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Study Report:

BREEDING WATERFOWL SURVEY,
Gates of the Arctic National Park and Preserve

GAAR-93-00x
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INTRODUCTION

Declines in waterfowl (Anseriformes: Anatidae) numbers throughout North America are a source of major concern among biologists and conservationists. Dabbling ducks (subfamily Anatinae, tribe Anatini) in particular have suffered major losses in recent years.

Although Gates of the Arctic National Park and Preserve is not one of Alaska's highly significant waterfowl production areas on a national level, portions of the park/preserve do host locally significant numbers of nesting waterfowl. Increasing human use of these areas may prove disruptive to waterfowl breeding success.

The U.S. Fish and Wildlife Service's office of Migratory Bird Management conducts aerial surveys of important waterfowl breeding areas throughout the state. It is not presently cost-effective to do surveys of this kind in Gates of the Arctic National Park and Preserve. However, a simple and relatively inexpensive monitoring program for nesting waterfowl would be useful to park management in its consideration of human-use issues, and would contribute to the regional information base.

One of the objectives of this year's survey was to view a sample of broods of each of the various waterfowl species breeding in the area surveyed and to produce respective estimates of mean brood sizes. An additional objective was to count the total number of waterbirds observed at each lake visited. If the survey is repeated in subsequent years it should be possible to gain some insight concerning the number of birds using the area and trends in reproductive success.

Thanks to volunteer Matt Irinaga for field assistance in this year's survey.

STUDY AREA

The study area consisted of the upper Kobuk River corridor from the Walker Lake outlet to the Pah River confluence (appendix B). This area was selected because it has some of the better waterfowl breeding habitat in Gates of the Arctic National Park and Preserve, is an area of relatively concentrated human recreational use, and contains a right-of-way for possible road construction.

Recreationists generally access the area by float plane and then float the river in canoes, kayaks, and rafts. Some direct access by float plane for fishing. Some access by river boat from down river villages.

Survey Pass (A-3)
Hughes (C-5), (D-3), (D-4), (D-5), (D-6)
Shungnak (D-1)

METHODS

The survey crew consisted of two individuals. We accessed the study area by float plane and travelled the river by canoe. Specific lakes and ponds were reached by hiking off the river.

The following lakes and ponds were surveyed (appendix B). For convenience in identification, pseudonyms or local nicknames were used for those lakes and ponds not named on the USGS topographic quadrangles:

1. Walker Lake Outlet Cove
2. Placid Cove
3. Floating Mat Pond
4. Sedge Meadow Pond
5. Beaver Slough
6. Minnesota Flats
7. Snipe Pond
8. Grebe Pond
9. Horsetail Slough
10. Moosebed Slough
11. Deep Slough
12. Dappled Inlet
13. Noflow Slough
14. Open Inlet

15. Beaverpike Creek
16. Multipike Slough
17. Megapike Slough
18. Tallgrass Slough
19. Sanctum Lake
20. Sister Lakes

River

We, 04 Aug 93
Th, 05 Aug 93
Fr, 06 Aug 93
Sa, 07 Aug 93
Su, 08 Aug 93
Mo, 09 Aug 93
Tu, 10 Aug 93
We, 11 Aug 93
Th, 12 Aug 93

We walked slowly around these lakes and ponds while searching for waterfowl and their broods, sometimes stopping to sit quietly while searching the area with binoculars. All waterbirds (including loons and grebes, as well as waterfowl) observed were identified, and the number of individuals seen was recorded. Determination of sex was sometimes difficult at a distance, especially with birds in eclipse plumage. When broods were observed, time and care was taken to insure that all of the young were seen. Information from each observation was recorded in a field notebook and the locations of each observation were identified by lake name.

RESULTS

Brood counts and incidental wildlife observations made during the breeding waterfowl survey are presented below, by lake and pond (see the appended map for the specific locations of each). "M" means male, "F" means female, "A" means adult, "y" means young, and "U" means unidentified or uncertain (regarding sex or age). Scientific names for each species listed are furnished in Appendix A:

1. Walker Lake Outlet Cove

Nice open water. Looks like it might be a good molting spot. May provide some food for diving ducks. Good concentration of grayling.

Broods: common goldeneye 2F+10y(50%)

Other Observations: Arctic grayling

2. Placid Cove

A broad inlet off of the Walker Lake outlet, with slow flowing water.

Broods: [none]

Other Observations: [none]

3. Floating Mat Pond

Mostly grown in with emergent vegetation, especially around edges. Much of the rest of the pond is covered by floating mat. Doesn't look too productive for waterfowl.

Broods: [none]

Other Observations: [none]

4. Sedge Meadow Pond

Filled in with sedges. Lots of organic material flowing out into Kobuk River.

Broods: [none]

Other Observations: [none]

5. Beaver Slough

Excellent waterfowl habitat. Good submergent vegetation.
Emergent vegetation along edges.

Broods:	greater scaup	F+1y(50%) F+4y(33%) F+4y(33%) F+5y(33%) F+5y(25%) F+3y(50%) F+4y(25%) F+3y(50%) F+7y(75%) F+4y(50%)
	surf scoter	
	red-necked grebe	F+2y(25%)
Other Observations:	greater scaup	1F

6. Minnesota Flats

Shallow with slow water flow. The water flow is enough to make it undesirable for most nesting waterfowl.

Broods: [none]

Other Observations: [none]

7. Snipe Pond

Lots of emergent vegetation--some parts of pond filled in solid. Good submergent vegetation in deeper parts of pond. A series of beaver dams in outlet, with water backed up into hardwood trees.

Broods:	wigeon	F+4y(75%)
	greater scaup	F+6y(67%)
	surf scoter	4y(50%)
Other Observations:	wigeon	3U
	common snipe	4

8. Grebe Pond

Sister to Snipe Pond. Good waterfowl habitat. Emergent vegetation along edge of pond.

Broods:	wigeon	F+2y (75%)
		F+7y (75%)
		F+4y (75%)
	greater scaup	F+5y (50%)
	red-necked grebe	2y+2y=4y (50%)
		1y (50%)
		F+1Y (75%)

Other Observations:	wigeon	3U
	beaver	

9. Horsetail Slough

Filled in with sedge and equisetum.

Broods: [none]

Other Observations: [none]

10. Moosebed Slough

Mostly grown in with sedge and equisetum--very little open water. Several big moose lay-down places.

Broods: [none]

Other Observations: [none]

11. Deep Slough

Some current from a small lead off river; deep, not much emergent vegetation.

Broods: [none]

Other Observations: [none]

12. Dappled Inlet

An inlet off main river. Deep, little flow. Emergent vegetation along sides, none in center.

Broods: [none]

Other Observations: [none]

13. Noflow Slough

Grown in with emergent vegetation except for the mouth. No flow evident.

Broods: [none]

Other Observations: [none]

14. Open Inlet

An inlet off of the main river. Some good-looking open water.

Broods: [none]

Other Observations: [none]

15. Beaverpike Creek

Numerous beaver ponds along lower section of slough. Lots of small northern pike. Upper lakes indicated on maps are completely grown in with emergent vegetation.

Broods: [none]

Other Observations: [none]

16. Multipike Slough

Open to river. Lots of good submergent vegetation. Lots of pike to fairly large size.

Broods: common goldeneye 4y(100%):3f+1m

Other Observations: moose cow
beaver

17. Megapike Slough

Open to river. Lots of good submergent vegetation. Fewer pike than Multipike Slough, but some much larger. Also observed a lake trout.

Broods: [none]

Other Observations: [none]

18. Tallgrass Slough

Filled in with emergent vegetation.

Broods: [none]

Other Observations: [none]

19. Sanctum Lake

Attractive small lake, not too productive for waterfowl.

Broods: [none]

Other Observations: [none]

20. Sister Lakes

These lakes were surveyed from the air at about 500 feet AGL, so birds could have easily been missed. Larger than most of the other lakes surveyed on this trip.

Broods: [none]

Other Observations: [none]

River

Th, 05 Aug 93

Broods:	greater scaup	F+2y(50%)
	wigeon	F+4y(50%)
	red-breasted merganser	F+2y(75%)

Other Observations:	red-breasted merganser	3U
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Fr, 06 Aug 93

Broods: [none]

Other Observations:	red-breasted merganser	1U
		1U
		1U

goose dung by camp

Sa, 07 Aug 93

Broods:	wigeon	F+4y(75%)
	red-breasted merganser	2F+16y(50%)
Other Observations:	[none]	

Su, 08 Aug 93

Broods:	red-breasted merganser	F+4y(33%)
Other Observations:	wigeon	1U
	red-breasted merganser	9U
		2U
	bald eagle adult and nest and nestling	

Mo, 09 Aug 93

Broods:	red-breasted merganser	11y(75%)
Other Observations:	Canada goose	7U
	white-fronted goose	~10U
		4U
	common loon	1A
		1A

Tu, 10 Aug 93

Broods:	red-breasted merganser	F+4y(75%)
		F+7y(33%)
		F+6y(50%)
Other Observations:	white-fronted goose	5A
	common loon	1A

We, 11 Aug 93

Broods:	[none]	
Other Observations:	Canada goose	8A
	white-fronted goose	15
		22
	common loon	1A
		2A

Th, 12 Aug 93

Broods: [none]

Other Observations: sandhill crane ~20

total waterfowl observed

LAKES broods

common goldeneye	2F+10y(50%) 4y(100%): 3f+1m	3	14	4-5
greater scaup	F+1y(50%) F+4y(33%) F+4y(33%) F+5y(33%) F+5y(25%) F+3y(50%) F+4y(25%) F+3y(50%) F+6y(67%) F+5y(50%)	10	40	1-6
surf scoter	F+7y(75%) F+4y(50%) 4y(50%)	3	15	4-7
red-necked grebe	F+2y(25%) 2y+2y=4y(50%) 1y(50%) F+1y(75%)	5	8	1-2
American wigeon	F+4y(75%) F+2y(75%) F+7y(75%) F+4y(75%)	4	17	2-7

LAKES other observations

greater scaup	1F
American wigeon	3U 3U
common snipe	

RIVER broods

greater scaup	F+2y(50%)	1	2	2-2
wigeon	F+4y(50%) F+4y(75%)	2	8	4-4

red-breasted merganser	F+2y(75%) 2F+16y(50%) F+4y(33%) 11y(75%) F+4y(75%) F+7y(33%) F+6y(50%)	8	50	2-11
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RIVER other obs

red-breasted merganser	3U 1U 1U 1U 9U 2U
wigeon	1U
Canada goose	7U 8A
white-fronted goose	~10U 4U 5A 15 22
common loon	1A 1A 1A 1A 2A
sandhill crane	~20

Table 2. Summary of incidental wildlife observations made along the upper Kobuk River from the Walker Lake outlet to the Pah River confluence. Observations are shown by date, August 1993.

	August								
	04	05	06	07	08	09	10	11	12
MAMMALS									
beaver			XX	XX	XX				
red squirrel				XX	XX				
bear spp. (sign)						XX			
wolf						XX	XX		
wolverine (tracks)								XX	
moose		XX				XX	XX		
caribou								XX	
human	XX	XX			XX	XX		XX	XX
BIRDS									
common loon						XX	XX	XX	
bald eagle					XX			XX	
perigrine falcon			XX	XX					
Harlan's hawk		XX		XX	XX				
osprey			XX	XX	XX	XX			
northern harrier							XX	XX	
Canada goose			XX			XX		XX	
white-fronted goose						XX	XX		
widgeon		XX		XX					
greater scaup		XX		XX					
common goldeneye	XX						XX		
red-breasted merganser	XX	XX	XX	XX	XX	XX	XX		
glaucous gull	XX	XX	XX	XX	XX	XX	XX	XX	
Arctic tern							XX		
spotted sandpiper	XX					XX			
common snipe				XX					
semipalmated plover				XX		XX			
sandhill crane									XX
belted kingfisher	XX	XX					XX		
great-horned owl (heard)						XX			
bank swallow	XX	XX			XX				
gray jay		XX					XX	XX	
boreal chickadee							XX		
raven	XX	XX			XX	XX	XX	XX	
northern shrike				XX					
robin			XX	XX			XX		
white-crowned sparrow	XX								

sparrow spp.

xx

FISH

northern pike

xx xx

Arctic grayling

xx

xx

xx xx

Arctic char

xx

lake trout

xx

chum salmon

xx xx

xx

Other Staff Observations:

Ann Corson

Observed large numbers of Canada geese along the Kobuk River near the Akpelik Creek confluence on 26 August 1993.

Bob Maurer

Observed (heard) geese of unspecified species during the evening of 10 September 1993 along the Kobuk River near the outside boundary of the Kobuk Preserve.

Steve Ulvi

Observed groups of scoters containing up to 200 individuals on Lake Selby between 12 and 18 September 1993. Also saw several common loons.

Staging white-fronted geese. This species is not doing too well.

Appendix A. List of animal species (including scientific names) observed during a waterfowl survey in the upper Noatak River corridor and upper Kobuk River corridor, Gates of the Arctic National Park and Preserve, Alaska, 1992 and 1993.

MAMMALS

black bear	<u>Ursus americanus</u>
grizzly bear	<u>Ursus arctos</u>
wolverine	<u>Gulo gulo</u>
gray wolf	<u>Canis lupus</u>
red fox	<u>Vulpes vulpes</u>
Arctic ground squirrel	<u>Spermophilus undulatus</u>
red squirrel	<u>Tamiasciurus hudsonicus</u>
beaver	<u>Castor canadensis</u>
human	<u>Homo sapiens</u>
moose	<u>Alces alces</u>
caribou	<u>Rangifer tarandus</u>
Dall sheep	<u>Ovis dalli</u>

BIRDS

common loon	<u>Gavia immer</u>
Pacific loon	<u>G. pacifica</u>
red-throated loon	<u>G. stellata</u>
red-necked grebe	<u>Podiceps grisegena</u>
horned grebe	<u>P. auritus</u>
Canada goose	<u>Branta canadensis</u>
greater white-fronted goose	<u>Anser albifrons</u>
northern pintail	<u>Anas acuta</u>
American wigeon	<u>A. americana</u>
northern shoveler	<u>A. clypeata</u>
greater scaup	<u>Aythya marila</u>
common goldeneye	<u>Bucephala clangula</u>
surf scoter	<u>Melanitta perspicillata</u>
red-breasted merganser	<u>Mergus serrator</u>
Harlan's hawk (red-tailed hawk)	<u>Buteo jamaicensis</u>
golden eagle	<u>Aquila chrysaetos</u>
bald eagle	<u>Haliaeetus leucocephalus</u>
northern harrier	<u>Circus cyaneus</u>
osprey	<u>Pandion haliaetus</u>
peregrine falcon	<u>Falco peregrinus</u>
willow ptarmigan	<u>Lagopus lagopus</u>
sandhill crane	<u>Grus canadensis</u>
semipalmated plover	<u>Charadrius semipalmatus</u>
common snipe	<u>Gallinago gallinago</u>
upland sandpiper	<u>Bartramia longicauda</u>

spotted sandpiper
 greater yellowlegs
 peep spp.
 red-necked phalarope
 glaucous gull
 mew gull
 Arctic tern
 great-horned owl
 belted kingfisher
 Say's phoebe
 bank swallow
 gray jay
 common raven
 boreal chickadee
 American robin
 yellow wagtail
 northern shrike
 rusty blackbird
 American tree sparrow
 white-crowned sparrow

Actitis macularia
Tringa melanoleuca
Calidris spp.
Phalaropus lobatus
Larus hyperboreus
Larus canus
Sterna paradisaea
Bubo virginianus
Ceryle alcyon
Sayornis saya
Riparia riparia
Perisoreus canadensis
Corvus corax
Parus hudsonicus
Turdus migratorius
Motacilla flava
Lanius excubitor
Euphagus carolinus
Spizella arborea
Zonotrichia leucophrys

FISH

whitefish spp.
 lake trout
 Arctic char
 chum salmon
 Arctic grayling
 northern pike

Coregoninae
Salvelinus namaycush
Salvelinus alpinus
Oncorhynchus keta
Thymallus arcticus
Esox lucius

INVERTEBRATES

freshwater snail

Gastropoda
