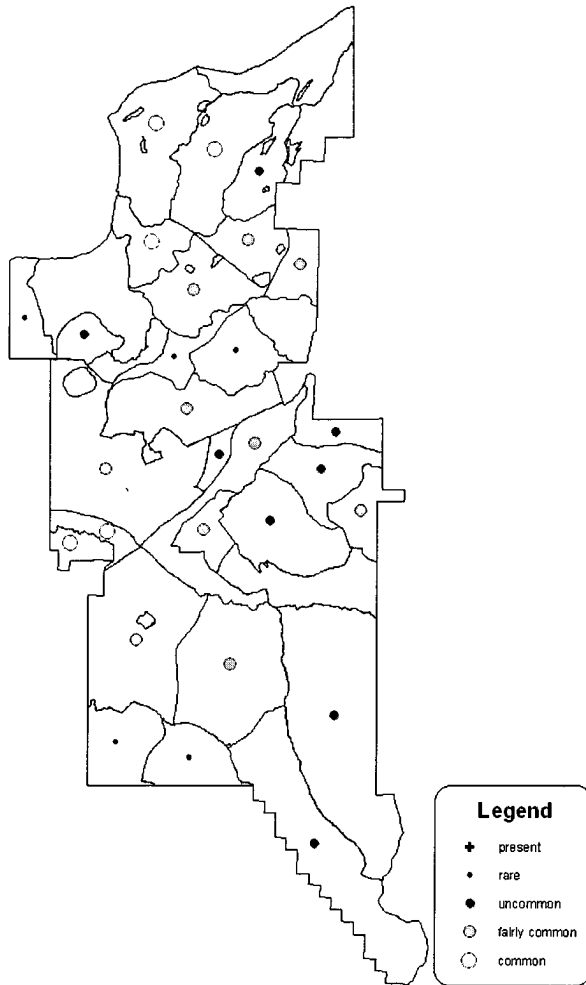
Migration system: Neotropical

White-crowned Sparrow
Zonotrichia leucophrys

Breeding status: confirmed
Nest site: ground, low shrub

Overall abundance: fairly common
Training area occurrence: 85%

General habitat: low and tall shrubs, open spruce and poplar forest understory and edges, dwarf spruce forest



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.40
Dwarf alpine shrub	0.12
Low alpine shrub	0.73
Low non-alpine shrub	0.85
Tall willow shrub	0.89
Tall alder shrub	0.57
Closed poplar forest	0.11
Closed birch forest	0.04
Open mixed spruce-poplar	0.16
Open mixed spruce-birch	--
Closed mixed spruce-poplar	0.10
Closed mixed spruce-birch	0.01
Dwarf spruce forest	0.29
Open spruce forest	0.32
Closed spruce forest	0.08

Breeding Bird Survey routes		
	birds/route	% stops
North Base	25.4	18.0
Alpenglow	11.7	16.7

Regional summer abundance

Cook Inlet: common

Interior Alaska: common

Population trend: significant decrease

Conservation status: low concern

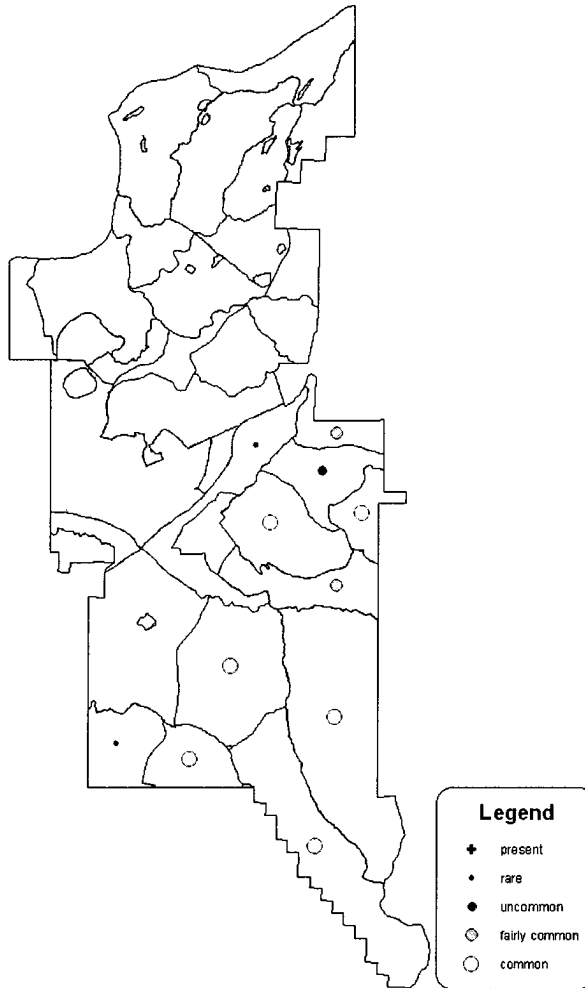
Migration system: Neotropical (partial)

Golden-crowned Sparrow *Zonotrichia atricapilla*

Breeding status: confirmed
Nest site: ground

Overall abundance: uncommon
Training area occurrence: 33%

General habitat: low alpine shrub, tall shrubs, dwarf spruce forest (higher elevations)



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	0.30
Low alpine shrub	1.77
Low non-alpine shrub	--
Tall willow shrub	1.05
Tall alder shrub	0.13
Closed poplar forest	--
Closed birch forest	--
Open mixed spruce-poplar	--
Open mixed spruce-birch	--
Closed mixed spruce-poplar	--
Closed mixed spruce-birch	--
Dwarf spruce forest	0.29
Open spruce forest	--
Closed spruce forest	--

Breeding Bird Survey routes		
	birds/route	% stops
North Base	--	--
Alpenglow	15.5	20.0

Regional summer abundance

Cook Inlet: common

Interior Alaska: uncommon

Population trend: increase^c

Conservation status: moderate concern

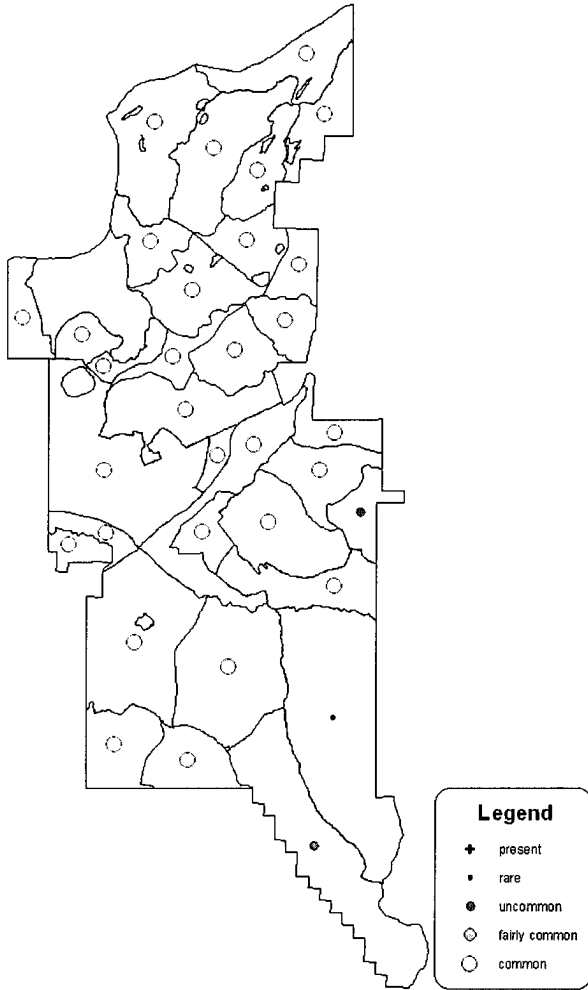
Migration system: Nearctic

Dark-eyed Junco
Junco hyemalis

Breeding status: confirmed
Nest site: ground

Overall abundance: common
Training area occurrence: 100%

General habitat: tall shrubs, all forests and forest edges



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.70
Dwarf alpine shrub	0.14
Low alpine shrub	0.50
Low non-alpine shrub	0.73
Tall willow shrub	1.11
Tall alder shrub	1.40
Closed poplar forest	1.22
Closed birch forest	0.97
Open mixed spruce-polar	1.40
Open mixed spruce-birch	1.20
Closed mixed spruce-poplar	1.50
Closed mixed spruce-birch	1.32
Dwarf spruce forest	1.29
Open spruce forest	1.32
Closed spruce forest	1.58

Breeding Bird Survey routes		
	birds/route	% stops
North Base	63.4	58.0
Alpenglow	37.0	53.3

Regional summer abundance

Cook Inlet: common
Interior Alaska: common

Population trend: significant decrease

Conservation status: low concern

Migration system: Neotropical (partial)

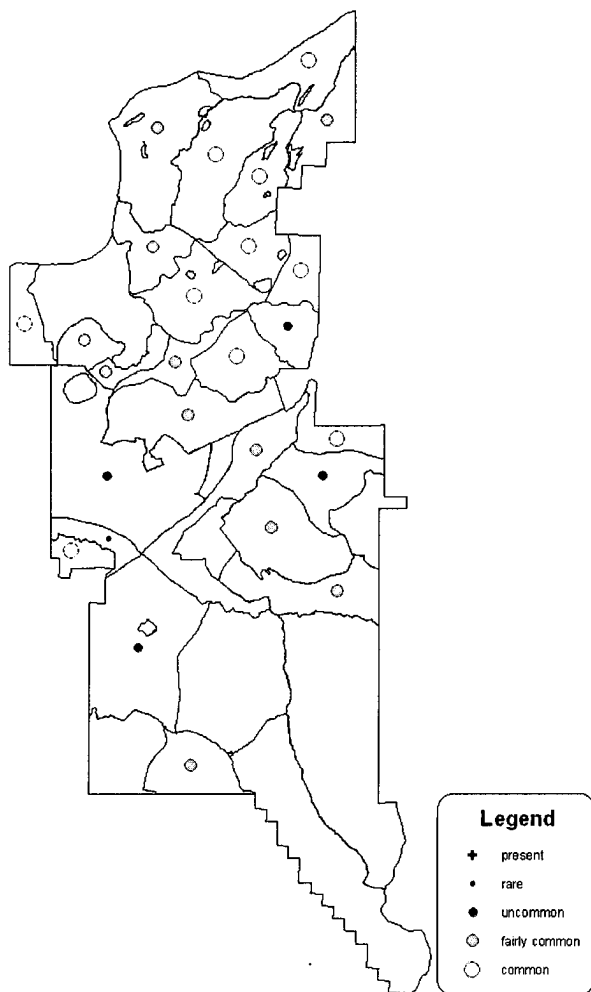
White-winged Crossbill

Loxia leucoptera

Breeding status: confirmed
Nest site: spruce tree

Overall abundance: fairly common
Training area occurrence: 79%

General habitat: open spruce
 and mixed spruce-birch forests



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	0.05
Low non-alpine shrub	--
Tall willow shrub	--
Tall alder shrub	0.20
Closed poplar forest	--
Closed birch forest	0.12
Open mixed spruce-polar	0.04
Open mixed spruce-birch	1.00
Closed mixed spruce-poplar	0.19
Closed mixed spruce-birch	0.02
Dwarf spruce forest	--
Open spruce forest	0.68
Closed spruce forest	0.08

Breeding Bird Survey routes		
	birds/route	% stops
North Base	10.9	2.6
Alpenglow	1.2	0.8

Regional summer abundance

Cook Inlet: uncommon
 Interior Alaska: uncommon

Population trend: stable

Conservation status: low concern

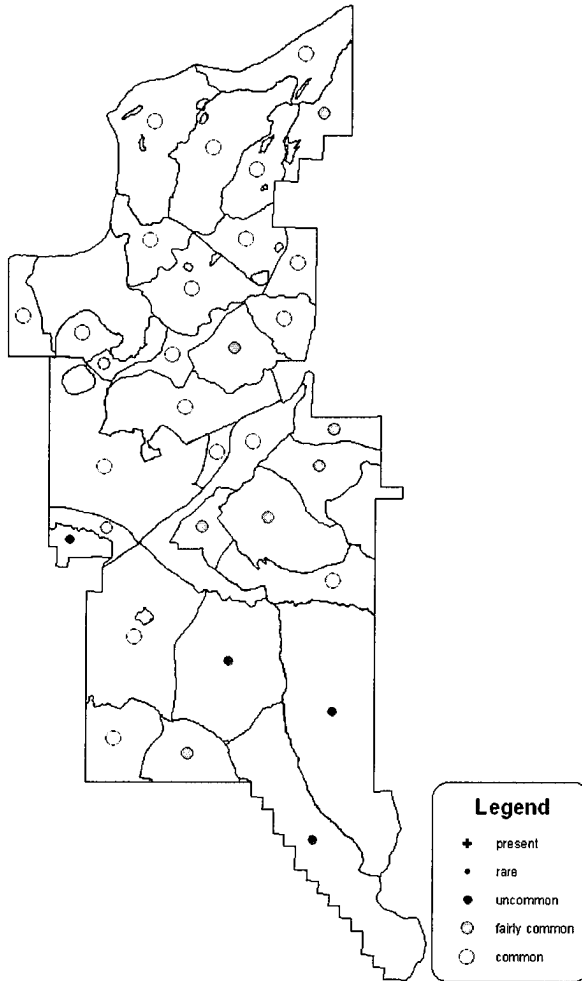
Migration system: resident/Nearctic

Common Redpoll
Carduelis flammea

Breeding status: confirmed
Nest site: ground, shrub (low)

Overall abundance: common
Training area occurrence: 97%

General habitat: widespread; tall shrubs and mixed spruce-broadleaf forests



Abundance by vegetation type	
	Birds/pt.
Herbaceous	0.15
Dwarf alpine shrub	0.19
Low alpine shrub	0.45
Low non-alpine shrub	0.48
Tall willow shrub	2.74
Tall alder shrub	1.93
Closed poplar forest	0.89
Closed birch forest	0.43
Open mixed spruce-poplar	0.40
Open mixed spruce-birch	0.46
Closed mixed spruce-polar	1.19
Closed mixed spruce-birch	1.01
Dwarf spruce forest	0.36
Open spruce forest	0.55
Closed spruce forest	0.54

Breeding Bird Survey routes		
	birds/route	% stops
North Base	21.0	12.9
Alpenglow	38.8	44.2

Regional summer abundance

Cook Inlet: common
Interior Alaska: common

Population trend: increase^c

Conservation status: low concern

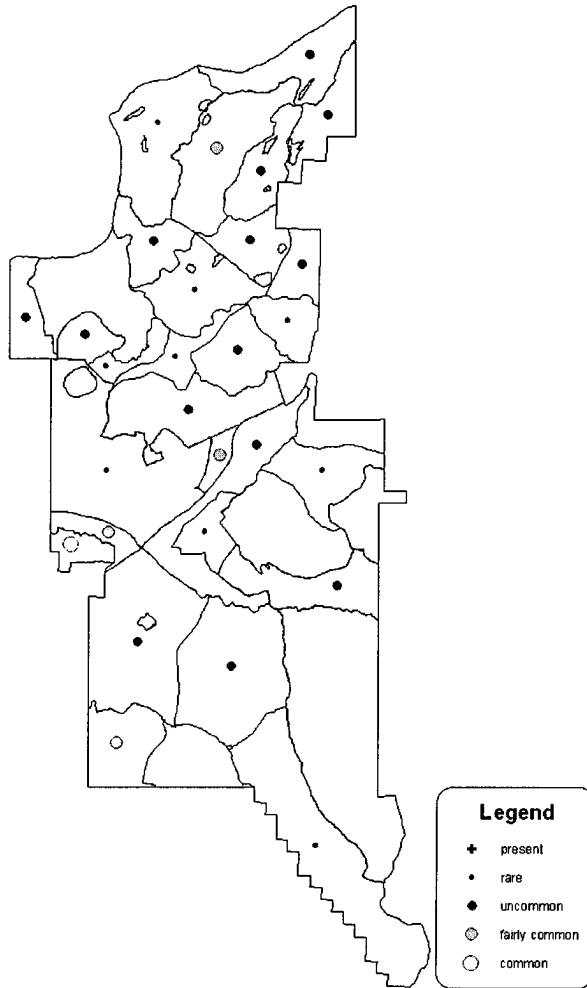
Migration system: Nearctic

Pine Siskin
Carduelis pinus

Breeding status: confirmed
Nest site: spruce tree

Overall abundance: fairly common
Training area occurrence: 85%

General habitat: open spruce forest, mixed spruce-polar forest, tall willow shrub



Abundance by vegetation type	
	Birds/pt.
Herbaceous	--
Dwarf alpine shrub	--
Low alpine shrub	0.05
Low non-alpine shrub	0.06
Tall willow shrub	1.16
Tall alder shrub	0.10
Closed polar forest	0.11
Closed birch forest	--
Open mixed spruce-poplar	1.28
Open mixed spruce-birch	0.03
Closed mixed spruce-polar	0.31
Closed mixed spruce-birch	0.15
Dwarf spruce forest	--
Open spruce forest	1.27
Closed spruce forest	0.19

Breeding Bird Survey routes		
	birds/route	% stops
North Base	5.7	2.3
Alpenglow	2.8	4.1

Regional summer abundance

Cook Inlet: uncommon
Interior Alaska: rare

Population trend: decrease^c

Conservation status: low concern

Migration system: Neotropical (partial)