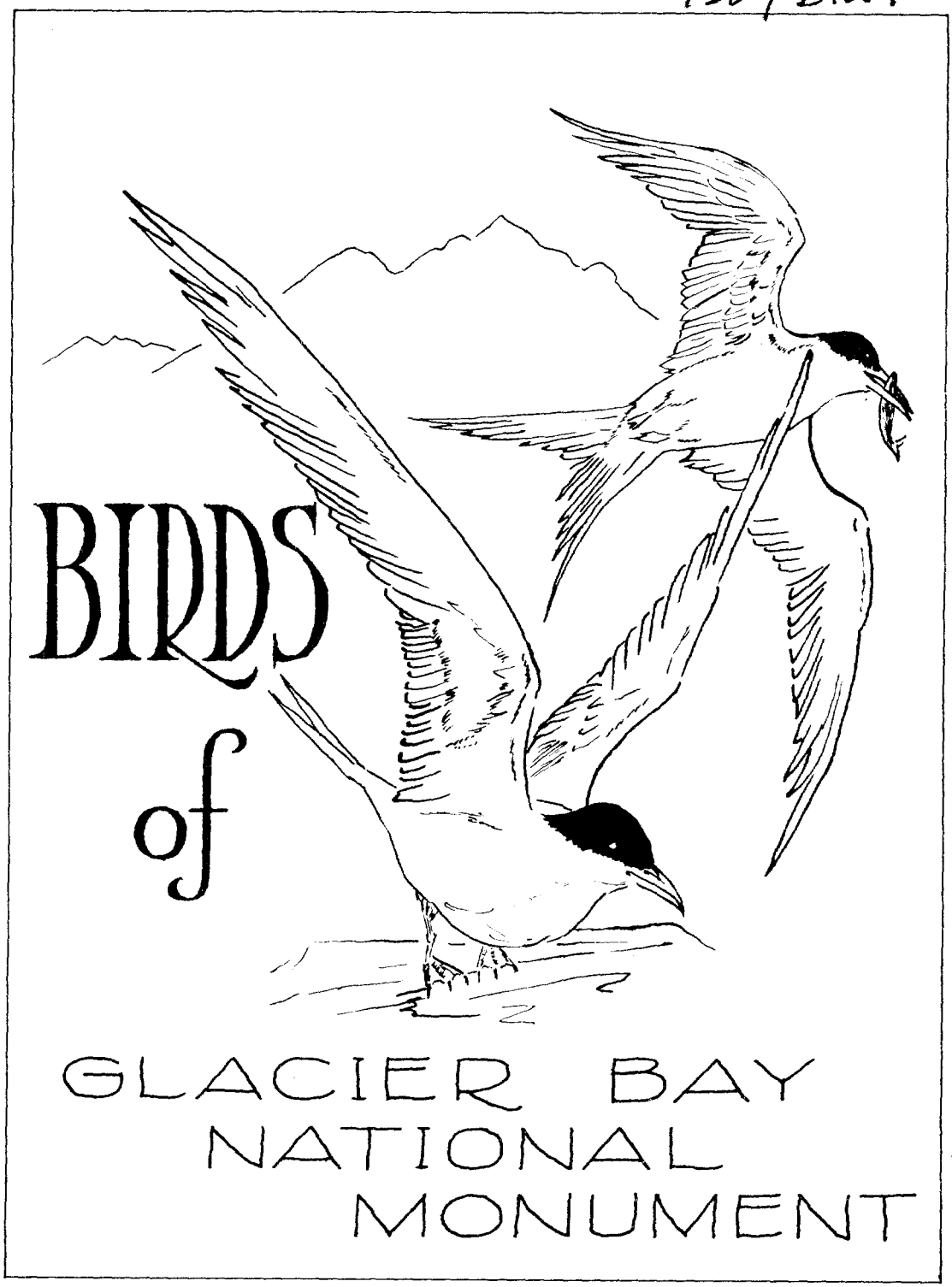

BIRDS OF GLACIER BAY NATIONAL MONUMENT

by

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Seasonal Park Ranger

October, 1967

(Updated by G. Streveler, March, 1968)

U.S. Department of the Interior
National Park Service

CONTENTS

Checklist for Glacier Bay National Monument

(see key at end)

Bird	Breeding			"Abundance"				
	nests	eggs	young	spring	summer	breeding	fall	winter
Common loon	X	X	X	F	F	F	F	F
Yellow-billed loon				U	R		R	U
Arctic loon				C	U		F	U
Red-throated loon	X	X	X	F	F	F	F	U
Red-necked grebe	p			C	U		C	F
Horned grebe	p			F			F	U
Western grebe				U	R		U	U
Black-footed albatross								
Fulmar							R	
Pink-footed shearwater								
Sooty shearwater								
Fork-tailed petrel				R			R	R
Double-crested cormorant				U	U	R*	U	U
Pelagic cormorant	X	X	X	C	U	U*	C	C
Great blue heron	p			F	F	F	F	U
Whistling swan				F			F	
Trumpeter swan				U	R	R*	U	R
Canada goose	?	?	X	C	F	F	C	F
Black brant				U	R		U	
Emperor goose				V			V	V
White-fronted goose				F			F	
Snow goose				U			U	
Mallard	X	X	X	C	C	C	C	C
Gadwall	p			U			U	
Pintail	X	X	X	C	U	U*	C	U
Green-winged teal			X	C	U	U	C	U
Blue-winged teal				U	U	U*	U	
American widgeon	p			F	U		F	U
Canvasback				U			U	
Greater scaup				F	U	R*	F	F
Lesser scaup	X	X	X	C	R		C	R
Common goldeneye	p		?	F	U	U	F	F
Barrow's goldeneye			X	C	U	U	C	C
Bufflehead				F	U	*	F	F
Oldsquaw	p			C	?		C	C

Bird	Breeding			"Abundance"				
	nests	eggs	young	spring	summer	breeding	fall	winter
Harlequin duck	p			F	F	F	F	F
Common eider	X	X	X					R
White-winged scoter	?			C	C	R*	C	C
Surf scoter	?			A	C	R*	A	A
Common scoter				U	U		U	U
Hooded merganser				U	U	U	U	R
Common merganser			X	C	U	U	C	F
Red-breasted merganser			X	F	F	F	F	F
Goshawk				U	U	U	U	U
Sharp-shinned hawk	P			F	U	U	F	U
Red-tailed hawk				U	U	U*	U	U
Swainson's hawk								
Rough-legged hawk	X		X	U			U	
Golden eagle	p			R	R		R	U
Bald eagle	X	X	X	C	C	C	C	C
Marsh hawk				F			F	
Osprey				U	U	U	U	
Peregrine falcon	p			U	U	U*	U	
Pigeon hawk				U	R	R*	U	
Sparrow hawk				F		*	F	V
Blue grouse			X	C	C	C	C	C
Willow ptarmigan			X	U	U	U	U	U
Rock ptarmigan			X	C	C	C	C	C
White-tailed ptarmigan	P			U	U	U	U	U
Sandhill crane				U	R	R*	U	
American coot				R			R	
Black oystercatcher	X	X	X	U	U	U	U	R
Semipalmated plover	X	X	X	F	F	F	F	
Killdeer			X	F	U	U	F	V
American golden plover				U			U	
Black-bellied plover				U			U	
Surfbird				U	R		U	R
Ruddy turnstone				U			U	
Black turnstone				F			F	F
Common snipe	p			F	F	F	F	U
Whimbrel				U			U	
Spotted sandpiper	X	X	X	C	C	C	C	
Wandering tattler	?			R			R	
Greater yellowlegs	X			C	F	F	C	
Lesser yellowlegs			X	F	R	R*	F	
Rock sandpiper				C			C	C
Pectoral sandpiper	p			F	R	R*	F	
Baird's sandpiper				U			U	
Least sandpiper	X	X	X	C	U	U	C	
Rufous-necked sandpiper								

Bird	Breeding			"Abundance"				
	nests	eggs	young	spring	summer	breeding	fall	winter
Dunlin				C			C	F
Short-billed dowitcher				F			F	
Long-billed dowitcher				U			U	
Semipalmated sandpiper				U			U	
Western sandpiper	?			C	R	*	C	
Sanderling				U			U	
Northern phalarope	?			C			C	R
Pomarine jaeger								
Parasitic jaeger	X	X	X	U	R		U	
Long-tailed jaeger								
Glaucous-winged gull	X	X	X	A	C	C	A	A
Thayer's gull				C			C	U
Herring gull	X	X	X	C	F	R*	C	F
Mew gull	X	X	X	C	C	U*	C	C
Bonaparte's gull	p			C	F	R*	C	
Black-legged kittiwake	X	X	X	U	R		U	U
Sabine's gull				R			R	
Arctic tern	X	X	X	F	F	F	F	
Common murre	X	X	X	C	F		C	C
Pigeon guillemot	X	X	X	C	C	C	C	C
Marbled murrelet	P			C	C	C*	C	U
Kittlitz's murrelet	P			U	U	U*	U	U
Ancient murrelet				U	U	U*	U	U
Cassin's auklet				R			R	U
Rhinoceros auklet				U	U	U*	U	
Horned puffin	X	X	X					
Tufted puffin	X	X	X	R			R	R
Mourning dove				U	R	R*	U	
Great horned owl	p			F	F	F	F	F
Snowy owl								U
Hawk owl				U			U	U
Pygmy owl				U	U	U	U	R
short-eared owl			X	F	V	V	F	R
Common nighthawk					R	R*	U	
Vaux's swift				U	U	U	U	
Rufous hummingbird			X	C	C	C	C	
Belted kingfisher			X	F	F	F	F	F
Red-breasted sapsucker				U	U	U	U	
Hairy woodpecker				U	U	U	U	U
Downy woodpecker				U	U	U	U	U
Northern three-toed woodpecker			X	U	U	U	U	U
Say's phoebe	p			R			R	
Western flycatcher	X	X		C	C	C	C	
Olive-sided flycatcher				U			U	
Violet-green swallow	p			F	U	U*	F	

Bird	Breeding			"Abundance"				
	nests	eggs	young	spring	summer	breeding	fall	winter
Tree swallow	p			C	C	C	C	
Bank swallow	X		X	U			U	
Barn swallow	X	X	X	C	C	C	C	
Steller's jay	p			F	F	F	F	F
Black-billed magpie				U	?	*	F	U
Raven			X	C	C	C	C	C
Northwestern crow	X	X	X	C	C	C	C	C
Chestnut-backed chickadee	P			C	C	C	C	C
Red-breasted nuthatch	p			U	U	U	U	
Brown creeper	p			U	U	U	U	
Dipper	P			F	F	F	F	F
Winter wren	p			C	C	C	C	C
Robin	X	X	X	C	C	C	C	U
Varied thrush	X		X	C	C	C	C	R
Hermit thrush	X	X	X	C	C	C	C	
Swainson's thrush	P			F	F	F	F	
Gray-cheeked thrush	X	X		R	R	R*	R	
Mountain bluebird				R			R	
Golden-crowned kinglet	p			F	F	F	F	U
Ruby-crowned kinglet	P			C	C	C	C	
Water pipit	X	X	X	C	F	F	C	
Northern shrike				F			F	F
Orange-crowned warbler	X	X	X	F	F	F	F	
Yellow warbler	X	X	X	F	F	F	F	
Myrtle warbler			X	C	F	F	C	
Townsend's warbler	p			C	C	C	C	
MacGillivray's warbler	p			R	?		R	
Yellowthroat				R	R	R	R	
Wilson's warbler	X	X	X	C	C	C	C	
American redstart				R			R	
Red-winged blackbird				R	R	R*	R	
Rusty blackbird				F	R	R*	F	R
Brown-headed cowbird				R	R	R*	R	
Pine grosbeak			X	F	U	U	F	F
Gray-crowned rosy finch			X	F	F	F*	U	U
Common redpoll	X		X	C	U	U*	C	C
Pine siskin			X	C	C	C	C	C
Red crossbill	p			F	F	F	F	F
White-winged crossbill	p			U	U	U	U	U
Savannah sparrow	X	X	X	C	F	F	C	
Oregon junco			X	C	C	C	C	C
Tree sparrow				F			F	U
Golden-crowned sparrow	X	X	X	C	C	C	C	
Fox sparrow	X	X	X	F	F	F	F	
Lincoln's sparrow			X	C	C	C	C	

Birds	Breeding			"Abundance"				
	nests	eggs	young	spring	summer	breeding	fall	winter
Song sparrow			X	C	C	C	C	U
Lapland longspur				F			F	
Snow bunting	X	X	X	F	U	U	U	U
Hypothetical								
Spruce grouse				R	R	R	R	R
Warbling vireo				R	R	R*	R	

Key

Breeding: These columns summarize information from Glacier Bay National Monument, as detailed in the text. A "P" indicates that breeding is probable, and a "p" means that breeding is possible.

Abundance: This section is taken from "Birds of Southeast Alaska", and covers the area (roughly) southern Glacier Bay - Skagway - Wrangell, excluding the outer coast. More work in the Glacier Bay area is needed before a meaningful abundance chart for the monument itself can be constructed; meanwhile, the southeast Alaska listings are most helpful. The symbols are as follows:

A	abundant	C	common
F	fairly common	U	uncommon
R	rare	V	very rare
*	actual breeding not certain		

The legend with the original chart states that "despite this detail, many status symbols are arbitrary. Although this list suggests a general abundance of birds, one frequently has the impression, at all seasons, that birds are few and far between. Birds seem to be more local here, and more irregular in occurrence. A bird listed here as fairly common, e.g., may occur in numbers in one cove, and be found nowhere else for many miles. It may be everywhere one spring, and rarely seen the next.

"Abundance is stated with respect to the size of a bird, its usual territory size, and the extent of its preferred habitat. The bald eagle and the barn swallow, e.g., are both listed as common, even though the latter occurs in much greater numbers."

PREFACE

This is the third checklist of birds of Glacier Bay to be written by National Park Service personnel. The first, compiled by Bruce W. Black in 1954, is now completely unavailable. The second, compiled by Francis H. Jacot in 1962, is also out of print, although a very few reference copies do exist.

Since Jacot gathered his data, much new information has become available, largely through the careful study carried out in the summer of 1965 by Dr. Milton B. Trautman of Ohio State University, and through the observations of headquarters personnel and the first field rangers to spend the entire summer in the upper bay, in 1967. Chiefly as a result of these efforts the list of species known to occur in the monument has risen from 110 to 173, and the number of known nesters from 34 to 63. Thus a revision of the monument checklist would not seem to be premature.

At the same time, however, a very great deal remains to be learned about the birds of this, the largest area under National Park Service administration. Most of the observations to date have been made in Glacier Bay proper, and in the summertime. This leaves a vast hinterland, including the outside coast, virtually unexplored, and leaves many blanks which can only be filled through careful winter observations. "Birds of Southeast Alaska" (see bibliography) lists some 227 species, and it is certain that the difference between these two lists will be narrowed in time.

In all, it would be entirely appropriate to quote from the preface of Jacot's checklist: "Needless to say, unlimited work remains to be accomplished in the ornithology of this vast Alaskan wilderness area. May future employees of Glacier Bay National Monument find this paper a steppingstone towards compiling a more complete knowledge of the abundant and varied bird life to be found here."

About the Report

The aim of this checklist is to record all species which have been reliably reported within the monument, along with information on nesting, distribution in time and space, and at least some idea of abundances. In the case of certain sparsely reported species, every available record has been included. With the more common birds, however, it has seemed better to sketch a broader picture rather than slavishly list dozens of records.

It should be noted at the outset that many of the records available to us are based on sightings. In spite of the element of doubt thus introduced, the inescapable argument justifying the use of sight records is simply that in many instances they're all we have. The expeditions and such ornithologists as Bailey, Jewett and Trautman, on the other hand, based much of their work on collecting specimens which were then carefully identified. Every effort has been made to include all of the expedition material in the text of the current report.

For the purpose of this report the small area of private and state land around Gustavus is considered part of the study area, because: it is bounded on three sides by the monument and on the fourth by salt water; its boundaries are arbitrary; it is permanently inhabited and furnished with a road, with the result that many of our observations have been made in the area; and its road provides most of our access to, and thus information from, the lodgepole pine habitat as well as the pasturelands of Gustavus (which are not without their own interest, especially during migration). To exclude these observations on the technicality that the Gustavus exclusion is not within the boundaries of the monument would be to deprive the reader of much of interest that attaches to the bird life in and around Glacier Bay.

The format of this report has been expanded to include a statement about the migratory patterns of each bird, in order to indicate the season(s) during which the species may occur in southeastern Alaska, and thus possibly in Glacier Bay. For the most part, this information has been drawn without footnote from Gabrielson's "Birds of Alaska", to which the reader is referred for a more complete discussion. In some instances these descriptions have been modified to reflect local knowledge as supplied by Mr. Rich Gordon.

This report is aimed at two readers. The first is the monument visitor who knows his birds to some degree and is interested in a checklist which will allow him to narrow the possibilities in identifying the bird he has seen, and then provide a brief discussion of its status in Glacier Bay. The second is the more serious student who is also interested in more of the details such as precise dates and literature references, breeding records, numbers of individuals and so forth.

The result is a compromise, and only time will tell how successful the balance will be. Footnotes have been omitted in the interest of easier reading, but in such a way that the bibliography can be used as a guide to the original references, so that nothing is lost. Recurring dates, such as 1920 and 1967, have also been omitted in cases where no ambiguity could arise; the information they would have conveyed has been compressed into the following table:

Observers Who Contributed During a Single Year

Observer	Year	Occupation
Bailey	1920	Ornithologist
Black	ca. 1954-5	Park Ranger
Cahalane	1954	Biologist
Casey	1966	Seasonal Ranger-Naturalist
Corson	1966	Visitor to monument
Cebula	1963	Seasonal Park Ranger
Crawford	1967	Seasonal Forestry Aid
Dixon	1932 (and other?)	Biologist

Engels	1967	Seasonal Maintenanceman
Grinnell	1907	Ornithologist (with Alexander expedition)
Hok (& wife)	1967	Seasonal Park Ranger
Hoy	1959	Park Ranger
Mrs. Janda	1967	Wife of Park Ranger
Jewett	1941	Ornithologist
Martin	1967	Seasonal Park Ranger
Moore	1967	Seasonal Ranger-Naturalist
Neeley	1960	Mechanic, NPS
Rose	1968	Mechanic, FAA
Trautman	1965	Ornithologist
Welch	1962	Biologist
Wik (& wife)	1967	Seasonal Park Ranger

As a final note, mention is made of the individuals whose names appear in the report, but not in the above table or in the bibliography: Butts - Park Ranger; Howe - Superintendent, Sitka & Glacier Bay National Monuments; Janda - Park Ranger; Streveler - Park Ranger.

ACKNOWLEDGEMENTS

It is to Mr. Francis H. Jacot, whose 1962 checklist marked the way and showed what could be done, that I am most indebted. Mr. Jacot compiled many records out of literature which was unavailable to me, owing to the isolation of our field camps; be it known that these passages have been freely adapted to the present work without further footnote.

If Jacot's work provided the foundation, then Dr. Milton B. Trautman's 1965 study of the birds of the Muir Inlet area provided the impulse. Both works listed 110 species, but their overlap was only partial, so that combining the two resulted in a list totailng 149 species -- reason enough to revise the checklist even in the absence of our own summer's observations. Dr. Trautman has also kindly provided me with unpublished details on his nest findings, which form an invaluable addition to the report.

Special thanks are due to Mr. Rich Gordon of Juneau, who contributed a great deal of helpful material and much encouragement; to the librarians of the Alaska State Library, who provided the printed accounts of some of the early observers who worked in Glacier Bay; to the many National Park Service employees who filed their personal observations over the years, providing thereby more raw material for this study; to Mr. Charles Janda, who drew the map; to Mrs. Carol Janda, who drew the cover picture; and to Mrs. Manya Wik, who typed the manuscript.

NOTABLE BIRDING LOCALITIES

Certain areas are mentioned again and again in the report, and for the interest of those who would wish to know where in the monument to go in order to see birds, the following summary of some of the more interesting bird areas is offered:

(1) Gustavus Flats. This area was excluded from the monument in 1955 because it was thought to have considerable agricultural potential. The cleared fields offer a stopping place for migrating geese and cranes, among others, and on the mud flats around the mouth of the Salmon River interesting shorebirds are sometime seen, especially during migration, including whimbrels, dowitchers and sanderlings.

(2) Bartlett Cove. This is monument headquarters, and a high proportion of the observations listed in this report were made from the compound in the course of normal duties. The ranger office fronts on a small tidal lagoon that is good for waterfowl, and the spruce forest marches right down to the buildings. One day this writer looked out from the office window and saw a brown creeper, a chestnut-backed chickadee and a golden-crowned kinglet in the same nearby tree at the same time.

(3) Bartlett River. A mile's hike from headquarters along a tidal channel brings one to this good area for water birds.

(4) Beardslee Islands. With a small boat these many small islands and protected waterways near Bartlett Cove can be explored, and many waterfowl can be observed.

(5) Sitakaday Narrows. Here almost the entire tidal flow of Glacier Bay is compressed both laterally and vertically in order to pass through a break in the morainal deposits stretching across the bay from the Beardslee Islands to Rush Point. The resulting turbulence, which is especially spectacular during periods of extreme tides, brings marine life close to the surface, where it furnishes food for gulls, puffins, murres, murrelets, phalaropes and others. Jaegers and, occasionally, peregrine falcons are in turn drawn by the notable concentration of birds.

(6) Marble Islands. These isolated, wind-swept outcroppings of limestone five miles from any shore provide a have for sea birds, notably glaucous-winged gulls, tufted and horned puffins, pelagic cormorants and pigeon guillemots. Plant life on the islands ranges from tall ryegrass through alder thickets to spruce groves, all within an extremely limited area, with the result that there are probably more habitats crowded into one place than anywhere else in the bay proper. Land birds found here include the bald eagel, crow, barn swallow, song sparrow, Wilson's warbler and ruby-crowned kinglet.

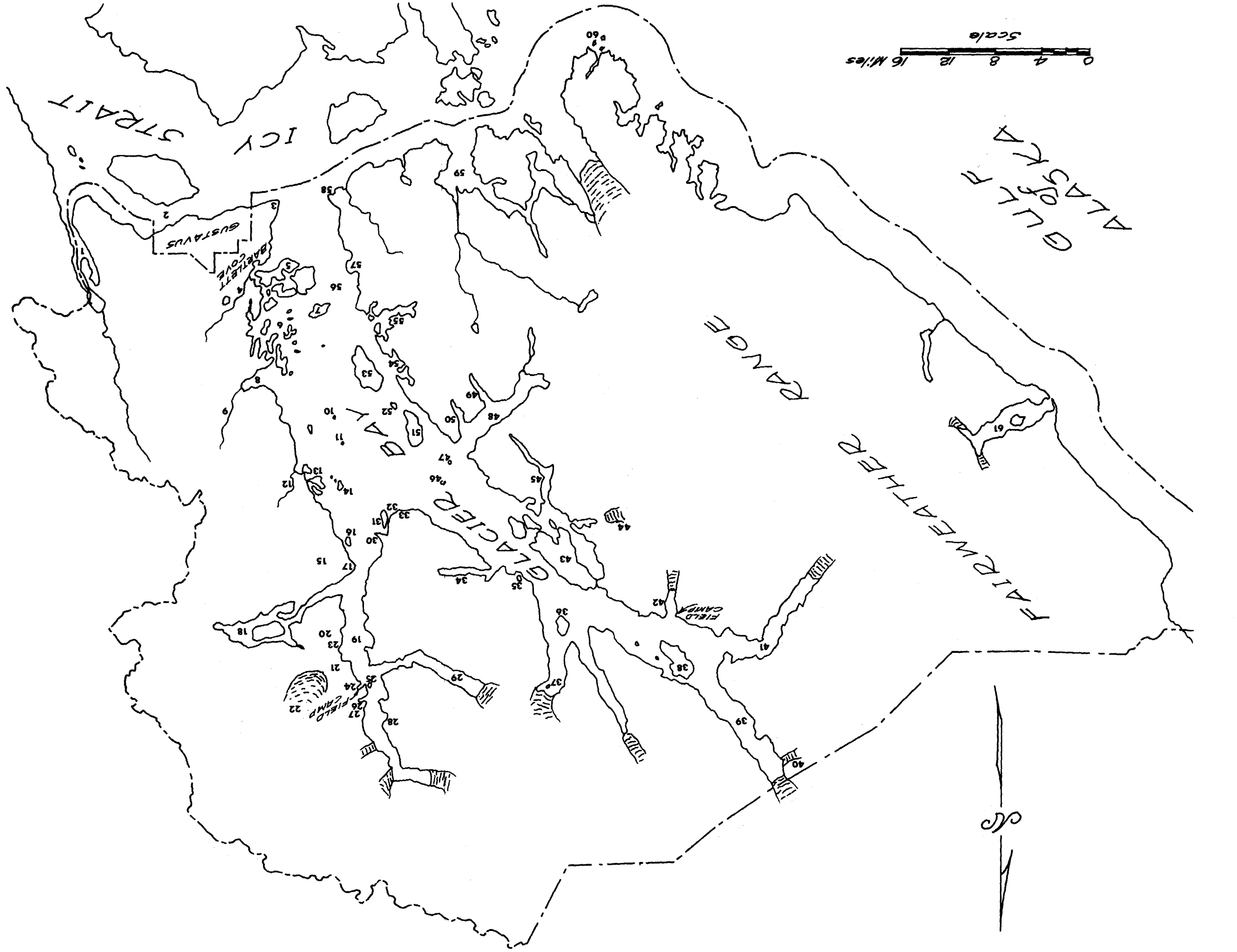
(7) Lone Island. As the name implies, this is a small islet at least five miles from the nearest shore. Glaucous-winged gulls nest in the tall grasses, song sparrows in the limited willow cover, oystercatchers on gravel patches, guillemots in crevices, and tufted puffins in burrows. Wide rock ledges covered with

rockweed provide forage for a non-breeding population of surfbirds, turnstones and dunlins.

(8) Geikie Rock. Smaller still and chiefly of interest for its turnstones and surfbirds.

(9) Reid Inlet. This was one of the 1967 summer field camps, where many hours not otherwise occupied were spent in birding. Perhaps an equivalent amount of study would have turned up an equal amount of information if devoted to another nearby inlet; if so, it is a testimony to the richness of the bird life in this barren section of the monument, for at Reid Inlet some twelve nesting species were found, the young of two others observed, and three others were definitely suspected of nesting.

(10) Goose Cove. Little nesting information was gathered at this, the other field camp, but many of the more interesting sightings were gathered here, including two, the red-winged blackbird and the mountain bluebird, that are new to Glacier Bay records.


GULF OF ALASKA
FAIRWEATHER RANGE
ICY STRAIT
GLACIER
BAY
BARTLETT COVE
GUSTAVUS
FIELD CAMP
FIELD CAMP
Scale
0 4 8 12 16 Miles

ALPHABETICAL LIST OF LOCALITIES

NUMERICAL LIST OF LOCALITIES

INTRODUCTION

Glacier Bay National Monument was established to preserve for future generations the spectacle of great glaciers descending from high mountain peaks and calving icebergs into salt water. But just as Katmai National Monument is more than the Valley of Ten Thousand Smokes, and as McKinley National Park is much more than the great mountain itself, so is Glacier Bay very much more than tide-water glaciers.

From the point of view of a bird report it is sufficient to note that not only are there many glaciers in the monument, but that many of them are in active retreat. The significance of this to birding is that the newly-exposed land at the glacier snout goes through a succession of vegetative types as time passes, from barren gravels with a few hardy poineer plants to the magnificent spruce - hemlock forests for which southeast Alaska is so well known. Since different habitats host different bird associations, a fascinating variety of birds is to be found in a rather limited horizontal distance as one moves from the forested areas toward the glaciers or vice versa. A further effect is that the presence near the glaciers of cold, windy, open habitats resembling alpine environments brings certain species usually found in the mountains within easy view at tide-water. Likewise, certain species can be found near the glaciers whose normal range is farther north.

Let us imagine a trip from Gustavus to Bartlett Cove, and thence by boat to upper Muir Inlet. Leaving the airstrip, we drive first through the pleasant fields of the Gustavus flats. It is migration, and we notice a flock of Canada geese at the far end of one of the cleared fields, and standing among them a pair of sandhill cranes. Nearer at hand there are many savannah sparrows, and we distinctly hear the call of a killdeer.

We pass over the Salmon River bridge, noticing a small group of common mergansers on a log and a flock of shorebirds along the banks, and enter the lodgepole pine forest which stretches from here almost to Bartlett Cove. In this woodland we catch a glimpse of a myrtle warbler, and near one of the many bogs a pair of yellowlegs sits atop a small pine scolding our passing car. Near the monument boundary a green-winged teal starts up from the ditch, and we hear a Wilson's snipe winnowing overhead.

We cross the line into the monument, and proceed through this lodgepole forest almost to Bartlett Cove, where all at once the road crosses a slight mound marking a glacial moraine, and abruptly we find ourselves in a completely different habitat. We have entered the dark, damp spruce - hemlock forest, and now the trees are twice or three times as tall, and the forest floor is deeply carpeted in soft mosses. A varied thrush starts up from the roadside, and we make out the sounds of small birds flitting about the forest canopy, tiny specks of black against the grey light diffusing down through moss-laden branches. The The road winds along between two moss-covered moraines, looming

like great, green frozen waves, and descends to tidewater. At the shore the forest yields first to a margin of alder shrub, where we notice the Oregon junco, hermit thrush and Wilson's warbler, and then to a savannah-like zone of beach ryegrass and fireweed, home of abundant savannah sparrows.

Our boat is waiting, and we set out at onee for the upper bay, rounding the Beardslee Islands and then hugging the east shore. The forest holds its own until Beartrack Cove, where the flat ground pinches out against the mountains. By the time we reach the flats at Muir Point, the spruces stand isolated in alder - willow - poplar thickets. Beyond Adams Inlet and the Klotz Hills we see few spruces among the dense stands of alder. Here and in the boggy areas in between we find hermit and gray-cheeked thrushes, fox and Lincoln's sparrows, and orange-crowned, yellow and Wilson's warblers.

Closer still to the glaciers, alder thickets gradually open out, finally yielding to low mats of mountain avens, with some shrub along drainage channels where soil has begun to accumulate. Here we find such nesting species as savannah sparrows and least sandpipers.

In the final, barren zone near the glacier snout we find rock ptarmigan, snow buntings and rosy finches. (This sketch is adapted from the work of Dr. Milton B. Trautman, IPS Report #20, pp. 122-128).

Back at the shore we note black oystercatchers, semipalmated plovers, spotted sandpipers and water pipits. Down-bay, in the open water, there are flocks of phalaropes, murrelets and scoters. Swinging past the Marble Islands we see puffins, guillemots, cormorants and gulls. Returning through the channels in the Beardslee Islands on the high tide and entering Bartlett Cove, our passage stirs up flocks of Bonaparte's gulls, brant, scaup and mallards; and tying up in the lagoon we notice a belted kingfisher sitting on a post, and a great blue heron fishing in the shallows.

Thus we have passed from dense forest to barren glacial outwash, from mud flat to sea cliff and back, in a matter of hours; and we have seen a wide variety of birds en route -- a remarkable day of birding in the remarkable wilderness that is Glacier Bay.

BIRDS OF GLACIER BAY

ORDER GAVIIFORMES
Loons

COMMON LOON (*Gavia immer*)

The common loon is found in southeast Alaska throughout the year. It has been reported by National Park Service personnel for all months except February, March and April; the absence of records for these months may reflect the relative lack of observation in monument waters rather than an actual absence of birds.

Daily observations were recorded by Bailey in June. Jewett reported seeing two at Sandy Cove on July 15 and another pair at Beartrack Cove on the 16th. Trautman lists the species ten times between June 17 and July 28, with as many as eight seen on a single day (July 27). Butts saw an individual along the north shore of Icy Strait between Point Carolus and Dundas Bay on May 5, 1964.

This writer's records list the common loon 26 times between July 1 and Sept. 11, from Lester Island on the south to Goose Cove in the north and Reid Inlet in the northwest.

The first breeding record was established by the Alexander Expedition (1907) with the finding of a nest and two eggs near "Coppermine" Cove, north of Rush Point. Trautman found a nest with a quarter-grown young on the large island in the middle of Adams Inlet on July 24. This writer saw a pair of adults with two nearly-grown young in the same place on August 7.

YELLOW-BILLED LOON (*Gavia adamsi*)

This largest loon winters in southeastern Alaska but breeds in the Arctic, and is thus absent from Glacier Bay during the summer months.

Gabrielson states that wintering birds are "most frequent" in Icy Strait and other waters of southeast Alaska, and gives an early arrival of September 30 and a late departure of June 17 for the region. He also gives a June 20 migration record for Lituya Bay. Bailey collected an adult and an immature, and saw three others, in Icy Strait on June 11-12. He also saw 13 in Icy Strait and Glacier Bay on October 10, and seven in Icy Strait on the return trip, October 15. Streveler saw one in summer plumage near Point Carolus and a pair in winter plumage in Dundas Bay, October 12, 1967; he observed an individual regularly in Bartlett Cove during mid-winter, 1967-68.

This writer and Gordon saw two in Johns Hopkins Inlet on May 25. Gordon reported two more the same day in the upper bay. Howe and Gordon saw one on July 2, 1967, in Tarr Inlet, which is especially interesting since the latest reported departure for the species from southeast Alaska is June 17, and the breeding area is so far to the north. Gabrielson lists a specimen collected at Dixon Harbor on the outside coast on August 17, 1911, which "may have been either a very early migrant or a bird that had remained south throughout the summer. This occasionally happens with many northern nesting species, the individuals concerned often being sick or injured birds."

ARCTIC LOON (Gavia arctica)

Like its yellow-billed cousin, the arctic loon is regularly resident in southeastern Alaska during the winter and moves north during the breeding season.

Our only fall records are those of Cahalane, who reported two groups of four to six near North Sandy Cove on September 28, and Gordon, who saw an individual at Bartlett Cove on October 16, 1967. Jacot listed approximately 50 wintering individuals between Bartlett Cove and Lemesurier Island for November 30 and four near Pleasant Island on December 23 and 24, all 1958.

Spring records are more numerous. Gordon reported between five and 30 for May 25-27, 1967. Streveler reported 25 in a raft at the mouth of Adams Inlet for June 5, 1967. Trautman listed individuals for June 12 and 14, and 25 on the 17th.

Thus the latest recorded spring departure for Glacier Bay is June 17 and the earliest arrival is September 28.

RED-THROATED LOON (Gavia stellata)

Most individuals of this species winter farther south and breed farther north, but both wintering and breeding birds are found in southeast Alaska.

This beautiful bird is a conspicuous nester on the ponds dotting the glacial outwashes in the upper section of the monument. The Alexander Expedition found a nest on an island in the east side of the bay on July 16, 1907, and Trautman found a dozen nests in Adams Inlet - six below the Casement Glacier, one on Sealer's Island and five around Goose Creek - between June 14 and July 28. This writer observed an adult and a chick in a pond on the saddle between Goose and Nunatak Coves on July 21, and another adult and chick on a pond near the Hugh Miller Glacier on August 15 (the only breeding record so far for the west arm of the bay).

The earliest arrival so far recorded for the monument is Gordon's listing for May 26-28, 1967, during which period he saw all four species of loon. The bird is commonly seen during the

summer months; Trautman listed it 32 times in 51 days, with a high of 40 seen on one day (July 24), and this writer listed it 26 times during the season. The largest concentration of birds in Glacier Bay proper seems to be found in the Muir Inlet area between Adams Inlet and Nunatak Cove, although it has been reported from Bartlett Cove and Berg Bay on the south to Gilbert Island on the northwest.

A small population spent the summer on the saddle between Nunatak Cove and Goose Cove, where one of the field camps was located. On June 22 three birds were found on one of the ponds which dot this sparsely-vegetated flat, engaged perhaps in courtship antics. One or another would patter across the water as if to take off, then at the last minute set back down, perhaps diving immediately, the while setting up a loud series of loon noises.

For fall records we have Gordon's listing of about 24 in the Beardslee Islands on September 17, 1967; Cahalane's of "several" near North Sandy Cove for September 28; Bailey's of "a few" during the period October 12-14; and Streveler and Gordon's sighting of 24 on November 4 and 5, 1967, between Bartlett Cove and Beartrack Cove, inclusive.

ORDER PODICIPEDIFORMES
Grebes

RED-NECKED GREBE (Podiceps grisegena)

According to Gabrielson, "these grebes are most abundant in southeastern Alaska during May, September and October when the individuals that spend the winter farther south are moving through this area." Breeding takes place farther north, but "it is also present as a possible breeding bird at least occasionally in the southeastern district where individuals were seen flying in Glacier Bay on June 16 (Grinnell 1909)."

During the 1967 field season Hok reported seeing five of this species in Hugh Miller Inlet on July 9, a striking confirmation of Grinnell's record. This writer saw one in breeding plumage in South Sandy Cove on August 6; a group of nine in mixed plumages in Hugh Miller Inlet on August 14; one in winter dress at the Wood Lake outlet in Geikie Inlet on August 18; 17 at Sebree Cove on August 29; five in Wachusett Inlet on August 30; one at Goose Cove on September 3; and one on September 24 at the mouth of the Salmon River. Streveler and Gordon saw ten in the Beardslee Islands on September 16, two at Bartlett Cove on October 15, and eight between Bartlett Cove and Beartrack Cove, inclusive, on November 4, 1967. Streveler reported 14 at Dundas Bay on October 12, 1967.

HORNED GREBE (Podiceps auritus)

This regular winter resident of southeastern Alaska ordinarily breeds farther north and east, but according to Gabrielson, "there are two summer records for Glacier Bay which may indicate at least occasional nesting. One was seen there by R.H.Beck on July 14, 1907, and birds were noted almost daily by Bailey between June 11 and 26, 1920." The 1907 record was a male in breeding plumage secured by the Alexander Expedition in the Beardslee Islands.

Butts recorded spring sightings of twelve in South Sandy Cove on May 8, 1962, and of six in Dundas Bay on May 5, 1964. As for fall records, Gordon and Streveler saw four in the Beardslee Islands on September 16 and four at Bartlett Cove on October 15, 1967. Janda saw two near Strawberry Island on September 22, 1966; Cahalane found them "common" between Wolf Creek and Beartrack Cove on September 29; and Butts recorded two for Bartlett Cove on October 6, 1960. Streveler reported eleven for October 12, three for the 13th for Dundas Bay, and an individual for the 22nd at Gustavus. He notes them as common at Bartlett Cove through February, 1968.

WESTERN GREBE (Aechmophorus occidentalis)

The "swan grebe", largest of American grebes, is found along the Pacific Coast in the winter, sometimes in large flocks. It is a winter visitor to southeastern Alaska, which is at the northern limit of its range.

Casey reported seeing a pair in Beartrack Cove on July 25, and Janda watched an individual at length from the south tip of Willoughby Island on September 19, 1967. On this occasion the bird was close enough that such features as its yellow bill were clearly made out.

ORDER PROCELLARIIFORMES
Tubenoses

BLACK-FOOTED ALBATROSS (Diomedea nigripes)

The "goony bird," famous ship-follower, is found in Alaskan waters mainly from May 'til October. It is an offshore bird which occasionally makes its way a few miles into Icy Strait.

Jewett made one observation of this species several miles off Cape Spencer in mid-July.

FULMAR (Fulmarus glacialis)

Another ship-following bird of the open ocean, the fulmar may

be expected in the offshore waters of southeastern Alaska throughout the year. Gabrielson states that "a few followed the boat into the entrance to Icy Strait on October 3, 1941, and two were noted outside of Cape Spencer on June 8, 1946."

PINK-FOOTED SHEARWATER (Puffinus creatopus)

This wanderer appears offshore along the North Pacific coast in spring, summer and fall. Gordon contributes the information that Bjarne Wallen of Petersburg, Alaska, who as a fisherman got to know this species quite well on the open sea, was astonished to find a flock in Glacier Bay in June a few years ago. Gordon found his description "superb," including that of the call, and has no doubt whatever that the sighting is authentic.

SOOTY SHEARWATER (Puffinus griseus)

This bird of the open sea breeds in the far reaches of the southern hemisphere but ranges the Pacific Ocean widely, appearing along a considerable stretch of the Alaskan Coast, but particularly that of the southeastern region, usually from June to September.

Gabrielson states that this bird is common in some years in Icy Strait and Glacier Bay during July and August. About 100 were observed by Jewett off Cape Spencer on July 16, and twice that many the next day. Seven were collected from a flock of about 25 in Icy Strait at the mouth of Glacier Bay on August 9 by Bailey.

FORK-TAILED PETREL (Oceanodroma furcata)

This bird of the open sea breeds in the Alexander Archipelago of southeastern Alaska, among other places. It flies largely by night, and so is rarely reported; but Gabrielson states that "on June 8th, 1946, off Cape Spencer, hundreds of (fork-tailed) petrels played ahead of the boat like swallows." Jewett reported seeing four which were flying low between Cape Spencer and Dixon Harbor on July 16. Bailey reported seeing one at Glacier Bay on October 14.

ORDER PELECANIFORMES
Pelicans and their Allies

DOUBLE-CRESTED CORMORANT (Phalacrocorax auritus)

This largest of Alaskan cormorants breeds elsewhere along the Pacific Coast, both north and south of southeastern Alaska,

and is a fairly common winter visitor to the region.

Jacot saw an individual which stood out among a small group of pelagic cormorants west of the mouth of the Bartlett River on April 23, 1960. Butts made ten observations in 1960-61; of these sightings, one took place in September, four in October, one in December, one in March, two in June and one in July. All sightings were in the vicinity of the Beardslee Islands and Bartlett Cove, with the exception of the March record, which was for Russell Island. The summer sightings were: one at Bartlett Cove on June 10; two in Hutchins Bay June 20; and two in the Beardslee Islands on July 1, 1961.

This writer saw one in flight at South Sandy Cove on June 7. In spite of close inspection of uncounted hundreds of cormorants during the rest of the season, no others of this species were seen. Later, on October 12, Streveler and Janda saw an individual at Dundas Bay.

PELAGIC CORMORANT (Phalacrocorax pelagicus)

This is the common cormorant of Glacier Bay. It is the only cormorant known to nest in southeast Alaska, and is largely resident in the breeding grounds during the winter.

Records for this common resident are too numerous to summarize neatly, except to say that they have been recorded for practically every month from near Muir Glacier and Tarr Inlet to Icy Strait. There are reports of a colony in Lituya Bay; Butts saw 20 there on August 29, 1962. Streveler reported twelve from Dundas Bay for October 12, 1967.

A breeding colony of at least 100 birds was reported on South Marble Island in 1907 by the Alexander Expedition, which also noted 150-200 non-breeders merely roosting at the same place. Trautman found a nest containing two eggs and a single young on Sealer's Island on July 3.

During the 1967 field season this writer recorded three other breeding areas for this cormorant. On June 20 the first nests were discovered (without eggs) on North Marble Island. Not less than 125 birds came wheeling off the cliffs with a great rush of wings; circled overhead, blackening the sky; and then landed on the water at some distance, clustering so densely as to resemble a flock of scoters. One easily distinguished nest which was empty on this occasion was rechecked on July 1 and found to contain three eggs. On July 22 there were two chicks and one egg.

A mainland colony was visited along the west wall of Tarr Inlet on July 23. One bird was observed on a nest, but the largest concentration of birds was located in vertical slashes in the rock very close to the south margin of the Margerie Glacier--too close to permit safe approach by boat due to falling ice.

A small colony was found on the two larger of the trio of islets lying due east of the southeast tip of Russell Island on

July 29. The largest group here consisted of about 20 adults. Nests were seen with half-grown young inside and adults on the rim--rather crowded living conditions.

With more study, additional colonies will probably be discovered. One suspected but unconfirmed site is the east wall of the upper bay near Vivid Lake.

Gabrielson states that the first of this species that he saw in Alaska were "a number of birds strung like a glittering black necklace along a shelf around the top of a small berg in Glacier Bay." This is certainly a regular sight in the monument; a small bunch used to float in and out of Reid Inlet with the tides, perched side by side on icebergs.

ORDER CICONIIFORMES
Herons and their Allies

GREAT BLUE HERON (Ardea herodias)

The only large heron found regularly in Alaska, this bird breeds in the southeastern region and is largely resident in the breeding grounds, although some wandering takes place.

Bailey collected a female with very large ovaries in Glacier Bay on June 16 which was "obviously ready to nest." The Alexander Expedition collected a bird of the year on July 2, 1907.

No breeding records are available for Glacier Bay, but Black reported several nests with up to four young on Lemesurier Island, just south of the mouth of Glacier Bay and outside its boundaries, for June 6-30, 1955.

Analysis of rather complete National Park Service records for the period October 1958 - June 1962 indicates that there is a resident population of herons which may be seen every month of the year. Sightings of this population increase consistently in the winter months, with 20 or more birds in a flock, and decrease during the breeding season, reaching a low during the period May-August. Most of the sightings are for Bartlett Cove, but the species has been reported also from the upper bay, Gustavus, Dundas Bay and Excursion Inlet.

Gabrielson lists no definite breeding evidence anywhere in Alaska, but expected that eventually nests would be found in the tall spruce and hemlocks of the small valleys of the Alaskan Coast. It is likely that nesters will eventually be found in Glacier Bay, where these beautiful birds, persecuted elsewhere as destroyers of fish, can find sanctuary and go through their life cycles unmolested by man.

ORDER ANSERIFORMES
Waterfowl

WHISTLING SWAN (Olor columbianus)

These large, beautiful birds are found in southeastern Alaska

during the migration to and from the breeding grounds farther north.

Jacot listed several spring observations, stating that "considerable numbers were reported from the Gustavus area and one individual observed in the lagoon at Bartlett Cove on or about April 25, 1959. A group of 35 believed to have been this species was also seen in the Bartlett Cove area on April 22, 1960.... Two single observations of swans in Adams Inlet are recorded for May 1, 1960, and July 12, 1959. Black (1954) saw eight on the west side of Sebree Island on May 14."

TRUMPETER SWAN (Olor buccinator)

This largest of North American waterfowl breeds locally and winters in southeast Alaska. National Park Service records compiled by Butts indicate that Fish & Wildlife's Fred Robards reported observing this species in the past while working up Glacier Bay.

Butts lists several sightings of swans for 1961 believed to be this species, without giving evidence to separate the birds from whistling swans. They are repeated here for completeness: He saw three, believed to be this species, at Gustavus on May 4. He also gives four fall sightings: 30 seen at close range on borrow pits next to the Gustavus airfield on October 22; two near the FAA housing complex at Gustavus, feeding in a ditch on November 16; five adults and two young seen at Gustavus, plus two young feeding in the ditch near the residences, November 18; and two in flight up the Bartlett River on November 20. He also lists a single winter observation, that of a pair of unidentified swans swimming in Adams Inlet.

CANADA GOOSE (Branta canadensis)

The Canada goose is found in southeast Alaska throughout the year, and is particularly numerous during migration. According to Jacot, the species has been recorded for the Bartlett Cove-Gustavus area throughout all months of the year, and wintering flocks of up to several hundred are not uncommon in the open flats of Gustavus and the Bartlett River.

There are several breeding records for the monument. Grinnell reported a brood of half-grown young in July. Bailey found breeding Canada geese on the west shore of Glacier Bay during the period June 12-22, and young the size of mallards above the Beardslee Islands. Black reported observing flightless young on August 30 in the Beardslee Islands. Trautman suspected nesting on the basis of July sightings of birds believed to be young, able to fly, in the Adams Inlet area.

We also have several records of molting birds. The most spectacular flocks have been seen in Adams Inlet, where Jacot recorded approximately 1500-2000 during the period July 11-13, 1959, all but three or four flightless. Trautman recorded 1000 birds on June 22,

while working out of a station not far from Adams Inlet. The current writer noted up to 250 flightless birds waddling up dry washes in the same area in early August.

Moore reported that on July 4 the tour boat encountered a group of Canada geese in Wachusett Inlet which refused to fly, finally walking ashore, perhaps suggesting this as another molting ground. The current writer found a group of nine in a small pond near Hugh Miller Glacier on August 15. Eight of these flew off, having by this time regained the power of flight, leaving the flightless ninth to his own fate. The behavior of this bird was most interesting. It lowered its head, touched its chin and the entire length of its neck on the water, and slowly swam towards shore, its silhouette most un-gooselike. Reaching the shore in due time, and without lifting its head or increasing its speed, it stole deliberately into the willows, there to disappear. The same sort of behavior had earlier been noted in Adams Inlet.

Banding of the Adams Inlet flock was carried on yearly from 1956 through 1960 and in 1963 and 1965 by the U.S. Fish & Wildlife Service and the National Park Service. Of the 1182 birds captured in 1959 for banding, 137 wore bands from Adams Inlet programs of previous years, indicating that some birds return to the same place to molt in successive years. Of 67 band returns for birds marked within the monument between 1956-1959, all were from birds taken or found dead in southeast Alaska, with the exception of one from Washington and four from Oregon. The low proportion of outside returns suggests that the Adams Inlet flock is composed largely of resident southeast Alaska birds.

Fred Robards of the U.S. Fish & Wildlife Service reported that sex determination of birds captured in 1958 revealed 137 males and 127 females. He suggests that the flock probably consisted partly of birds too young to breed, and partly of older birds which had attempted to nest (as indicated by brood patches) but failed for one reason or another.

BLACK BRANT (Branta nigricans)

The black brant passes through the monument during migration to and from its northern breeding grounds. Gabrielson suggests that "the paucity of records for southeastern Alaska indicates that the principal line of migration is across the Gulf of Alaska to some point on the coast of British Columbia."

The Harriman Expedition noted a few flying overhead at Muir Inlet in June, 1899. Black reported observing 50 near the west side of Sebree Island on May 14, and made another sighting in Berg Bay on May 16. Butts sighted a flock of 50 in Dundas Bay on May 18, 1964.

Trautman contributed several interesting records for the late spring and summer of 1966. He listed 40 on June 11, 24 on the 12th, five on the 20th, four on the 21st, eleven on July 4th and 5th, and one on July 23 and 24. Several other species whose normal

breeding grounds lie far to the north are sometimes found as non-breeders in the monument in the summertime. These include both scaup, all three scoters, and surfbirds.

During the 1967 field season, this writer noted a flock of five at Reid Inlet on June 8 and 9, and a flock of 22 resting on the water off Caroline Shoal on June 12. Streveler reported six in Johns Hopkins Inlet on June 6 and a flock of ten at Bartlett Cove on June 14 and 15, 1967. Gordon reported two at Bartlett Cove on November 6, 1967.

EMPEROR GOOSE (Philacte canagica)

This goose normally breeds in the Arctic and winters in the Aleutians and on the Alaska Peninsula, but a few stragglers reach as far as northern coastal California. Janda saw an individual in the spring of 1966 amid a flock of Canada geese on the fields of Gustavus. It remained in the area for about a month.

WHITE-FRONTED GOOSE (Anser albifrons)

The white-fronted goose passes through southeast Alaska during migration to and from its Arctic breeding grounds. All available National Park Service records are for spring migrants. Black noted approximately 50 on the west side of Sebree Island on May 14. Butts reported three sightings at Gustavus for May, 1962: 75 on the 5th, one on the 10th, and 25 on the 15th. He lists two sightings for 1964: 75 on April 28, and 50 on May 11.

SNOW GOOSE (Chen hyperborea)

This beautiful goose also passes through southeast Alaska during its migration to and from breeding grounds in the Arctic. Again, all National Park Service records are for spring migrants. Jacot recorded one amid a flock of 50 to 70 Canada geese in a pasture at Gustavus on May 2, 1959. He saw seven among 200 Canada geese at the same place on May 3, 1960. Butts saw nine in flight at Bartlett Cove on May 4, 1961; and 30 on May 5, 1962, eight on May 15, 1962, and 10-15 on May 11, 1964, all at Gustavus. Moore saw two at Wachusett Inlet on June 8.

MALLARD (Anas platyrhynchos)

The mallard is found in southeastern Alaska throughout the year. According to Jacot, "rafts and groups of upwards to 650 birds have been commonly seen during winter months at the mouth of Bartlett River, with smaller numbers recorded for areas about Excursion and Beartrack Rivers." The species has also been reported for

many other portions of the monument.

There are several breeding records. Jacot saw a hen and a brood of eight chicks which were two or three days old in a roadside drainage ditch near the monument boundary on June 14, 1960. The Alexander Expedition noted several broods of young from June 27 to July 20, finding a set of eight eggs which had only just commenced incubation on July 14. Casey reported a female and five young on Blackwater Pond (near Bartlett Cove) on July 15, and a female and six large young on July 7 at Bartlett Cove, where this writer saw a female and seven young in early July the following year. Trautman reported two large young in the Adams Inlet area on July 24, and Bailey saw five young barely able to fly at Berg Bay on August 9.

GADWALL (Anas strepera)

The gadwall is found in southeast Alaska during the breeding season, but records are few. Gabrielson lists wintering records for the Aleutians and Kodiak Island, but not for the southeastern region. For this reason Jacot's listings of wintering birds in Glacier Bay are especially interesting. He listed 40 to 50 on the Excursion River and its delta for December 23 and 24, 1958, and adds "identification positive, even though this is generally believed to be a little west and north of wintering ranges;" and one female seen among a group of mallards and green-winged teal near Alder Creek, Bartlett Cove, on February 18 and 19, 1960.

Spring records listed by Jacot are: 60 at the mouth of the Bartlett River on April 23, 1959; 40-50 at Fingers Bay and five at Johnson Cove (Willoughby Island) on May 5, 1960; and twelve in the Beardslee Islands on May 30, 1959. The Alexander Expedition noted a flock of five "about a small lake on one of the Beardslee Islands" on July 16. Bailey reported seeing a pair at Bartlett Cove on August 9. Welch noted the species in the Muir Inlet area for August 23. This writer identified one at Berg Bay on September 11. Cahalane found them abundant at the mouth of the Dundas River on October 1.

PINTAIL (Anas acuta)

Gabrielson indicates that the pintail may be considered a resident in the southeastern coastal district of Alaska, where it is common during migration, nests in limited numbers, and where a few spend the winter.

Several spring sightings were recorded in 1959 by Jacot, who saw about 200 in the vicinity of the Bartlett River on April 22, 50 in the same place the following day, and one pair in Bartlett Cove on April 27. Trautman listed the species in the Muir Inlet area for eight days during the summer of 1966. Six of the records cluster between June 22 and July 1, and the remaining two are July

24 and 26. Fall sightings by Butts in 1961 were: 50 in the lagoon at Bartlett Cove on August 26, and five in the same place on September 26.

The Alexander Expedition found a half dozen pairs breeding around a small lake on July 16. During the 1967 field season this writer found a nest containing seven eggs at Reid Inlet on June 8 and visited the nest nine other times until June 30, at which time hatching had not occurred. On the last four visits, the eggs were always found covered with down, the female resting on the bay not far off. On the next trip to Reid Inlet on July 22, the female was observed swimming with a single chick only. No unhatched or damaged eggs were found in the nest, indicating a heavy mortality among the hatchlings.

This writer found that the number of sightings of pintails increased strikingly in the fall, coinciding with an influx of mallards, green-winged teal and widgeons noted around Goose Cove and elsewhere. The latest fall record for the monument is October 12, 1967 when Streveler saw eight in Dundas Bay.

GREEN-WINGED TEAL (Anas carolinensis)

Southeast Alaska lies within both the breeding and wintering ranges of the green-winged teal. The species has been reported for Glacier Bay for all months except January. Available records indicate a thinning of the monument's population of green-winged teal during the breeding season and a striking influx in the fall. The 1967 field season started June 7, well after the spring migration, and this writer never recorded this species until August 7, when a single bird was watched on a small pond in the Adams Inlet area. The first flock was seen on August 15 at the Gilbert Island isthmus, and from August 23 to September 24, groups averaging twelve birds were sighted almost daily.

Other observers, however, provide us with summer records and breeding information. Grinnell reported seeing a small flock on July 5 and catching nearly-grown young on July 16. Trautman reported 18 on June 22, five on June 29, one on July 20, 21 and 22, and three on July 28. He suspected breeding on the basis of observing a flapper adult and a young on July 24. Streveler saw three near Strawberry Island on July 22, 1967.

BLUE-WINGED TEAL (Anas discors)

Gabrielson considers this bird an uncommon summer resident in Alaska and lists very few records. Likewise the Glacier Bay records can be summarized quite quickly: Butts saw three near the monument boundary along the Gustavus road on May 5, 1962; Howe saw a pair at Reid Inlet on June 7, 1967; this writer saw individuals at Nunatak Cove on September 8, at Goose Cove on September 9, and in the Bartlett Cove lagoon on September 19; and Cahalane saw four at

Beartrack Cove on September 29 and several on the Bartlett River on the 30th.

AMERICAN WIDGEON (Mareca americana)

The American widgeon winters in southeastern Alaska and moves north during the breeding season. Nesting has been recorded no closer than Yakutat, but there are some summer records for Glacier Bay. Present monument records list the species for the months of March and June through November, with most of the records obtained during the fall migration.

The March observations were made by Butts in 1961 at the Bartlett Cove lagoon. He saw an individual there on the 1st and a lone male on the 5th and 16th.

Trautman, working in Muir Inlet, reported three on June 22 and 29, eleven on July 20, three on July 22, and eight on July 24, of which eight he suspected some were young.

Fall records, as stated, are more numerous. Gabrielson saw more than 75 at Beartrack Cove on September 3, 1944; Cahalane reported some at the Bartlett River mouth on September 30 and found them abundant at the Excursion River mouth on October 3; Bailey saw some at Bartlett Cove on October 10; Streveler reported four in the Bartlett Cove lagoon from October 10-16, and saw five at the mouth of the Salmon River on October 22, 1967; he and Gordon reported 55 from the Beardslee Islands on November 4, 1967.

During the 1967 summer field season this writer saw no widgeons until August 27, when five were sighted in the mouth of the little creek where we drew our water at Goose Cove. From four to eight were seen at this spot until September 13, which was the last time we drew water at this camp. A total of eleven sightings were recorded up until September 24 for Goose Cove, Sebree Cove, Forest Creek, Berg Bay, Bartlett Cove and the Gustavus area. The largest concentration was a flock of 74 seen grazing a bar in the lower Salmon River on September 24.

CANVASBACK (Aythya valisineria)

Although Alaska is at the extreme northern and western limit of its breeding range, small numbers of migrating canvasbacks have been reported sporadically for southeastern Alaska. For the monument, Black reported a May sighting of two individuals at Dundas Bay; Welch reported a few small flocks in the Muir Inlet area beginning on August 25; and Butts recorded two males seen over ponds adjacent to the Gustavus airfield on November 18, 1961.

GREATER SCAUP (Aythya marila)

In southeastern Alaska the greater scaup is locally common

during the winter, and non-breeders are sometimes fairly numerous in summer.

Grinnell noted that Littlejohn reported a large flock which was "frequently seen about the narrow channels among the small islands" of Glacier Bay during the period June 27 to July 20, and which showed no indications either of breeding or pairing.

Trautman contributed five more summertime records: two on June 16, 21 on June 22, two on June 28, 21 on June 29, and one on July 24.

Our only fall record is of an individual collected on October 10 by Bailey. (For the records of unidentified scaup, see lesser scaup below.)

LESSER SCAUP (Aythya affinis)

The lesser scaup breeds primarily in the interior, and in fact the only Alaskan record outside that range listed in Gabrielson was that of a set of 10 eggs with the female, at Glacier Bay on July 16, by Grinnell, who also reported another female with a brood of young.

Trautman collected young of this species in the Adams Inlet area during the period July 24-28, when he saw about a hundred birds from one- to three-quarters grown. His other records for the species in the Muir Inlet area were: two on June 22 and 29, and 24 on July 20 and 22.

Unidentified scaup. According to Gabrielson both species of scaup are found in southeastern Alaska during the winter, but the greater scaup seems to be much the more common. Thus Butts' sighting of 24 on Bartlett Lake on November 14, 1961, may have been greaters.

During the summer of 1967 this writer observed a band of about fifteen scaup, mixed males and females, on several occasions in the channel of the Beardslee Islands just west of the Bartlett River mouth, during late May and early June; two in flight at Sealers Island on June 14; and a flock consisting of one male, three females and 14 young in the lake in the middle of the large island in the middle of Adams Inlet on August 7.

COMMON GOLDENEYE (Bucephala clangula)

This bird is fairly abundant in southeast Alaska during the winter. Most of the population moves off to northern breeding grounds in the spring, but occasional individuals remain south for all or most of the summer.

Jacot made many observations of this species at Bartlett Cove during the winter of 1958-59, a few remaining in the lagoon through November, December and January. (Interestingly, he reports that he saw none at all the following winter.) Observations were sparse

during the 1967-68 winter season: Howe saw five in Fingers Bay on December 21; Streveler noted up to 3 males in Bartlett Cove during late January. National Park Service records for April, 1962, list two pairs on the 4th, and two males and a female on the 6th.

Trautman noted individuals on June 22 and July 10; three on July 20; two on July 22; three on July 24; and two on July 28.

During the 1967 field season this writer made one observation only, of a male in beautiful breeding plumage on Nunatak Cove on July 24. The bird was diving near the shore, and it was possible to approach behind icebergs to within very close range. The greenish gloss of the head was quite apparent, for the light was perfect. The effect was all the more striking for the fact that all the sightings of goldeneyes for weeks past had been of females or of males in the eclipse.

Our only fall record is by Bailey, who reported them to be rather abundant at Bartlett Cove on October 10.

Trautman suspected nesting by this species on the basis of having seen pairs of both goldeneyes, and also "1 female plus four young--?" in Adams Inlet on July 24.

BARROW'S GOLDENEYE (Bucephala islandica)

During some years this is an abundant wintering bird in southeastern Alaska. Its main breeding grounds are farther north.

This species is indeed one of the more abundant winter birds of the monument, but analysis of National Park Service records for the period October 1958-May 1962 shows a scarcity of goldeneyes of any kind during the breeding season. More recent information establishes the species as a definite though limited nester.

Our one definite record is of a single young collected out of a group of eight by Trautman at Bartlett Cove on July 29. (Dr. Trautman indicated by letter that the young was identified after his report was written, which explains why the species is not marked as a breeder on the chart.)

For summer records, we have Casey's listing of two Barrow's goldeneye males on July 10, in the Bartlett Cove lagoon, where this writer saw males and females in late May and early June of the following year. Trautman listed this species five times for the Muir Inlet area between June 13 and July 31.

Unidentified goldeneyes. Females with broods have been reported by several observers. Streveler saw a female with five chicks on a small pond south of the lodge at Bartlett Cove on June 27, 1967. Jacot saw a hen with eight young at Berg Bay on July 10, 1960, and Butts saw a female and two chicks in the Bartlett River on July 16, 1961. This writer recorded broods on three occasions: a female and four chicks in the Bartlett Cove lagoon on July 6; a group of 37, of which some were chicks (one female and four young eventually split off from the main group), in Geikie Inlet on August 18; and two females with eight presumed young in

Berg Bay on September 10.

In addition to the broods mentioned above, this writer noted adult unidentified goldeneyes in July, August, and September at Goose Cove, Adams Inlet and Bartlett Cove.

BUFFLEHEAD (Bucephala albeola)

The bufflehead is an abundant wintering bird in southeastern Alaska. Its breeding range lies farther north, but summering birds have been reported for Glacier Bay.

National Park Service records show buffleheads regularly for the months October through May. Janda has watched their courtship display in the Bartlett Cove lagoon in the springtime. Our summer observations were made by Trautman, who listed the species six times during his work in the Muir Inlet area: five on June 22, June 29 and July 20; three on July 22 and 24; and two on July 28.

This writer observed a pair in female plumage in the Bartlett Cove lagoon on September 29.

OLDSQUAW (Clangula hyemalis)

Like the bufflehead, the oldsquaw is an abundant wintering bird in southeastern Alaska, migrates to northern breeding grounds in the spring, but has been sparsely reported for Glacier Bay for the summer months.

National Park Service records prior to 1967 show the oldsquaw infrequently from September through May, ordinarily in small numbers. The usual record is from one to five birds, but three larger flocks are noted: approximately 40 near the Bartlett River on April 23, 1959; about 125 throughout the Beardslee Islands on April 23, 1960; about 200 north of the Beardslee Islands on May 23, 1962. During the winter of 1967-68, this species was noted frequently in many parts of Glacier Bay. Concentrations of 200 or more birds were seen in Fingers Bay, the Beardslee Islands, Blue Mouse Cove, and off Muir Point.

Six observers have reported from one to eight oldsquaws during the months of June, July and August for 1966 and 1967. No pattern emerges from a compilation of these sightings of summering birds, but it is interesting to note that some were found in the barren Wachusett and Johns Hopkins areas both years. Gordon noted a pair at Ptarmigan Creek during the period June 28-July 2, 1966, which appeared to be nesting up the creek (judging by their flights to and from salt water and other behavior).

From the literature we find that Grinnell reported that "the species was not common" during the June 27-July 20 visit of the Alexander Expedition, but that Bailey found them abundant here on October 10-11.

HARLEQUIN DUCK (Histrionicus histrionicus)

This marvelously-colored duck is abundant in southeastern Alaska throughout the year. Its status in Glacier Bay has flucuated considerably in the last ten years. Jacot found them "fairly common" around 1960-1962. Janda found them quite uncommon from 1964-1966 (to the extent that he was unable to show one to Mrs. Janda the whole time). During the summer of 1967, however, a remarkable population was noted by all observers. This writer, cruising the upper and central bay by boat at the rate of a thousand miles a month, found hardly a rocky point that did not have its population of from five to fifteen, or occasionally as many as fifty, of these shy little ducks. During the molt the flightless birds would hug the rockweed-covered waterline and paddle quickly, sometimes violently, around the nearest point. If cornered, a bird would press its cheek against the cliff right at the waterline, where a sharp eye was needed to find its motionless form.

Similar behavior was noted on August 18 at the mouth of a little stream near the mouth of Tyndall Cove. Three harlequins, finding themselves hemmed in, started up the stream instead of paddle-wheeling around the point. They were seen again farther up the stream, huddled against the bank with only their heads showing, their white cheeks looking like ordinary bank stones. Upon closer approach they would waddle with difficulty against the current, or quickly shoot under six inches of water to the opposite bank, a layer of air trapped against their feathers and reflecting the light. A moment's inattention permitted them to escape without a trace. If harlequins slip off their streamside nests and perform in this manner, it is little wonder that so few nests have been reported anywhere.

From the literature we find that the Harriman Expedition saw this bird at Muir Inlet in June, 1899. Grinnell stated that "many of those seen, as at Glacier Bay, stayed in small flocks around the outer reefs, and were thought to have been non-breeders, as those taken showed no signs of active reproduction." Jewett reported it as fairly common on July 15, also finding no evidence of breeding.

COMMON EIDER (Somateria mollissima)

The common eider is found in the northern portion of southeastern Alaska throughout the year in limited numbers, although its main range lies along more northerly coasts. In a turnabout of the usual pattern of the more northerly birds, there are several breeding records for Glacier Bay but none for wintering birds.

To quote Gabrielson, "Grinnell...reported a female found dead in Glacier Bay on July 16 with ova so small that it seemed certain if it had bred in the vicinity it must have been at a much earlier date. Nevertheless, in 1926, E.P.Walker reported a colony of 150 pairs on two small islands in the northern part of the Beardslee group.

and the next year Bailey (1927) added additional notes on summer occurrence in this region. The first nest and eggs to be found here was recorded by Hibben (1942). It was found June 30, 1941 on North Marble Island...."

On July 7, 1960, Jacot found a nesting hen and five eggs on Sealer's Island. Trautman saw four adults and 12 young in Adams Inlet between July 22-24, establishing the third breeding record for the monument.

To give the remainder of our scant knowledge of the occurrence of this bird in Glacier Bay, Trautman recorded two on June 17 and one on July 3, all in the Muir Inlet area. Gordon saw two immature males near Willoughby Island on June 27, 1966. Streveler and Howe saw nine north of Strawberry Island on October 25, 1967.

WHITE-WINGED SCOTER (Melanitta deglandi)

This scoter is abundant in southeastern Alaska during the winter months, and many non-breeding individuals remain during the summer. Jacot indicated that this is one of the more abundant winter birds, and it certainly is common in the summertime--though much less so than the surf scoter.

The Alexander Expedition and Jewett both noted that the white-winged scoter was common in July, but observed no evidence of breeding. During the summer of 1967 this writer found white-winged scoters either mixed in small numbers with flocks of surf scoters, or else segregated in small bands, throughout the upper bay. The huge rafts of scoters were invariably surf scoters; the typical band of white-wings numbered a dozen or less as a rule.

SURF SCOTER (Melanitta perspicillata)

Like the white-winged scoter, the surf scoter is abundant in southeast Alaska in wintertime, and many non-breeders remain through the summer. Grinnell again noted many during July without seeing any indication of breeding activity. Bailey saw large flocks June 12-29 and noted hundreds of molting birds from August 8-15.

This writer, traveling extensively by boat during the 1967 field season, noted rafts of scoters numbering in the hundreds on several occasions and in several locations. From the moving boat it was not always possible to determine the number of white-wings vs. surf scoters, but it is possible to estimate that the surf scoter predominated certainly by 5:1 and perhaps by 10:1 or even more.

The large rafts invariably consisted mostly of surf scoters. A flock of about 500 remained in the Sandy Cove-Garforth Island area through the summer; 400 were seen on August 3 at Berg Bay; 300 on July 28 around the mouth of Geikie Inlet and Drake Island; and 1000 were noted during a kayak crossing of Hugh Miller Inlet on August 14.

Interestingly enough, National Park Service records indicate large flocks in some of these same areas, notably Berg Bay and Sandy

Cove-Garforth Island, in previous years. Trautman listed from 300-1500 daily for July 5-10 while working out of Muir Point, near Garforth Island.

Scoters pass through the molt during July, at this time relying on paddle-power and diving skill to get away from approaching boats. It is beautiful to see the diving impulse sweep through a flock from one end to the other, each bird diving just after the one ahead; and then to see the hundreds of heads pop to the surface some distance away entirely at random.

COMMON SCOTER (Oidemia nigra)

This uncommon scoter, like its cousins, winters in southeastern Alaska (though not in such numbers) and breeds much farther north, leaving a few non-breeders behind for the summer. Once again the Alexander Expedition observed the species during July without noting any breeding evidence. Bailey noted that they were fairly numerous to abundant near the Beardslee Islands and on Glacier Bay during June, on August 11, and during early October.

Jacot states that the common scoter has been observed in Glacier Bay throughout the year. The National Park Service master records for this species prior to 1967 cannot be located at this writing, but several sightings can nevertheless be compiled. Casey reported seven at South Marble Island and 15 in upper Glacier Bay on June 12. Exactly one year later Janda saw a male and a female near Lone Island. Welch saw a few on July 4, 1962, in Muir Inlet. Casey reported four for Wachusett Inlet on July 24. Streveler saw some in a mixed flock in Hugh Miller Inlet on July 30, 1967. Trautman lists the species nine times between June 11 and July 28. Cahalane reported "many" below Muir Inlet on September 28 and listed the bird for Excursion Inlet on October 4 without indicating numbers. Streveler noted six south of Bartlett Cove on February 3, 1968.

This writer made a special effort to sight the common scoter by scrutinizing every bird in flock after flock during the later part of the summer, but without success. Then, while watching an aggregation of oystercatchers, surfbirds, turnstones, dunlins, and sanderlings on Geikie Rock on September 20, a group of five were seen to fly past at close range.

HOODED MERGANSER (Lophodytes cucullatus)

This small merganser reaches southeast Alaska in small numbers during the breeding season and winters farther south. The first recorded sighting in the monument was made by Butts, who saw eight to ten females and/or immatures in the Bartlett Cove lagoon on October 10 and 11, 1961. He also reported sighting 13, 10 females and three males on September 7, 1962. This writer saw two feeding in the Bartlett Cove lagoon on September 17, in company with a

single goldeneye. Later in the day Gordon and Streveler saw another four farther up the Beardslee Islands. This writer noted from one to three daily thereafter until October in the lagoon. The birds were actively feeding and doing quite well, occasionally being somewhat harassed by a mew gull which spent more time fruitlessly trying to snatch food from the mergansers than would have been required in finding its own fare.

COMMON MERGANSER (Mergus merganser)

This merganser is common to plentiful in southeastern Alaska during the winter, and is also a common breeder. Jacot indicates (and 1967-68 winter records tend to confirm) that the common merganser is less abundant than the red-breasted merganser in Glacier Bay during the winter, but that the situation is reversed in the summer when the reds move north to their breeding grounds. The summer relation is well reflected in Trautman's careful day-by-day records, which show common mergansers 19 times with an average of 11 birds per record, vs. twice for the reds at 4½ per record.

In many miles of boat travel during the 1967 field season, this writer came to expect to find a group of five to 30 mergansers at the mouth of any fresh-water stream. They were noted throughout the monument, truly widespread from the Salmon River mouth on the south to Wachusett Inlet on the north and Reid Inlet on the northwest.

These birds go through the molt during July and early August, and during this flightless period are capable of paddle-wheeling for amazing distances to escape an approaching boat. Their splash pattern while so engaged makes them visible for a long distance, for they are rather shy and bolt while the boat is still far off.

The largest concentrations of mergansers in Glacier Bay have been found at the mouth of the Bartlett River. Perhaps it is because the river joins a tidal channel in which the current reverses its direction not only between tides but also in the middle of tides, as peninsulas become islands and the waters can again pass straight through the channels. In any event, Dixon's mention of hundreds of mergansers at the Bartlett River finds confirmation in other years. On June 24, 1960, Jacot saw 400-500, of which 75% were males. This writer saw a flock of 160 (half common, half red-breasted) there on July 4, actively feeding. A flock of 200 unidentified mergansers dribbled down the channel from the Bartlett Cove lagoon on September 26, 1967, and then spooked and took off in a great rush of wings.

Our only breeding record is a sighting by Jacot on June 23, 1960, of "a female with six young, fairly young at that, seen near the outer dock at Barco. This group commonly observed from this date on throughout month." Trautman suspected breeding on the basis of seeing an adult with four young believed to be this species on July 24 in Adams Inlet.

RED-BREASTED MERGANSER (Mergus serrator)

This merganser is fairly common in southeastern Alaska in the winter and breeds here in about equal numbers with the common. As noted above, Jacot found that larger numbers were found in the monument in winter during the period 1958-1960 than in the summer, and Trautman's records reflected a summer scarcity.

Likewise this writer, ranging the central and upper bay widely by boat during the summer of 1967, noted the sleek males of the common merganser in breeding plumage on numerous occasions and in widely spread localities prior to the molt into the eclipse. Thereafter every merganser that was positively identified was a common, and there were many such (based on the color margin at the neck), although since only a few in any bunch were ever in a proper position for identification, there is no telling how many red-breasts might have been mixed with the other molting birds. As for male red-breasted mergansers in breeding plumage, this writer saw them only once between May 23 and September 29; three were seen with three females on June 18 at a small islet north of Young Island in the Beardslees.

We have several breeding records for the red-breasted merganser. Bailey saw females and broods of well-grown young on streams draining into Bartlett Cove and Berg Bay on August 9 and 10; and Jewett noted "many with young" in the Beardslee Islands on July 14-15. Trautman suspected breeding on the basis of seeing an adult with eight young believed to be this species on July 11, while working out of a camp near Muir Point. Butts reported a female and six half-grown young believed to be this species in the Bartlett River on July 18, 1961.

ORDER FALCONIFORMES
Hawks and Falcons

GOSHAWK (Accipiter gentilis)

Southeastern Alaska lies within both the wintering and breeding ranges of the goshawk. Butts listed the species twice in 1962. On March 24 he recorded "one seen from about 50 feet, my appearance interrupted his pass at a mallard in the ditch" along the Gustavus road near the monument boundary, and on May 10 he sighted an individual at Gustavus. Cahalane saw one flying over South Sandy Cove on September 29.

SHARP-SHINNED HAWK (Accipiter striatus)

This small bird hawk is found in southeastern Alaska during the breeding season and is also fairly common and well distributed here during the winter. Butts saw one chasing a magpie through an

alder thicket at Bartlett Cove on February 27, 1961, and noted that the "magpie did not seem too concerned." The hawk gave up the chase and was joined by a second as it flew away. The same observer listed three other spring sightings: individuals at Bartlett Cove on March 1 and 16, and one at Gustavus on April 11, all in 1961. Grinnell reported one for Glacier Bay in July, and Butts contributed one fall sighting--an individual over Bartlett Cove on October 10, 1961.

During the 1967 summer field season this hawk was seen very frequently at Goose Cove beginning August 12. There was considerable disagreement as to whether the small hawk in our area was a sharp-shinned or a pigeon hawk, each of us presenting what seemed good evidence for our respective opinions. It transpired that both species were present; this writer saw two sharp-shinned hawks and a pigeon hawk all at the same time on August 21.

The pair of sharp-shinned hawks were visibly present in the dense alder thicket along the north side of the cove for the rest of the season. They unmercifully harassed any other bird that happened to be in the vicinity, but especially the crows that fed on the beach. Several aerial dogfights between this species and the pigeon hawk that shared its air space were seen, with one bird or the other sometimes rolling over on its side and reaching up toward the other bird's underbelly with outstretched talons. But the most spectacular and noisy demonstrations occurred on those few days scattered through August and September when a single kingfisher made so bold as to sit on the ledges below the alder thicket and try to fish there. The hawk would swoop down from the alders and the kingfisher would be off in a flash. As the hawk closed the gap, the kingfisher would abruptly dive into the water, and the hawk would shoot past the spot. In a flash the kingfisher would be on the wing again, scolding vigorously. The hawk, now back on its perch, would quietly watch the kingfisher flying about chattering, and would launch the whole performance over again every time the kingfisher landed.

From the continued presence of the hawk pair, this writer began to suspect a nest among the cliffside alders. Watching and waiting until the leaves should drop before searching for the nest proved to be a poor plan, for in contrast to the familiar pattern in the interior of Alaska, the leaves of Glacier Bay's alders were still firmly on the plants at the close of the field season. However, Hok had a prolonged view of what he made out as an immature sharp-shinned hawk on an antenna mast on August 29. He wrote that "the bird allowed us to get very close, and then obligingly flew about us several times, returning to its perch, but facing the opposite direction. It made a mild peep from time to time which would have seemed more suited to a young songster than to a bird of prey."

The only other sighting made by the current writer was near a stream mouth on the north side of Geikie Inlet on August 19. While walking up the bank on a salmon survey, the writer noticed a single bird come wheeling out of the alders to make a single circle overhead, at a range of about fifteen feet, before retiring noiselessly back into the forest.

RED-TAILED HAWK (Buteo jamaicensis)

This hawk breeds in southeastern Alaska and is probably resident. A pair was observed near Coppermine Cove (near Rush Point) by the Alexander Expedition. One of these was collected, establishing a new subspecies, B.j.alascensis Grinnell.

Jacot lists single observations made near Gustavus and the monument boundary on July 1 and 2, 1960. Butts listed a pair over the Good River on April 27, 1961, and saw one chased off by a hawk of unknown species. Streveler listed four sightings for 1967. On June 16, on aerial patrol, he saw one about a mile north of Icy Point; on August 18 he noted an immature near Gustavus; on October 30 and November 25 he observed single birds, also near Gustavus. This writer watched one on September 30 at the Good River bridge as it sat in the top of a spruce, then sailed across the river, widely fanned its tail, and pounced into the grasses (it apparently missed its prey).

SWAINSON'S HAWK (Buteo swainsoni)

This species has apparently not been previously recorded in southeastern Alaska, though it does occur in at least some portions of the adjacent coast range. On October 22, Streveler noted a pair of hawks near Gustavus which he described thus: "Roughly redtail size and shape. Colors: overall dull grayish-brown; breast, belly heavily barred (vertically); back dark gray-brown; tail dark gray, more of less finely barred (transversely) with black." A single bird seen by him at the same place on January 20, 1968 elicited the additional comment: "undersides of wrists dark (rough-leg like)." A third quite good sighting of the same (?) bird by Streveler and Gordon on January 27, 1968 resulted in notation of the pale base of the beak and upturned primaries while soaring. Gordon felt quite confident that the bird was a Swainson's.

ROUGH-LEGGED HAWK (Buteo lagopus)

This large hawk breeds in southeastern Alaska and winters further south, leaving in September or October and returning in early April, when it immediately starts nesting.

The earliest spring record for Glacier Bay is a sighting by Butts of a pair over the Bartlett Cove lagoon on April 26, 1961. Bailey collected a specimen from Willoughby Island on June 12. The Alexander Expedition found a nest on a cliff near the beach at Coppermine Cove (near Rush Point) on July 10 and collected two adults and two young.

For fall records we have Bailey's listing of an individual at Sandy Cove on August 11 and a pair in the Beardslee Islands on August 14. Jacot saw an individual in the Gustavus area on August 31, 1959 and watched one in the road on the way to Gustavus on October 15, 1958, eating prey. Our latest record is of an individual which

Butts saw perched on a stump near the Gustavus tank farm on November 16, 1961.

GOLDEN EAGLE (Aquila chrysaetos)

The golden eagle winters in southeastern Alaska, but is not known to breed in the region. Records for Glacier Bay are scarce, not only because the bird itself is uncommon but also very likely because many sightings of the golden eagle are mistakenly referred to the frequently-seen immature bald eagle.

Gordon saw six on May 26, 1967--four in Johns Hopkins Inlet and two toward Reid Inlet. Trautman listed two for June 11, and individuals on June 12 and July 6, for the Muir Inlet area, and suspected nesting on the basis of observations made near Muir Point.

BALD EAGLE (Haliaeetus leucocephalus)

The bald eagle is found abundantly in southeastern Alaska the year around. National Park Service records for Glacier Bay are much more numerous for this bird than for any other, no doubt because its great size and striking coloration make it so conspicuous, and because it is a bird that stirs the imagination. These records show this eagle's conspicuous presence in the monument for every month of the year, especially along sea beaches and salmon streams.

Breeding records are also numerous, due again to the conspicuous size of the nests and the habit of the birds of sitting in the trees not far away, often emitting their characteristic and weird cries. Nests have been reported by Jacot in the Beardslee Islands; by Butts at Excursion Point, Point Gustavus, Point Dundas, the Beardslee Islands, Beartrack Cove, Garforth Island, the Klotz Hills, and Wolf Creek; by Cebula for the Berg Bay area (three nests) and North Fingers Bay; and by Goldthwaite for Cenotaph Island, Lituya Bay.

During the 1967 summer field season nests were located at several other localities. Engles spotted nests along the south shore of Lester Island, the mouth of the Bartlett River and the south tip of North Marble Island. Other nests were found by this writer at Puffin Island, Muir Inlet (across from the mouth of Adams Inlet), the vicinity of Tlingit Point, the mouth of Tidal Inlet, the mouth of Geikie Inlet, the mouth of Tyndall Cove, and on the largest of the three islands due east of the southeast tip of Russell Island. This summary of known nests demonstrates the abundance and wide geographical spread of the monument's breeding population. Further work is certain to turn up many more nests.

All the nests except one observed by this writer were rather bulky affairs in the crotches of deciduous trees, but one of those described by Butts on June 19, 1961 in the Beardslee Islands was located 30 feet above the ground in a live spruce. (This nest contained one egg at that time--our only recorded egg date.) The unusual nest studied by the current writer was found on top of the rock-knob summit of an islet near Russell Island on July 29. The single young was well feathered and very large, but still flightless,

and clambered down the slope to escape the human intruder. The nest was rather sketchy, consisting of a very few sticks laid down on the grass to form a rude semicircle against a small bedrock outcropping. A few feathers and fish bones were scattered about, but nothing could be identified as to species.

Bald eagle nests have been known to be reused for as many as 35 consecutive years, and it is interesting to note that some of the same Glacier Bay nests have been visited by different observers in different years. Butts listed a nest on the south shore of Beartrack Cove for May 23, 1962. The current writer visited what is undoubtedly the same nest, rather prominently visible from the shore, on August 3, 1967, and saw two adults being harassed unmercifully by a mew gull. Again, Butts refers to a nest on Garforth Island, where he saw two adults on June 14 and an adult and young on July 26, 1962. This writer saw a circling, calling, mature bird above this small island on August 6, and made out two young sitting in the branches of a poplar near the nest. (The pleasure of making a brand new discovery was only slightly dimmed a moment later by seeing Engles in the next tree taking pictures of the young.) It would be entirely feasible to keep a log of known nesting sites within the monument and to visit each nest every summer to determine the recurrence of nesting and to document any suspected decline in the breeding bald eagle population in future years.

Several interesting records are available regarding the food habits of the bald eagle in Glacier Bay. Jacot saw a pair sitting in a tree above a dead cow near the monument boundary on February 26, 1960. He also records the experience of Neeley, who saw a one-legged sandhill crane while on the way to Gustavus on May 27. This easily recognized individual had been in the vicinity of the Good River for several days. On Neeley's return from Gustavus later in the day, he found an "exceptionally large" immature bald eagle feeding on the still-warm carcass of the crane. (Might this have been a golden eagle?)

Butts wrote that on January 30, 1961, "one adult was observed making a pass, talons extended, at a land otter that was feeding on the edge of some pan ice. The otter avoided the attack by slipping into the water just in time." On March 20, 1961, he wrote "Six mature and one immature over Barco (Bartlett Cove). One of the mature was seen making a pass on a bird in the water, believed to be a gull. The eagle made the kill and then swam to shore using its wings like oars with slow deliberate strokes. The kill was carried all the way to shore in the talons." For June 20, 1961, he wrote of "five mature, one immature in Hutchins Bay (Beardslee Islands), feeding on a freshly killed hair seal pup, adult seal still in the water near-by." He also records two unsuccessful passes by eagles at water fowl in the Bartlett Cove lagoon; the intended victims were 100 mallards on January 31 and just "ducks" on February 13, both 1962. On December 6, 1961, he reported "one adult soaring over lagoon, scared up flight of 30 Canada geese."

The men who spent the summers of 1966 and 1967 at the Institute of Polar Studies camp in the little bight in the southwest

corner of Adams Inlet reported that an eagle used to come regularly to raid the herring gull chicks in the colony on the islet in front of the camp. It is also likely that the eagles which nested on North Marble Island during the summer of 1967 found abundant food at their doorstep in the form of chicks of the hundreds of glaucous-winged gulls that also nested there. This writer saw a mature bird drop a light-colored object while flying away from the island on July 1; it may well have been a gull, although attempts to locate it in the water were unsuccessful.

Certainly the eagles paid a stiff price for living so close to the food supply, in the form of harassment by the gulls. Ravens, crows and even oystercatchers have also been observed chasing bald eagles. But perhaps the crowning indignity to this majestic and powerful bird was recorded by Butts, who wrote that on January 30 he saw an eagle "chased away from feeding by a gull which then landed and fed on what the eagle had left."

MARSH HAWK (Circus cyaneus)

This handsome hawk migrates to Alaska in May and departs for the south in September. It is found widely through Alaska in the summertime, but according to Gabrielson, is seen most frequently as a migrant in the southeastern region.

All National Park Service records fall into spring and autumn sightings, reflecting migratory movements. Jacot made single sightings at Bartlett Cove on April 20, 24, 25 and May 3, and saw four near Gustavus on May 2, all 1959. Butts saw one over Bartlett Cove on April 29 and a female over the Gustavus flats on May 2, both 1961; an individual at Gustavus on May 5, 1962; and another at Dundas Bay on May 18, 1964.

Our first fall sighting was by Streveler, who saw one in the Gustavus area on August 18. The current writer watched a female or immature working up and down the strip of alders bordering the creek at Goose Cove on September 13. On the 14th it made a couple of passes quite close to the tent, suddenly flaring its tail and dropping into the salt grass, sending flocks of lapland longspurs into the air. Such rapid maneuvers contrasted wonderfully with the languid flapping that characterized the bird's hunting flight. On the attack it appeared to press its suddenly flared tail upward, deflecting its stern in a downward arc, while pivoting on one wing-tip, thus countering its momentum and approaching the ground facing the opposite direction from which it had approached. It lost no time regaining its cruising altitude or speed, and soon would make another dive. One wonders how many times it attacks for every animal caught.

This writer also made two fall sightings in the Gustavus area. A single bird crossed the road on September 16, and a brown individual was observed in the marshy area near the monument boundary on September 24. On this second occasion the hawk was seen only after watching a common snipe flying around for several minutes in a high circle, uttering a rasping note not unlike that of a green-winged teal. One wonders whether the marsh hawk might not occasionally depart from its

usual rodent fare to try for one of the snipe that were at this time so abundant on the marshes.

Our latest fall record is that of a female seen by Streveler at the mouth of Bartlett Cove, November 10, 1967.

OSPREY (Pandion haliaetus)

The osprey is found in southeastern Alaska from May through September, and has been known to breed in the region, although actual breeding records are few. Our only records for Glacier Bay are of a pair seen flying over Bartlett Cove by Jacot on August 17, 1959, and an individual seen at the same place by Butts on April 19, 1964.

PEREGRINE FALCON (Falco peregrinus)

The "duck hawk" is known to breed in southeast Alaska and may occasionally winter along the coast, although most of the population migrates southward.

Grinnell reported that peregrine falcons were seen at South Marble Island on July 5 by Dixon. Bailey noted three at Glacier Bay and collected two on August 11 (which were identified as the subspecies F.p.anatum).

Butts made two sightings at "Wolf Cove" in upper Muir Inlet in 1962: an individual on May 18, and a pair on a bluff on July 13. In view of this and the July sighting by Dixon it would seem reasonable to add the species to the list of possible nesting birds of Glacier Bay.

Streveler clearly watched a peregrine falcon chasing a barn swallow over the Bartlett Cove lagoon on August 22, and reported seeing an individual on August 11. The current writer's attention was caught by a sudden racket of yellow-legs in the same place on September 19, and turned in time to see a large brown hawk, of appropriate size but too far away for identification, cruising the lagoon.

A much more spectacular sighting was made on September 10. The writer had stopped the boat near Rush Point to watch a large flock of phalaropes wheeling over the Sitakaday Narrows tide rips, their white bellies flashing in unison, the burst of sudden sundrops contrasting wonderfully with the background of dark, clouded mountains. The phalaropes wheeled and wheeled as they had so often been seen to do, but this time they rose much higher into the air than usual. The instinct was to seek the cause in the jaegers which have often been seen working the rips, and once the eyes were retuned for large dark birds, two were instantly spotted. They were flying from the rips toward near-by Rush Point, and landed within a couple of hundred yards of the boat. One of them carried a whitish object which could have been a phalarope by size and color, and on reaching the beach started eating. The second bird

sat quietly nearby. Upon closer approach of the boat the falcon took its prey to a more distant beach rock and continued its meal; and at a second approach, flew away out of sight.

A hawk with the bird-catching skill of the peregrine falcon would find the table thickly spread in these tide rips at every changing of the tide, with plenty of ducks along the nearby shores in between times. The presence of this pair at Rush Point was no accident, and if a search for a nest were made, this would be one of the first places to look.

Streveler and Gordon watched an individual unsuccessfully stooping on phalaropes and Bonaparte's gulls in the tide rips outside Bartlett Cove on October 15, 1967. Our latest fall record is of two individuals seen by Streveler near Gustavus on October 22, 1967.

PIGEON HAWK (Falco columbarius)

This small falcon is uncommonly observed in southeastern Alaska during the summer and migrates to the southward for the winter. Bailey observed one chasing an arctic tern near Muir Glacier on August 12. This writer watched one through a telescope at Caroline Point on September 4.

Another pigeon hawk took up residence near the Goose Cove field camp during the fall of 1967. This writer first saw it on an antenna mast on August 8, and got a prolonged look from very close after it had flown to a bush nearby. Like the sharp-shinned hawks-in-residence, this pigeon hawk regularly harassed the crows on the beach, as well as the teal and yellowlegs and any other bird that happened to be in the area. Between passes, however, it was prone to perch on an open rock knob or the stump of a fossil tree protruding from the glacial gravels, rather than retreating to a perch in the alders as the sharp-shinneds used to do. It frequently called loudly as it flew over camp.

The latest fall record is of an individual seen by Streveler and Gordon on October 15, 1967 at Bartlett Cove.

SPARROW HAWK (Falco sparverius)

This smallest falcon is found in southeastern Alaska primarily in migration. Gabrielson saw a single bird near Willoughby Island on September 3, 1944. Jacot saw individuals on three occasions during April, 1959, near Gustavus. All three were seen feeding on kills of mice. Butts reported seeing an adult male on the wires near Gustavus on February 21, 1961, which is a very interesting winter sighting (Gabrielson lists the sparrow hawk as wintering from southern British Columbia south).

During the summer of 1967 Streveler recorded the species twice. He saw one at Bartlett Cove on June 8, and recorded a dead individual which had been found in the same place on August 31.

ORDER GALLIFORMES
Gallinaceous Birds

BLUE GROUSE (Dendragapus obscurus)

This year-round resident of southeastern Alaska has been found to breed in Glacier Bay. A chick molting from natal to juvenile plumage was taken by the Alexander Expedition on July 10, and Dixon is reported to have observed a female with a brood of small young on July 11.

There are several breeding records for Glacier Bay by National Park Service personnel. In 1959, Jacot reported a female and brood of five on the Gustavus road on June 25; a female and two young on July 1; and Hoy saw two females, one with five chicks and one with four, near Gustavus. Jacot found a female with seven chicks only a day or two old near the outer dock at Bartlett Cove on June 15, 1960; Neeley reported two females and broods the next day, and later in the summer (July 5) saw a female with 5 or 6 young barely able to fly, a short distance from Bartlett Cove on the Gustavus road.

During 1967 Streveler reported seeing chicks on June 14, 29, and July 2, all at Bartlett Cove and of at least two, or possibly three broods. Hok and Crawford reported a flock of about ten blue grouse on Garforth Island on August 10, of which some were chicks. The species has also been reported for Sandy Cove, where Jacot heard hooting on June 9; for Muir Inlet, where Trautman heard an adult and saw one young on July 6; and for Dundas Bay.

The deep, hollow booming of the blue grouse is a familiar sound around Bartlett Cove in April, May and June. This writer once tried to find a booming bird on Lester Island, and joined thereby the ranks of those many birders who have been baffled by the ventriloquial properties of its voice. The sound comes first from here, then from there; first from up, then from down; and the task soon becomes hopeless. One is eventually happy enough to step out of the tall dark forest, through the alder margin and onto the open beach, leaving the bird to itself. The first "hooter" of the year was recorded for four years by an "oldtimer" living in Dundas Bay: dates are May 7, 1950; May 7, 1951; May 4, 1952; and May 8, 1957.

WILLOW PTARMIGAN (Lagopus lagopus)

The willow ptarmigan is resident in southeast Alaska and has been found to breed in Glacier Bay. The Alexander Expedition collected an adult and two half-grown juveniles on the east side of Glacier Bay on July 14. Trautman reported five young in the Klotz Hills on July 27 and four half-grown and 12 quail-sized young in the Adams Inlet area on July 24.

During the 1967 field season this writer made three positive observations on this species, all confirmed by the birds' voice and all in August. A flock of nine were flushed on the large island in

the middle of Adams Inlet on the 7th; a flock of five below the Hugh Miller Glacier on the 15th; and a flock of five near the first creek south of Reid Inlet on the 16th.

ROCK PTARMIGAN (Lagopus mutus)

The rock ptarmigan is also resident in southeastern Alaska and has been found to breed in Glacier Bay. The species was first recorded by W.S.Brooks in 1915 from Muir Inlet. Welch reported a pair with chicks for Muir Inlet on July 3. Trautman reported two young on July 18 near The Nunatak and an adult and one small young on July 27 on the Casement Glacier outwash.

WHITE-TAILED PTARMIGAN (Lagopus leucurus)

This smallest and rarest of Alaskan ptarmigan is resident in the southeastern region. The species was first reported on April 12, 1913, by the same W.S.Brooks who first found the rock ptarmigan in the monument. Specimens from Glacier Bay are in the collection of the U.S. Fish and Wildlife Service. Dixon (1932?) considered this species to be "abundant" at the Muir cabin site, mouth of Muir Inlet.

An exception is made in recording the following "probable" sighting because of its significance to the breeding list. This writer flushed a pair of birds on the mountainside near the snout of the Reid Glacier on June 10, 1967. Field notes made that day indicate "white wings, white and brown on body--size of ptarmigans but leaner, different flight...very different voice from (willow) ptarmigan but that mottling of white and brown suggested ptarmigan in changing plumage." These birds uttered a repeated three-note call that was completely unlike that of the willow ptarmigan.

Hok and Martin reported a ptarmigan hen and six chicks at the same place on July 5 which they were "reasonably certain" was of this species. They did not get a look at the tail, nor did they hear the voice, but studied other markings at length. No mention is made of the size of the bird. The current writer tried to locate these birds later in the season without success.

This species was observed at low elevations at least twice during the winter, 1967-68: sightings of ptarmigan with no black in the flight pattern were obtained from upper Geikie Inlet (one, December 20); north of Goose Cove (seven, January 23).

ORDER GRUIFORMES
Cranes and their Allies

SANDHILL CRANE (Grus canadensis)

The sandhill crane is known in southeastern Alaska mainly as a migrant, although there are a few breeding records. Spring

records for Glacier Bay include sightings by Butts of 150 near Gustavus on April 28, 1964 and by Jacot of resting birds in the Good River area on May 26, 1959, and May 24-27, 1960. This writer saw a pair feeding among a flock of Canada geese in the fields near the Gustavus Inn in the late evening of June 2, 1967.

Fall records include flights of up to 200 over Gustavus in the first and last weeks of September, 1959, by Hoy, and five seen near the Good River on September 22, 1960 by Butts. Streveler saw about 80 overhead on September 12, 1967. This writer, familiar with the crane from Wonder Lake, Mt. McKinley National Park (where in fall it would circle to great height as if gaining altitude in advance for the crossing of the Alaska Range), and also from the breeding grounds along the Kobuk River, was thrilled to hear flights of calling birds overhead in the darkness in the early morning and late evening of September 15, and to see a flight of about 180 calling birds over Gustavus on September 30. The latest fall record is of a flight of 60 birds seen very high over Bartlett Cove on October 15 by Streveler.

AMERICAN COOT (Fulica americana)

According to Gabrielson, "Alaska is north of the normal range of this elsewhere familiar bird and it appears in the State only sporadically. As would be expected, most of the records are for southeastern Alaska." He lists several records and then continues, "It will be noted that these are mostly fall records and possibly are accounted for by the wandering of juvenile birds which apparently is practiced to some extent at that season by many species of birds."

The only Glacier Bay record is of three observed on November 14, 1961, along the shore of Bartlett Lake by Butts.

ORDER CHARADRIIFORMES
Shorebirds, Gulls and Alcids

BLACK OYSTERCATCHER (Haematopus bachmani)

This noisy comedian is found on the outer coasts and islands of southeastern Alaska the year 'round. It has been recorded in Glacier Bay from April through October, and it is possible (though not likely) that the absence of winter records reflects nothing more than the birds' preference for the upper bay, in combination with curtailed boating activity during those stormy months.

Like the bald eagle, the black oystercatcher is a very conspicuous bird--if not by size, then certainly by voice--which stirs the imagination. In this case the effect is one of humor stemming from the contrast of its stern posture, piercing eye and coal-black dress with its hysterical, peeping shrieks and ludicrously pale legs.

During the 1967 field season this writer found the oystercatcher

at 28 different localities in the monument. More than half of the records are for the central portion of the bay, in the triangle bounded by Garforth Island, the head of Geikie Inlet, and Beartrack Cove. Other sightings occurred as far north as Sealer's Island, as far northwest as Tarr Inlet, and as far south as the southern Beardslee Islands (the species has been recorded as far south as Bartlett Cove in other years). The birds seem to favor islands, especially treeless ones, particularly for nesting, but have also been noted on the mainland where suitably barren beaches and spits are available.

Breeding birds call attention to themselves with raucous cries, but it is no easy matter to find the nest, which consists of a remarkable mosaic of very uniformly sized rock chips neatly lining a dish-shaped hollow in the gravel, without a single straw or blade of grass to soften it. The bird will be seen obviously incubating eggs, but at the close approach of the human intruder will half stand up and Groucho Marx-like, slink away another 30 feet and there squat in the gravel, "obviously" incubating another set of non-existent eggs. Often it will slink behind a rock and peer ludicrously over the top.

This writer tried, unsuccessfully at first, to find a nest at Reid Inlet in early June. Success was finally achieved by sleeping overnight on the ground behind a small mound near, but out of sight of, the birds, and then, in the morning, slowly raising up to find the real incubation site. After the birds became aware of human presence, they performed their various distractions, the display making it all the easier to understand their behavior and find the second nest, known to be in the area, the same day.

The typical clutch of eggs found during the field season consisted of three eggs. The parents are both to be found around the nest and probably share the incubation, just as they share the efforts at distracting intruders. Chicks are as hard to find among the stones as are the eggs, but when located permit approach of any closeness. They seem to feel that as long as the tip of their bill is concealed in a crevice or beneath a stone, they are safe, and will remain motionless even if touched.

There are several breeding records. This writer found two nests with three eggs each at Reid Inlet on June 8; a nest with a single egg on Sealer's Island on June 14 (the other eggs may have hatched already); and three downy chicks on an islet in the southwest portion of Adams Inlet on June 21. Pipping of the eggs on one of the Reid Inlet nests was observed on June 30, fixing the incubation period at not less than 23 days. And since Janda had reported chicks at Lone Island on June 12, 1967, it is evident that there is a wide spread in pipping dates--eighteen days at least.

Ordinarily oystercatchers were seen individually or in pairs or small groups, but on August 19 the writer saw a flock of 120 on a small gravel beach near the mouth of the stream which drains into Geikie Inlet on the north shore near its mouth. The writer paddled quietly toward the flock in the small dinghy so that no motor noise would mask the expected wild, wilderness sound of so great an

assemblage of oystercatchers as they took flight. But the event was a bit less than expected, for the sound of ten dozen of them at this season didn't begin to approach the noise that would result from multiplying the sound of a breeding individual by 120.

On August 29 our course again lay toward Geikie Inlet, and it was with some anticipation that we rounded the corner and brought the little beach into view. Again it was littered with oystercatchers, as if with black stones. A count of red bills yielded 124 this time. Along with this flock there were bunches of surfbirds and turnstones, the only sighting of these species on the mainland all summer. What could possibly have distinguished this beach among all others for so unusual an assemblage remains a mystery, although it is probably no accident that Geikie Rock, haven for unusual shorebirds, lies not too far away. In fact it was on Geikie Rock that a flock of 60 oystercatchers was observed on September 20, together with about 200 surfbirds and turnstones and a few sanderlings and dunlins.

Since it is not known whether the oystercatcher winters in Glacier Bay, it might be added that the earliest record currently on file is for April 23, when in 1960 Jacot saw two a mile north of Lester Island and when in 1961 Butts saw four at Bartlett Cove; and that the latest sighting was of a flock of twelve seen over the water between Strawberry and South Marble Islands on October 25, 1967, by Streveler.

SEMIPALMATED PLOVER (Charadrius semipalmatus)

The semipalmated plover is found in southeastern Alaska as a breeding bird and migrates southward for the winter. The Alexander Expedition found it in Glacier Bay on July 5 and suspected breeding. The first recorded nest was found by Bailey at the head of Berg Bay on June 15. Casey found a nest with two eggs and two young already hatched at Blue Mouse Cove on June 29. Streveler reported a pair with four chicks at Bartlett Cove on July 17, 1967. Trautman saw young almost daily until July 24 while working on the Casement Glacier outwash, for a total of about 30 chicks.

During the 1967 field season this writer kept track of three nests, all at Reid Inlet. The first was found by Howe on June 7; the four eggs hatched out on June 28. The second nest had two eggs when found by this writer on June 9, four eggs when revisited on the 11th, but was empty on the 25th, indicating that the nest was plundered--a very unfortunate occurrence, because it would have been possible to determine the incubation period. The third nest was discovered by Janda on June 25 with four eggs, which had not hatched by June 30.

This bird has been reported from widespread localities throughout the monument, from Gustavus on the south to Nunatak Cove on the north and Reid Inlet on the northwest. The earliest recorded arrival was April 21, when Neeley saw two at the Good River. During the summer of 1967 this writer noticed a sharp decline in sightings of

this species in mid-August, at which time it was more common to hear small bands in flight overhead. The latest departure so far recorded is August 29, when this writer observed five along a small pond at Reid Inlet and wrote into the summer log "what made this sighting interesting was the ritual dance they were performing. One of them would lift and fully spread the fan tail, and then, with head down, creep slowly--almost crabbing a little sideways--toward another, uttering the while a rather typical note for the species (so it sounded). When the displaying bird came close to the other, it would shy away, sometimes flying to the other side of the pond. The first bird would follow, and the performance would be repeated."

KILLDEER (Charadrius vociferus)

The killdeer reaches Alaska sporadically during the breeding season, and is sighted most often in the southeastern region. It may be extending its range. Perhaps one of the more significant finds of the 1967 field season was the discovery that the killdeer breeds in the Glacier Bay area.

On June 2 this writer watched four vocal birds in a field across from the Gustavus Inn interacting in a manner suggesting courtship. Breeding was confirmed on July 7 with the sighting of an adult and two chicks. The adult performed a vigorous broken-wing act when approached, but the chicks could not be located among the clods. After leaving the field the writer watched the adult settle down and saw the two chicks, their neck rings plainly visible, emerge from the tussocks and clamber over to the parent. A second search also failed to locate the young.

Gustavus residents have indicated that killdeers were present through the summers of 1966 and 1967. This writer saw the birds twice in the fall: on September 24 five were watched feeding along a bar of the Salmon River, and on the 30th six were seen at the edge of the Good River.

We have one record within the boundaries of the monument itself: Gordon listed an individual for Blue Mouse Cove on May 26, 1967.

AMERICAN GOLDEN PLOVER (Pluvialis dominica)

The golden plover is found in southeastern Alaska during the spring and fall migrations, but sparingly. The first recorded sighting for Glacier Bay was of a flock of twelve seen at Gustavus on May 15, 1962, by Butts, who also reported 50-100 on May 11, 1964. Janda remembers having seen this species in the spring of 1964, 1965 and 1966; one year a flock of 60-70 remained in the pastures for a couple of weeks.

This writer saw and heard a pair on the beach at Goose Cove on September 10, in company with a black-bellied plover. A single golden was heard and seen again on the 12th at the same place.

BLACK-BELLIED PLOVER (Squatarola squatarola)

The black-bellied plover also migrates sparingly through this area. Writing of the golden and black-bellied plovers, Gabrielson says that "anywhere in southeastern Alaska a sight of either of these strikingly handsome shorebirds is enough to make that date one to remember."

The first recorded sighting in Glacier Bay was made by Trautman, who lists an individual for June 26, at which time he was working out of camp on the Casement Glacier outwash.

This writer saw a single black-bellied plover in company with two golden plovers at Goose Cove on September 10. The differences in the flight patterns and in the calls were both noted, as the birds were quite tame, permitting approach to within 20 feet before flushing and flying a short way down the beach.

The writer's only other sighting was at the mouth of the Salmon River on September 24. A flock of six calling shorebirds flew past, and just as they were about to disappear behind some trees, one flashed its back axillars. This was excuse enough to retrace the quarter-mile from the forest margin to the shore. There the flock was seen at close range to consist of five black-bellied plovers (the light rump of each was noted) and a single dowitcher, which took off with the rest when they again flew.

SURFBIRD (Aphriza virgata)

The surfbird winters at least occasionally in southeastern Alaska, and non-breeders are listed as remaining at times along the coast from California to British Columbia during the summer. The 1967 summer field program established the presence of a summering population within Glacier Bay.

The first known record for Glacier Bay was for June 24, 1967, when this writer listed five for Lone Island. A population was found there throughout the summer, the numbers of which varied. Streveler listed nine on July 1-2; and the current writer saw 50 on July 22, 125-plus on July 28, 100-plus on August 13, and 35 on August 29. The birds sometimes fly around the island ahead of the circling boat, so that all these figures are conservative, and the apparent cresting of the population may not be significant.

This writer also noted surfbirds on Geikie Rock as follows: 40 on July 28; 20 on August 29; and about 150 on September 20. A third locality was the small islet in the mouth of Sebree Cove, where 30 were seen on July 30, and where 130 were noted on August 13. The fourth locality was the little stream mouth in Geikie Inlet mentioned under the discussion of the oystercatcher, where three were observed on August 29.

In many hundreds of miles of boat travel throughout Glacier Bay, the writer saw surfbirds, turnstones and dunlins only at these few localities, strung out in a line across the central bay. Geikie Rock, Lone Island and Sebree Islet must have some common

characteristic which appeals to these birds. All are small and treeless and subject to violent wave action during winter storms, so that their tidal ledges are swept free of gravel and are instead thickly covered with rockweed, among which the birds have been observed feeding. Most of the shores of Glacier Bay are evidently either too steep, with glacial cliffs falling straight into the water, or else too gentle, with wide gravel beaches. Although it would seem that the wave-lashed tips of the Marble Islands might also provide a suitable habitat, these species were never observed there. Perhaps they will be in another year; but meanwhile the observer intent on seeing these birds would do well to head directly for the hospitable, rockweed-covered ledges on the north side of Lone Island, where a real display, to judge by the summer of 1967, can be counted on.

RUDDY TURNSTONE (Arenaria interpres)

The ruddy turnstone is listed sparingly for southeast Alaska as a migrant to and from arctic breeding grounds. It has been reported for Glacier Bay as early as July 20, when Trautman listed a single individual. He also recorded 106 on July 30, and 112 on July 31 (location unavailable).

During the 1967 field season this writer noted turnstones on nine occasions, most of them in the black-and-white plumage shared by both the ruddy and black turnstones during certain times of the year. On all nine occasions some of the flock were identified positively as ruddys, either by the magnificent breeding plumage or, later in the season, by the orange legs. The presence of black turnstones was never established by sight. It is worth noting, however, that the sound of the flocks of turnstones as they wheeled about upon being disturbed was identical to the "breeeeeeee" call on the Peterson recordings attributed to the black turnstone, and quite unlike the recording given for the ruddy variety.

Turnstones were observed at Lone Island as follows: 15-20, two of them ruddys in breeding plumage, on July 22; 30 on August 13; and 40 on August 29. At Geikie Rock ten ruddys, all in breeding plumage, were seen on July 28; and 50 turnstones were noted on August 29 and again on September 20. At the little islet in the mouth of Sebree Cove 15 turnstones were noted on July 30, and 25 on August 13. A flock of 85 turnstones was noted at the mouth of Geikie Inlet on August 29, in association with the flock of oystercatchers described earlier.

BLACK TURNSTONE (Arenaria melanocephala)

Southeast Alaska is at the northern limit of the black turnstone's wintering range, and Chichagof Island, just across the strait from Glacier Bay, is the southern limit of its known breeding range.

National Park Service records contain a listing of the black

turnstone for an island in Geikie Inlet on July 5, 1966, by Hall, but unfortunately no discussion of field marks or other criteria is included. Streveler has reported seeing 50 at the mouth of the Salmon River on June 3, 1967.

As indicated above under the discussion of the ruddy turnstone, this writer failed to identify any of the dozens of turnstones sighted during the summer of 1967 as blacks. Perhaps it is because birds with legs which appeared black were disregarded as being possible orange-legged ruddy turnstones in unfavorable light. In any event, the call of these birds, as mentioned above, corresponded precisely to that attributed to the black turnstone on the recordings matching the Peterson Western Field Guide. This writer is not in a position to know whether the ruddy turnstone sometimes utters a similar call, although it can be said that the call of the ruddy turnstone offered in these records was never heard from any of the birds.

COMMON SNIPE (Capella gallinago)

The common snipe is most abundant in southeastern Alaska during migration, but is also present in the summer and winter. Howe saw an individual in a small, open snowfree bog on January 20, 1967. Jacot saw individuals near the monument boundary on January 31, 1959, February 15, 1960, and March 26 and 27, 1959.

The species has also been reported for April and May, and this writer has watched and heard the winnowing display over the fields at Gustavus in early June. Trautman recorded one for July 23, and Streveler found snipe "abundant" on the Gustavus flats on August 18, as did this writer on September 24. Cahalane saw one at Sealer's Island on September 28, Streveler saw five at Bartlett Cove on October 2, 1967, and Bailey saw individuals in the Beardslee Islands on October 12 and at Sandy Cove on October 14. Jacot reported one near Bartlett Cove for October 27, 1958.

The bogs of the Gustavus flats would seem an ideal habitat for the common snipe, and would bear investigation during the breeding season, particularly in view of the winnowing display and the fact that breeding has been recorded as close as Yakutat.

WHIMBREL (Numenius phaeopus)

The whimbrel is listed by Gabrielson as a straggling migrant for southeastern Alaska. It was first listed by Bailey, who saw a small flock over Bartlett Cove on October 10.

We also have four spring records, all for 1967. Howe saw one feeding along the beach on the island in the Bartlett Cove lagoon on May 15. Gordon saw three at the mouth of the Bartlett River on May 23. This writer saw three from a kayak along the shore of Lester Island on about May 29 and a flock of four at the Gustavus small boat harbor on June 2.

SPOTTED SANDPIPER (Actitis macularia)

The spotted sandpiper is found commonly in southeastern Alaska during the breeding season, and may be expected from mid-May to mid-September.

Breeding in Glacier Bay was first recorded by Grinnell who listed a female and a set of four half-incubated eggs collected on the west shore. Bailey found a nest with four eggs barely above the high tide mark in Berg Bay on June 15. Trautman listed it daily without exception from June 12 through July 31 while working in Muir Inlet, with a high of 52 observed in a single day on July 24 (which no doubt reflects a lot of tramping; the average count was six per day for 50 days). He found four nests with 16 eggs and recorded 25-plus young.

During the 1967 field season this writer found the spotted sandpiper individually or in small groups throughout Glacier Bay, noting its presence on the west shore at Reid Inlet, Gilbert Island, Hugh Miller Inlet, Geikie Inlet, Drake Island and Berg Bay, and on the east shore at Nunatak, Goose, Beartrack and Bartlett Coves. Earliest recorded arrival and latest recorded departure dates for this species are this writer's notation of an individual at Reid Inlet on June 7 and Streveler's listing of one at Bartlett Cove on October 15, 1967.

WANDERING TATTLER (Heteroscelus icanum)

Gabrielson lists the wandering tattler as a regular migrant along most of the coast of Alaska, giving an early arrival date for the southeastern region of May 6 and indicating that the fall migration gets under way in July and lasts until October.

The tattler was first recorded for the monument when Dixon flushed a pair at Point Carolus, at the western side of the mouth of Glacier Bay, on September 10. Jewett reported seeing an individual in immature plumage on a rocky island in Glacier Bay on July 15. Trautman recorded nine at Beartrack Cove on July 27.

During the 1967 field season this writer saw the tattler five times, always singly: at Geikie Rock on July 28; at the snout of the Reid Glacier on July 29; along the stream draining into the head of Tyndall Cove on August 18; and at Goose Cove on September 9 and 10. Martin reported them "common" along the outer coast just north of Lituya Bay about August 25.

GREATER YELLOWLEGS (Totanus melanoleucus)

Southeastern Alaska lies within the breeding range of the greater yellowlegs, which arrives in late April and departs in September. Early spring arrivals for Glacier Bay of April 24, 1959 and April 21, 1960, were recorded by Jacot, and of April 24, 1961, by Butts, all for the Bartlett Cove lagoon. The species has also

been reported sparingly for the months May through August.

Jacot observed a pair believed to be nesting on June 23, about a mile from Bartlett Cove along the Gustavus road. The birds were very aggressive toward the observer and toward several semipalmated plovers that were also in the vicinity. However, no nest was found. Trautman listed this species as a breeder on the basis of observations of a pair and destroyed nest found in the northeast corner of Adams Inlet.

For other summer records, we have Trautman's listing of an individual for June 14, and the sighting by this writer of a pair landing in formation with seven dowitchers at the Salmon River bridge in mid-June. On July 7 Casey watched a pair feeding, also at the Salmon River bridge, from which one may observe a rather productive gravel bar. Trautman listed individuals on July 28 and 29, two on the 30th and four on the 31st, the last day of his study period.

This writer watched seven at close range among the channels of the delta of the Beartrack River on August 3. Jacot lists a late season observation of August 12 made by Black.

LESSER YELLOWLEGS (Totanus flavipes)

The lesser yellowlegs is found in Glacier Bay as a migrant, and although Gabrielson states in 1959 that "it does not breed, so far as is now known, in southeastern Alaska," it has been found to breed in the monument.

The earliest spring arrival so far listed was a flock of ten seen by Streveler on the Bartlett River on June 19-20, 1967. On July 3 he found a young on the Gustavus road and saw the adults overhead, which were identified as this species by their call. The Gustavus flats are a perfect habitat, and it would seem likely that more nesting activity will be recorded there in time.

Migrants have been recorded by Trautman, who listed from two to ten almost daily between July 26 and 31, and by this writer, who saw them in July, August and September at the Salmon River bridge, Bartlett Cove, Sebree Island, Goose Cove and Hugh Miller Inlet. The latest fall departure was listed by this writer for September 24, when an individual was watched feeding near the Salmon River bridge.

ROCK SANDPIPER (Erolia ptilocnemis)

This sandpiper occurs commonly in southeast Alaska during migration and winter, but was not positively identified in the monument until 1968. Streveler noticed flocks of rock sandpiper-like birds once during early June, 1967 at the Gustavus beach. He and Gordon saw similar aggregations several times at Bartlett Cove and Gustavus during January and February, 1968. Finally he positively identified flocks totaling over 300 birds on the mainland beach north of Russell Island, and others totaling over 500 at

Blue Mouse Cove, all on January 21, 1968.

PECTORAL SANDPIPER (Erolia melanotos)

The pectoral sandpiper passes through southeastern Alaska during the spring migration, largely in May, and again in the fall, mostly in August and early September.

Gordon watched a pair at Blue Mouse Cove on May 25, 1967, giving the breeding-grounds flight display. Trautman listed individuals for July 20, 24 and 28. Gordon reported 13 along a tidal slough in the Beardslee Islands on September 17, 1967. The latest fall record is this writer's sighting of five at the Salmon River mouth on September 30.

BAIRD'S SANDPIPER (Erolia bairdii)

This sandpiper is an uncommon migrant in southeastern Alaska; most of the breeding birds move from the arctic breeding grounds east and south to the Mississippi Valley. Most of the records of the species outside its breeding grounds are in May and August.

Nevertheless, Trautman reported individuals for July 13, 16, 25 and 26 while working in the Muir Inlet area. Corson recorded four for July 20-21, (locality unspecified). Bailey took an immature individual on August 12 near Muir Glacier.

LEAST SANDPIPER (Erolia minutilla)

The least sandpiper passes through southeastern Alaska during the migration, and has also been found to breed in Glacier Bay. Trautman found an average of eight a day for a 51-day period in the Muir Inlet area. He reported many pairs protecting territory, saw several eggs daily, and reported about 20 young for Adams Inlet, the Casement Glacier outwash, Sealer's Island and the Nunatak area. Howe found a nest containing four eggs at Reid Inlet on June 7, 1967. They had not hatched when last visited on June 12, but Martin saw and tried to photograph a chick on July 5 (it proved to be too active).

This writer's observations confirm Trautman's in suggesting that this tiny sandpiper is common in the thinly-vegetated flats of the upper bay. It must indeed be an abundant breeder to account for the many active, vocal birds that are stirred up by a hiker passing through their areas.

The writer's only record for this species outside the upper bay is a sighting of an adult with four swift but very young chicks seen on the sand flats near the Salmon River mouth on July 2.

RUFOUS-NECKED SANDPIPER (Erolia ruficollis)

This is an Old World bird which has established itself in Alaska to the extent of breeding in the Cape Prince of Wales area facing Siberia. Trautman gives this account of his sighting: "The Rufous-Necked Sandpiper is of special interest because of its occurrence approximately 1500 km southeast of its known range in North America....During the late afternoon of July 20, a migration of shorebirds became apparent, coincidental with a sharp increase in wind velocity, from the north. High winds, accompanied by cold rains, prevailed throughout July 21 and 22, abating on July 23. Throughout this storm period, dozens of shorebirds and other bird species were observed flying southward without alighting. On the morning of July 23, Trautman saw four small shorebirds flying toward him from the northwest, and then alighting nearby on the beach. While observing them for a period of five minutes, he identified them as Rufous-Necked Sandpipers. All were the size of Least Sandpipers, had dark, greenish legs and backs mottled with shades of black and rufous-brown. The most conspicuously colored of the four had the sides of its head, neck and upper breast suffused with a striking tawny-red, and there were definite but faint streakings along the upper sides anteriorly. In two others, the tawny-red was more subdued, and in the remaining one there was only a suggestion of tawny-red. Had Trautman seen the latter bird by itself, he would have considered it to be a Least Sandpiper. Unfortunately none was collected." (Trautman, 1966, p.133.)

DUNLIN (Erolia alpina)

The dunlin or red-backed sandpiper is found in southeastern Alaska primarily during migration, although it has been known to winter casually as far north as Juneau and Glacier Bay. Gabrielson's spring dates for the region of April 26 to May 24 were slightly extended for Glacier Bay by Howe's sighting of an individual at Reid Inlet on May 25, 1967, and likewise the listed fall dates of July 24 to October were slightly anticipated when two were found on Lone Island by Hok and identified by this writer on July 22. Like the surfbirds which spent some weeks there, the dunlins remained on the island through the rest of the season. This writer's records also list six for July 28 and August 13 and five for August 29, the date of the last visit. On September 20 an individual was identified on Geikie Rock among a large aggregation of surfbirds, turnstones and a few sanderlings. Streveler got an excellent look at two members of this species on the Gustavus flats, January 20, 1968.

A specimen from Lituya Bay is in the collection of the U.S. National Museum. Janda remembers seeing a flock of around 200 very tame dunlins, which he watched at length at close range, on the float at Bartlett Cove in the early spring of 1965.

SHORT-BILLED DOWITCHER (Limnodromus griseus)

The range of this dowitcher is more southerly than that of the long-billed form, but is still far enough north that the bird is recorded in southeastern Alaska only as a migrant. Gordon listed an individual for Blue Mouse Cove for May 25, 1967.

Unidentified dowitchers. This writer listed dowitchers on three occasions, but was unable to refine the observations to the species level. The first sighting was of a flock of six feeding in the mud at the Bartlett River mouth in late May or early June. The second was of a flock of seven which came in for a landing at the Salmon River bridge, in formation with a pair of greater yellowlegs, in early June. The next sighting was in the fall, when an individual was observed in company with five black-bellied plovers. They flew in formation over the flats at the mouth of the Salmon River on September 24, landed together, wandered together until approached to within a few yards, and then flushed and re-landed together nearby. The dowitcher was obviously smaller than the plovers, which might indicate that it was of the short-billed form.

LONG-BILLED DOWITCHER (Limnodromus scolopaceus)

This dowitcher is likewise found in southeastern Alaska only during migration. Our only record is of an individual noted by Trautman for July 19, when he was working out of camp at Nunatak Cove. He writes that "with very few exceptions, such as the Rufous-necked Sandpiper, all unusual or difficult-to-identify species which I have recorded are substantiated by a specimen, which is deposited by permission of the Park Service in the Ohio State Museum collections. Whenever there was doubt about subspecific determination the specimens were sent to the U.S. National Museum for verification." From this letter it is assumed that the long-billed dowitcher is included in the collection.

SEMIPALMATED SANDPIPER (Ereunetes pusillus)

This small sandpiper breeds in the arctic and migrates, for the most part, down the Mississippi Valley and the Atlantic coast. Records outside the breeding grounds are few. Trautman listed the species six times in July: five on the 5th, two on the 13th, one on the 14th, three on the 25th, two on the 26th and one on the 29th. Again, it is gathered that a specimen was collected.

WESTERN SANDPIPER (Ereunetes mauri)

This sandpiper is commonly found in southeastern Alaska during migration, moving northward during late April through late May and

southward, much more abundantly, from mid-July through September. Fall migration begins early. Trautman noted it first on July 5, when an individual was seen (and presumably, taken). Grinnell took two specimens in Glacier Bay on July 6 that were in worn nuptial plumage. Trautman's second listing was of 27 for July 12; he also recorded from two to 30 almost daily for the last half of that month.

On August 16 this writer watched an individual at length from a distance of about 25 feet as it fed in company with seven least sandpipers on a small sand bar at Reid Inlet. With the other birds about, the slightly greater size of the western sandpiper was quite evident, and its long, heavy bill and general cast made it stand out among the other birds no matter how they shuffled themselves. Despite its greater size, however, it was clearly and repeatedly dominated by the least sandpipers.

The second record was of an individual seen in company with two pectoral sandpipers on the flats near the Salmon River mouth on September 30, which is evidently about as late as the species may be expected in southeastern Alaska. Once again the bird was very tame, permitting approach to within 20 feet, and the long bill was obvious.

We have one spring record. Howe sighted a flock of 15 at the Bartlett Cove lagoon on May 15, 1967.

SANDERLING (Crocethia alba)

The sanderling's migration pattern is somewhat different from that of most shorebirds found in southeast Alaska, in that it breeds in the eastern arctic and has to migrate across the continent to reach Pacific coast wintering grounds, most of the population reaching the ocean to the south of Alaska. Most of the sightings for the State occur in the fall migration, although there are some winter and spring observations.

Trautman listed a single individual for July 25, the first recorded occurrence in Glacier Bay. This writer first saw sanderlings on September 20 when three were seen on Geikie Rock, their snow-white bellies, grayish back and short, stout bills setting them distinctly apart from the surfbirds, turnstones and dunlins sharing the rocks. A second flock, numbering 28, was watched at length on a sand bar near the Salmon River mouth on September 24.

The first bird watched on Geikie Rock was thought at first to have but one leg. It slept with one leg drawn up, which would not seem unusual; but in addition, it would hop and even flutter away a few feet when disturbed by a surfbird without putting its second foot down. Just as the evidence for a missing leg seemed positive, it was noticed that a second sanderling was behaving the same way.

This trait was carried to an extreme by the larger flock watched a few days later on a small sand bar that was being submerged by the tide. Of two dozen sanderlings on the bar, as many

as nine at once were observed to be napping on one foot. The waves were only a few inches high, but every once in awhile one would make an especially vigorous surge up the sinking bar, sending the sanderlings a few steps closer to the highest ground. The resting birds would all move closer together by one-legged hops, so that the absurd effect was of the finish line of a sack race. This happened again and again until the bar disappeared entirely and the birds flew off, calling vigorously.

NORTHERN PHALAROPE (Lobipes lobatus)

The northern phalarope appears in southeastern Alaska in migration, sometimes in spectacular concentrations, especially in the fall. Spring movements through the region begin in late April, and most individuals have passed southward again by the end of September.

Most of our records are for the fall migration when, as Gabrielson writes, it is possible to see "acres of phalaropes" feeding where swirling currents bring marine life to the surface. He indicates that "in the southbound fall movement the first birds appear in southeastern Alaska in mid-July," but records for Glacier Bay suggest that they can be expected by the first week of that month. Moore reported the first flocks, numbering in the hundreds, on June 30, 1967. Grinnell took a single bird in Glacier Bay on July 2; Gordon reported a pair for Tarr Inlet on July 2, 1966; and Trautman's first listing was for July 5, 1965. Hok reported "large numbers" just outside Bartlett Cove on July 4; Grinnell found them common by July 10; and Jewett found many large flocks on July 14. There is also one record for the outer coast, where Martin saw "great numbers" near Echo Creek on about August 25.

The phalarope of all birds lent itself most readily to observation by field Rangers on boat patrol. During the 1967 field season this writer found that their numbers and distribution varied widely, no doubt reflecting migratory movements as well as feeding patterns. Some days they were everywhere, widely dispersed; other days they were concentrated into compact flocks in a few favorable localities; while again days might pass without the sighting of a single bird, after which five thousand would suddenly be found in the tide rips.

Of all the places in the bay where phalaropes were seen, the Sitakaday Narrows were most notable for large flocks. The boat would slice through the rafts for hundreds of yards at a stretch, the floating birds waiting until the last moment before taking off under the boat's bow. (Actually, the phalarope never seems to take of at all--it is just suddenly airborne, in an instant; and it lands with similar abruptness.)

It would be well for observers to be on the lookout for this bird in the monument during the nesting season, for the known breeding range begins at Yakutat Bay, and Bailey recorded a small flock near Willoughby Island for June 12.

This writer found phalaropes to be present in small flocks in the Sitakaday Narrows as late as September 20 and 22, and saw a

single individual in the Bartlett Cove lagoon on September 28. Streveler saw 15 in Dundas Bay on October 12 and 100 at Bartlett Cove on October 15, 1967.

POMARINE JAEGER (Stercorarius pomarinus)

This jaeger is seen sparsely, offshore, in migration. Jewett saw three over the open ocean off Cape Spencer on July 16; Trautman lists an individual for July 21; and Gabrielson reports sighting one or more near Lemesurier Island in Icy Strait on July 23, 1945, and an individual off Cape Spencer on August 30, 1943.

PARASITIC JAEGER (Stercorarius parasiticus)

The parasitic jaeger is found in southeast Alaska in migration (remaining largely offshore, however, in spring) and has been found to breed in Glacier Bay, although the main nesting grounds are far to the north. The Alexander Expedition collected five in Glacier Bay from June 29 to July 14; one member of the expedition saw a pair chasing a peregrine falcon near South Marble Island on July 5.

Bailey reported an adult and three young on a Beardslee Island which were thought to represent breeding birds. Trautman confirmed this suspicion with the finding of a nest with two eggs near the Casement Glacier outwash on June 14. He also reported two young at Forest Creek on June 30. Streveler reports watching a broken-wing act and being dive-bombed by parasitic jaegers that obviously had a nest near the terminus of the Grand Pacific Glacier on July 13, 1967.

This bird is not abundant in Glacier Bay but it can be seen with fair regularity, especially near Adams Inlet. Trautman lists it 18 times in his 51-day study period, and this writer recorded unidentified jaegers that were most likely this species 15 times. Of these sightings, eleven were recorded in Muir Inlet between Muir Point and Sealer's Island; two in the tide rips of the Sitakaday Narrows (where there were many kittiwakes to chase); one over the flats at the Salmon River mouth; and one at Reid Inlet, where Hok once observed a pair chasing a small passerine bird. All except one were dark-phase birds.

The earliest record for this species is Trautman's listing of five for June 11, and the latest is Gabrielson's for August 27. This writer saw three unidentified jaegers in the Sitakaday Narrows on September 1.

LONG-TAILED JAEGER (Stercorarius longicaudus)

The long-tailed jaeger is an uncommon migrant in southeastern Alaska, and has been reported only twice for the monument.

Individuals were seen by Gabrielson off Cape Spencer on July 7, 1940, and by Bailey near Point Gustavus at the entrance to Glacier Bay on August 9.

GLAUCOUS-WINGED GULL (Larus glaucescens)

The glaucous-winged gull both winters and breeds in southeastern Alaska and is the most common gull in Glacier Bay. It is also by all odds the most conspicuous breeding bird in the monument, nesting in small and large colonies throughout the central and upper bay. Certainly the most notable nesting locality in the bay is the Marble Islands, where from the tour boat the visitor may see hundreds of gulls wheeling above the steep, grassy hillsides; but hundreds and more hundreds of nests can be found from the Beardslee Islands to Tarr Inlet.

Preferred sites are treeless islands or spits high enough to have some grass cover, although mainland colonies are also found on suitably steep cliffs. Notable nesting sites of the first type are located on Sealer's, Triangle, and Lone Islands, and on numerous islets scattered throughout the bay, while cliffside colonies have been found in Tarr and Johns Hopkins Inlets and along Mt. Wright.

These gulls are notorious predators on the eggs and young of other species of birds, and gull eggs and chicks in turn furnish prey for jaegers and eagles. An interesting facet of the gulls' food cycle is their habit of feeding at the very snouts of active tidewater glaciers, where they wheel and dive after each great icefall, perhaps picking up crustaceans and other small marine creatures killed or stunned by the impact of the tons of ice that crash into the water with every fall.

Another interesting facet of the gulls' role in the ecology of Glacier Bay is the contribution of guano in no small amount to the developing soil of the islets on which they nest. By improving the soil through the addition of such nutrients as nitrogen, the birds in some measure advance the vegetative succession, bringing closer the day when they themselves will by choice seek out a more suitably barren island closer to the glaciers' retreating snouts. Willoughby Island was once occupied by hundreds of nesting gulls, but is now almost completely abandoned by them, perhaps because it has become covered with shrubbery.

This species was the most widespread and conspicuous avian resident of mid and upper Glacier Bay during winter, 1967-8.

HERRING GULL (Larus argentatus)

Southeastern Alaska is located in both the breeding and wintering ranges of this strongly migratory gull. Records for Glacier Bay are not numerous, in part because the herring gull, though widespread throughout the monument, is far less common than the similar glaucous-winged gull. A further reason is certainly that identification poses

somewhat of a problem, since there are six whitish gulls in varying plumages found mixed together, so that a certain amount of study is required in order to separate them readily. But even with the best of intentions and an adequate control of the field marks, separation of the different forms from a moving boat is often impossible, even while many of the more distinctive species of birds are being accurately recorded. Finally, gulls are so common that they fail, after awhile, to stir the imagination--which is unfortunate because the details of their distribution and breeding are quite interesting.

The herring gull is the fourth most common gull in Glacier Bay, outnumbered by the glaucous-winged gull (by perhaps 20:1), the mew gull (by perhaps 5:1), and Bonaparte's gull. It breeds in small groups at various points in the monument. Nests have been reported for Sealer's Island by Bailey (who called it "Muir Island") on June 19; by Trautman, who lists twelve-plus nests for July 3; and by this writer, who saw five definite herring-gulls-on-the-nest amid the mixed gull colony there on June 14.

A few pairs of herring gulls are usually found among numbers of glaucous-winged gulls in the typical colony. Such mixed populations have been noted on Triangle Island, in Johns Hopkins Inlet, and on the wall of Mt. Wright. A colony on the small islet in the southwest corner of Adams Inlet is unusual in that it was found to consist almost entirely of herring gulls when visited by this writer on June 21. Of about 25 pairs of birds, only a few were glaucous-winged gulls. Gordon reported a colony of about ten on the cliffs of the southeast wall of Johns Hopkins Inlet in late June, 1966, but saw none there in the summer of 1967.

The complete absence of this species from the monument's 1967-8 winter bird records suggests a shift of the population out of Glacier Bay during this period.

The migratory Thayer's gull (L.a.thayeri), formerly classified as a race of herring gull but now believed to be a separate species, was reported on May 26, 1967 by Gordon, who saw two near Reid Inlet.

In all, our records for the herring gull are entirely inadequate in view of its conspicuous size and modest abundance, and observers in the future would do well to be on the lookout for it.

MEW GULL (Larus canus)

The mew gull is a year-round resident of southeastern Alaska and is the second most common gull of Glacier Bay. Bailey believed that this gull was nesting in Muir Inlet, a suspicion which was later confirmed by Trautman's work. He reported ten-plus nests for Adams Inlet on June 29 and four old nests for Nunatak Cove on July 13. This writer found a nest at Reid Inlet on June 7 containing three eggs which had not hatched by the 12th. On the 25th, however, the nest was empty and three young were seen on the water nearby.

Trautman's (and this writer's) daily records both indicate a very pronounced increase in the numbers of mew gulls after the breeding season (late July, early August). Trautman listed up to

200 birds in a single day on July 24 and 30, and this writer saw 110 birds in a single flock resting on a rocky spit in South Sandy Cove on August 6.

Trautman's records end on July 31, but this writer's indicate that mew gulls are numerous through September at least; a flock of 50 was noted for Bartlett Cove on September 29. 1967-68 winter records demonstrate the presence of a wintering population, probably reduced in size from that of summer, more strongly concentrated in lower Glacier Bay and Icy Strait.

This writer observed a rather interesting feeding habit of the mew and Bonaparte's gulls which frequented the mud flats of the Bartlett Cove lagoon and the Salmon River. The birds stand in still water barely up to their ankles, shifting their weight rapidly from foot to foot as if running in place, and pick up food morsels with rapidly-repeated jabs of their bills. They reach downward and comfortably ahead, indicating that their food is not being churned up by their toes, which would require an entirely different posture. It seems that the foot action is intended to set up ripples which then wash over the shallow margins of the puddle, exposing food morsels of some sort. The particles must be very small, judging by the numbers a bird will glean from a single position and the rapidity with which they are picked up. Birds have been seen to wander from one puddle to the next, rippling the water for a moment in each and finally settling down to work when one was found to be productive.

BONAPARTE'S GULL (Larus philadelphia)

Bonaparte's gull is found in southeastern Alaska primarily in migration, although some birds remain in the region through the breeding season. An early arrival of April 23 was recorded when in 1960 Jacot saw ten in the Beardslee Islands.

Existence of a summering population in Glacier Bay is strongly suspected, but the few available records do not afford conclusive evidence. In addition to the spring record given above, Jacot listed about 30 for May 5, 1960, and Streveler recorded 20 for June 3. The record is then blank until early July, at which time sightings become common. From mid-July through October large flocks, no doubt migrants, have been reported by Trautman (800 on July 30); Bailey (immature birds very abundant from August 8-15); this writer (about 300 in Berg Bay on September 11); Gordon and Streveler (2000 in the Beardslee Islands on September 17, 1967); and Cahalane ("great numbers" at the mouth of the Excursion River on October 3). Streveler reported them regularly through October, the last definite sighting being of more than 75 among the Beardslee Islands and in Beartrack Cove, November 4, 1967.

This writer found that flocks of Bonaparte's gulls congregate around the mouths of streams where there are extensive mud flats, such as the Salmon, Bartlett, and Beartrack Rivers and the unnamed stream entering Berg Bay from the southwest; and that the flocks will

remain around the same stream for weeks and can be seen on subsequent visits. Again, this bird would bear further study, particularly in the summer.

BLACK-LEGGED KITTIWAKE (Rissa tridactyla)

This kittiwake is found most commonly in southeastern Alaska during migration, particularly in May and again from late July to November. A small population remains in the northern portion of the region through the summer and consists primarily of non-breeding birds in immature plumage.

Since the limits of this kittiwake's usual breeding range are over 500 miles farther north and west, it is especially interesting to record a colony for Glacier Bay, located on a sheer cliff near the south margin of Margerie Glacier in Tarr Inlet. Streveler and Gordon visited the site on July 1-2, 1967, and counted 113 nests, of which somewhat over ten contained young. This writer visited the colony on July 24 and found the chicks more than half-grown. The tide was at the full flood, and young in the lowest nests might have been touched from the boat.

As with the mew and Bonaparte's gulls, migratory movements are reflected in increased sightings of large flocks of birds in late summer and early fall. Trautman listed 700 for July 29, and this writer's records show flocks of from dozens to hundreds from late August through September, especially in the tide rips of the Sitakaday Narrows. A fall date of October 9-10 was recorded by Bailey, who found them abundant at that time at Bartlett Cove. The latest fall records are of four individuals seen by Streveler in Sitakaday Narrows, November 7, 1967.

SABINE'S GULL (Xema sabini)

Sabine's gull is uncommonly seen in southeastern Alaska during migration, usually on the less-sheltered waters of the outside coast during August and September. Our only records are those of Gabrielson, who saw a flock moving north and west, well off Cape Spencer on June 8, 1946, and an individual off Cape Spencer on July 30, 1943.

ARCTIC TERN (Sterna paradisaea)

Gabrielson writes that "the Arctic Tern moves north at sea in late April and early May and starts southward in late July. Most of the southward migration is over by early September with only stragglers appearing after that time"; that the southern limit of its breeding range in Alaska is at Tracy Arm, just south and east of Glacier Bay; and that "there are a number of small colonies in southeastern Alaska all associated with moraines at the mouths of

living glaciers."

The possibility of nesting in Glacier Bay was first suspected by the Alexander Expedition and first demonstrated by Trautman, who found colonies of 120 and 60 birds in Adams Inlet and on Sealer's Island, respectively, in June and early July. This writer found the Sealer's Island colony active again in 1967 and located another at Reid Inlet, where eleven nests were kept under observation. The results of daily nest checks carried out whenever we were operating out of Reid Inlet indicate that the birds went through two nesting cycles, with the first batch of chicks from nine nests hatching out around June 12 and a second batch of chicks from two nests hatching out some time after June 30. True to Gabrielson's description, the colony was on a low morainal island only about a mile and a half from the snout of a booming tidewater glacier.

The arctic tern is seen regularly in Glacier Bay during the breeding season, but appears to be one of the first migrants to move out--which is understandable in view of its long journey to the sub-Antarctic. This writer's records show a very few sightings for August, with the latest for the 29th, when an individual was seen near Sebree Cove. The latest fall date is September 16, 1967 when Streveler and Gordon saw an individual near Strawberry Island.

COMMON MURRE (Uria aalge)

The common murre breeds in southeastern Alaska. There is no evidence of regular migratory movements, but some of the birds do move into such inner waters in the region as Glacier Bay in fall and winter.

Existence of a breeding colony was first suspected by Trautman on the basis of seeing what appeared to be fully grown young birds on July 29-30, a suspicion which was confirmed during the 1967 field season. On July 1 this writer watched a flock of seven circling about and making passes at a small ledge on North Marble Island. An attempt to climb up to the site was unsuccessful, but on July 19 it was possible to reach the nest from landward by descending by rope on a self-belay. Three large, pointed murre eggs were found. On July 22 the descent was repeated for photographic purposes. This second trip was smoother, more direct and faster, with the result that the birds did not fly before being included in the successful slides along with the eggs and nesting ledge.

Two pairs of murres were seen repeatedly in a tiny cave closer to the water, but it was never possible to reach the site. All-told the colony consisted of about ten pairs of birds. The site was revisited (by boat only) periodically until September 1, at which date there were still ten birds on the ledges, standing upright like penguins. From the late egg date it would seem that the young of this year would not have been in evidence by the late July date listed by Trautman, but no date for 1967 can be offered as young were never identified.

An influx of wintering murres was apparent by September 20, when perhaps 30 were seen in the tide rips of the Sitakaday Narrows.

(Only occasional individuals had been noted there earlier.) Jacot listed sightings of 15 birds for December 23-24, 1958, and of 60-70 for January 21, 1960. Concentrations of over 1000 birds were reported on several occasions by Streveler and Gordon during winter 1967-68, from the vicinities of Ancon Rock and Sitakaday Narrows. Jacot lists one spring sighting of May 5, 1960, when several were seen near Rush Point.

PIGEON GUILLEMOT (Cepphus columba)

The pigeon guillemot breeds in southeastern Alaska and is a common winter resident of the region. It is a late nester, as evidenced by several breeding records for Glacier Bay. This writer found nests near Gilbert Island and on Lone Island on July 1; the Alexander Expedition found fresh to moderately-incubated eggs on South Marble Island on July 5; and Trautman found four nests containing five eggs and three young on Sealer's Island on July 19.

The guillemot is one of the most commonly seen and, as indicated by the records above, one of the more widespread breeding birds of Glacier Bay. It is usually observed singly or in small numbers up to and during the breeding season, at which time it can often be seen standing upright on a ledge with a silvery fish in its bill, waiting for the boat to leave so that it can make its way to the nearby nest with the meal.

Following the nesting period it is sometimes seen in tight flocks numbering dozens of birds, which is a departure from the habits of the earlier summer. This writer counted 20 in a flock near Sealer's Island that without the binoculars had appeared to be scoters, and Hok counted 60 in a tight bunch at Reid Inlet.

After mid-August there is an abrupt and very noticeable decline in guillemot sightings; however, Gordon and Streveler recorded about 80 in the Beardslee Islands on November 4, 1967. A small wintering population remains: scattered sightings were made by Streveler through December 21, 1967. Butts saw three in the lower bay on March 15, 1962.

MARBLED MURRELET (Brachyramphus marmoratum)

The marbled murrelet is a common permanent resident of southeastern Alaska. It is known to breed in the region, but its nesting is so secretive that Gabrielson lists only a single nest finding--on Chichagof Island, not far from Glacier Bay--and even this record is not generally accepted, since it may have been a Kittlitz's murrelet. There is little doubt that it breeds within the monument, but as elsewhere the evidence is indirect, however suggestive. Females containing fully formed eggs were taken in Glacier Bay by Bailey on June 12 and by Jewett on July 13. The Alexander Expedition found the birds mostly paired off between June 27 and July 20; Trautman saw what appeared to be fully-grown

young birds on July 29-30; and Bailey found young to be "abundant" from August 8-15.

This is the most common of Glacier Bay's alcids. In the first half of the summer it is impossible to go anywhere in a boat without seeing this small, chunky seafowl laboriously leaving the water, usually bouncing two or three times on its belly before becoming fully airborne. Those that don't fly will dive in murrelet fashion just before the boat reaches them. In contrast to the graceful, arcing action of a diving merganser or the somewhat more forceful action of a scoter, the murrelet disappears beneath the surface as if suddenly pulled under by a string around its neck.

As with other divers, murrelets can be seen in numbers in the tide rips of the Sitakaday Narrows and also, conspicuously, in those of lower Adams Inlet. They are frequently seen carrying small fish in their bills; this writer noted 15 such in a single pass through the Sitakaday Narrows on July 15. One notable concentration away from the tide rips was encountered in the vicinity of Tlingit Point on June 23. The water was glassy calm that day, and "many many" murrelets were sprinkled over a square mile of water.

This writer's records indicate that the population of murrelets in Glacier Bay decreases markedly after mid-August, the birds probably moving toward the mouth of the bay and Icy Strait. A wintering population remains: Streveler reported up to 250 in Sitakaday Narrows during winter, 1967-68.

KITTLITZ'S MURRELET (Brachyramphus brevirostre)

Kittlitz's murrelet is also found in southeastern Alaska as a breeding and wintering bird, especially in glacier waters. Bailey collected a female with an egg in the oviduct almost ready for the shell on June 12, and wrote, "I watched the birds upon the water on this date without a clue as to the direction of the nesting grounds, for I never saw them overland." The center of abundance for the species appeared to Bailey to be around Willoughby Island on this visit; no birds were seen within ten miles of the Muir Glacier.

He continues, "I returned to Glacier Bay August 8-15.... Although hundreds of birds were at the mouth of the bay, I failed to identify a single Kittlitz's Murrelet, and it was not until I ran to Muir Glacier August 12 that I identified or collected any. Possibly one hundred were noted in pairs or small flocks in the drifting ice above Reid Inlet, where none had been seen in June. They seemed to find conditions to their liking close to the glacier, in the floe ice. Two young birds were taken, their slightly smaller size and immature look being apparent while they were upon the water. On August 14, possibly 25 birds were seen along the Beardslee Islands, but on the whole, the species was much scarcer than in June.

"During my trip to Glacier Bay in October, I was unable to identify a single Kittlitz's Murrelet, although we again went close to the (Muir?) glacier. There were very few birds in the ice, so it

may have been that food conditions were not favorable and the birds were in another arm, up Reid Inlet for instance, or they may have left the bay for the open sea for the winter months."

This description of a summer's observations of a single bird in Glacier Bay has been quoted at length because it is unique, none other like it having been found in the literature for any bird, and also because the results of the 1967 field season square up very well with Bailey's account.

This writer's impressions of Kittlitz's murrelet in Glacier Bay in 1967 are that they were distinctly less common than the marbled murrelet in the early summer; passed through some sort of population peak in mid-summer; and then disappeared entirely. To elaborate: early in the season they were outnumbered perhaps 10:1 by their marbled cousins. Later the ratio was noticed to be closer to 1:1. The date of this observation unfortunately cannot be located in the 378 pages of the summer's log, but interestingly enough Trautman's daily bird count chart for 1965 shows the same sort of relative increase for mid-July. (This is all statistical thin ice, but it is all we have, and it may be substantiated with more work.) As for the disappearance, this writer saw none after sighting two near Gilbert Island on August 15. Gabrielson saw two at Reid Inlet on August 17, 1945, and a single bird in Beartrack Cove on September 3, 1944, for our latest fall record. Gordon made the earliest spring sighting so far recorded when he listed ten in lower Glacier Bay on May 25, 1967.

ANCIENT MURRELET (Synthliboramphus antiquum)

The ancient murrelet breeds in southeastern Alaska and winters well out to sea. It shows a decided preference for the open ocean and is thus the least reported murrelet for Glacier Bay proper. The earliest spring record for the monument is Jacot's sighting of several near Berg Bay on May 5, 1960. Gordon reported an individual for June 27 (1966), as did Trautman for June 29. Jewett saw six pairs swimming close together well off shore between Cape Spencer and Dixon Harbor on July 16 and collected a female which showed no signs of breeding. The Alexander Expedition collected an immature male in Glacier Bay on July 17. Bailey noted possibly a dozen birds at the entrance to Glacier Bay on August 9. Our latest fall records are Gordon's and Streveler's sightings of four on September 17 in the Beardslee Islands, and of four near Bartlett Cove on October 15, both 1967.

CASSIN'S AUKLET (Ptychoramphus aleutica)

Cassin's auklet breeds in southeastern Alaska and winters at sea near the breeding grounds. It is uncommon anywhere in Alaska, and records for the monument are scarce. Grinnell reported that Littlejohn felt sure he had seen several of this species just before entering Glacier Bay on June 27. Trautman listed 20 on June

29 and an individual on July 10, with four other sightings in between. Jewett saw a pair on both July 16 and 17 off Cape Spencer, where Gabrielson also saw four on July 30. Welch saw one in Adams Inlet on August 13.

This writer was on the lookout for this species throughout a summer of boat travel in Glacier Bay, but had not seen one by the close of the field season. Then, on September 20, as we ran the Sitakaday Narrows on the way to Reid Inlet to take down the tent camp, an individual flew right alongside the boat for a full five seconds, affording a splendid view of all its features, including its weird white eye.. Another five were seen in the next mile or two.

For other fall sightings, Gordon reported eight for September 17 in the Beardslee Islands and one near Bartlett Cove on October 15, 1967, and Bailey listed several in Icy Strait near Glacier Bay on October 10.

RHINOCEROS AUKLET (Cerorhinca monocerata)

The rhinoceros auklet breeds in southeastern Alaska and winters offshore south along the coast. It is nocturnal, which accounts in large measure for the lack of records for the species. Trautman listed an individual for June 22 and a pair for both June 26 and 29. Jewett saw more than 20 between Cape Spencer and Dixon Harbor on July 16-17. Gabrielson listed three sightings for Cape Spencer: June 7, 1940, and July 30 and August 27, both 1943. Gordon saw an immature in the mouth of Bartlett Cove on September 17, 1967.

HORNED PUFFIN (Fratercula corniculata)

The horned puffin is a permanent resident of southeastern Alaska. It was first found to breed in Glacier Bay when the Alexander Expedition located a nest on South Marble Island. This writer noted that two or three pairs spent the summer on the same island in 1967, and found one nest in a vertical chimney in the limestone on June 20. The adult would neither budge an inch nor utter a cry in spite of being approached to within three feet for photographic purposes, and so the presence of an egg, however strongly suspected, was not proved. On the fourth visit to the nest, on August 3, the female when approached gave a low groan and half stood up, exposing to view a single half-sized black chick. The nest was empty when last visited on September 1.

A larger colony consisting of not less than five pairs of birds is suspected along the west wall of lower Tarr Inlet, where on July 23 as many as six birds were seen wheeling out over the water in formation. A small colony might exist along the wall of the isolated mass of rock bench-marked "Gloomy" near Vivid Lake, where individuals were noted on July 23 and August 28. This cliff may also be found to

harbor nesting cormorants, gulls, tufted puffins and guillemots if closely investigated during the breeding season.

The horned puffin is rather uncommon in Glacier Bay; the three localities mentioned above are the only ones where this writer sighted it all season. There are no winter records; early and late dates for Glacier Bay are this writer's sightings of an individual at South Marble Island on June 15 and Gordon's of one in the Beardslee Islands on September 17, 1967.

TUFTED PUFFIN (Lunda cirrhata)

The tufted puffin is also a permanent resident of southeastern Alaska. Breeding in Glacier Bay was suspected by Bailey, who thought that nests might be found on Willoughby, Drake, and the Marble Islands. Jacot lists a report that nests were found on islands in Hugh Miller Inlet during July 3-9, 1960, by the Rev. R.K.Heacock of Juneau.

This writer found nests on South and North Marble Islands and on Lone Island. One of these was in a natural opening between some rocks; one was in a burrow whose opening was concealed by overhanging grass; and others were in burrows under rocks. By far the most beautiful nest was found on Lone Island in a little vault-like grotto partially concealed by ferns. The single egg was lying as if in a shrine, and a single gull feather lay before it like a threshold. The beauty of the site was evidently lost on the chick, which had considerably trampled the area by July 22.

The tufted puffin outnumbered its horned cousin in Glacier Bay proper by perhaps 15:1 or 20:1 during 1967. The flocks of hundreds reported by Bailey were never encountered, although up to two dozen were seen on occasion. The distribution of these groups indicates that other breeding colonies may exist in Tarr Inlet, near Vivid Lake, on Francis Island and along the wall of Mt. Wright. Colonies have been reported in former years in the Beardslee Islands and at Puffin Island (north of North Sandy Cove).

It is not known whether a population of tufted puffins remains in Glacier Bay during the winter. The earliest spring and latest fall records so far reported are May 5 and September 26.

ORDER COLUMBIFORMES
Doves

MOURNING DOVE (Zenaidura macroura)

The mourning dove reaches southeastern Alaska during the breeding season. According to Gabrielson "it is certain to be found breeding in Alaska" and "it would be no great surprise for a nest to be found anywhere in the southeastern district." He also states that "it is evident that most of the Alaska records are birds indulging in the common post breeding wandering that

occurs with many species in summer and early fall."

During September, 1967, this writer was told by several residents of Gustavus that pigeon-like birds had been seen feeding about the lawns of the area. One bird, which was found dead, was said to have had red feet. A search of the dump failed to turn up the carcass.

The mystery was cleared up when Janda positively identified a mourning dove near the Salmon River bridge on October 11.

ORDER STRIGIFORMES
Owls

GREAT HORNED OWL (Bubo virginianus)

The great horned owl is found in southeastern Alaska as a year-long resident. A female collected by Bailey on August 13 is in the U.S.National Museum. Trautman lists a sighting (by E.E.Good and/or R.K.Burnard) for July 22, 1965, and suspected breeding on the basis of seeing what appeared to be fully-grown young birds on July 29-30. Corson saw two between July 20-22 and Casey saw an individual along the Gustavus road on September 24. Streveler heard the call of this owl at Bartlett Cove on several occasions during early October and along the Gustavus Road on October 22, 1967. Later, he and Gordon heard another at Beartrack Cove on November 4.

SNOWY OWL (Nyctea scandiaca)

According to Gabrielson, "This owl appears irregularly and relatively infrequently" in southeast Alaska. The species was not reported for Glacier Bay National Monument and Gustavus until November 12, 1967, when one was seen at the latter locality by Mrs. Carol Janda. A second sighting was made at Gustavus on March 12, 1968, by Fred Rose.

HAWK OWL (Surnia ulula)

This bird has been observed sparingly in southeast Alaska during all seasons; a single nest has been found (near Juneau). As was the case with the snowy owl, no sightings are recorded for the monument or Gustavus prior to winter 1967-68. Hawk owls were, however, noted repeatedly by Janda, Gordon and Streveler in the latter locality from November 11, through March 22 (the day this description was written). At least three individuals were present on January 28.

PYGMY OWL (Glaucidium gnoma)

The pygmy owl is found in Alaska only in the southeastern region, where it is a permanent resident. Janda reported watching a very

tame individual near the monument boundary in May, 1967, noting especially the false "eyes" at the back of the head; he saw one at the same place on November 23, 1967. Jacot reported observing an individual believed to be this species on January 5 and 6, 1960, near Gustavus.

SHORT-EARED OWL (Asio flammeus)

Gabrielson states that it is "more than probable" that the short-eared owl breeds occasionally in southeastern Alaska and that a few individuals might sometimes remain in the region for the winter, though most are migratory. Trautman lists individuals for June 14 and 20. Bailey reported two for June 16 and four for August 15, all in the Beardslee Islands. Jacot saw two on the Gustavus road on July 31, 1959. Streveler saw a pair at Bartlett Cove, November 12, 1967.

Breeding was confirmed when Streveler saw an adult and a newly-fledged young near Gustavus on August 18.

ORDER CAPRIMULGIFORMES
Goatsuckers

COMMON NIGHTHAWK (Chordeiles minor)

The common nighthawk is found casually in southeastern Alaska during the summer. Trautman listed an individual seen on June 14, 1965 by E.E.Good and/or R.K.Burnard.

ORDER APODIFORMES
Swifts and Hummingbirds

VAUX'S SWIFT (Chaetura vauxi)

This swift is a regular summer resident of southeastern Alaska and probably breeds here. The only record for Glacier Bay is this writer's sighting of a pair feeding over Goose Cove on September 13. (Gabrielson states that Swarth saw one at Excursion Inlet on August 24, 1909, but a check of Swarth's paper shows him to have been elsewhere on that date. The kernel of truth that no doubt gave rise to Gabrielson's listing cannot be pinned down.)

RUFOUS HUMMINGBIRD (Selasphorus rufus)

This hummingbird breeds in southeastern Alaska and winters in Mexico. It is an uncommon but widespread bird in Glacier Bay. Grinnell considered it rare during the period June 27 to July 20, but Jewett reported it as common on July 16. The hummingbird

doesn't appear on Trautman's list until July 10, but from one to eight are listed almost daily for the last half of that month, perhaps reflecting migratory movements, the emergence of the young of the year, and/or a change in the camp's location. Breeding in Glacier Bay was established by Trautman with the sighting of numerous young in the Muir Inlet area during the latter third of July.

The rufous hummingbird has been recorded in widely scattered locations throughout the monument, including Lituya Bay. This writer was surprised to see an individual feeding at a fireweed blossom at barren Reid Inlet, but there are reports of a sighting out on the Casement Glacier. Many observers have commented on the way that the bird will be attracted by red objects such as articles of clothing or packsacks.

The earliest arrival so far recorded was an individual seen on Lester Island on April 27, and the latest fall departure is this writer's sighting of one at Garforth Island on August 12.

ORDER CORACIIFORMES
Kingfishers

BELTED KINGFISHER (Megaceryle alcyon)

This kingfisher is found in southeastern Alaska throughout the year. National Park Service records show the bird for all months, especially for the Bartlett Cove lagoon. Janda reports that if the lagoon freezes over during winter cold spells, the kingfishers move to the outer dock, but come back as soon as the ice melts again.

Kingfishers have been reported in more than one year for the Gustavus flats, especially around the Chase farm. Other localities listed in the records are Sandy Cove, Lituya Bay, Lester Island and Goose Cove, where this writer saw an individual on four occasions from mid-August to mid-September being harassed by a sharp-shinned hawk, as described in the discussion of that bird.

Mrs. Carol Janda saw an adult feeding a young on July 28.

ORDER PICIFORMES
Woodpeckers

"RED-BREASTED" SAPSUCKER (Sphyrapicus varius)

The red-breasted sapsucker is a permanent resident in southeastern Alaska, which is at the northern limit of its breeding range. Grinnell notes that one was taken by the Alexander Expedition at Coppermine Cove (near Rush Point) on July 19.

HAIRY WOODPECKER (Dendrocopos villosus)

The hairy woodpecker is resident in southeastern Alaska. Jacot

observed a pair at Bartlett Cove on March 21, 1960, that were being harassed as they fed by three magpies. Butts saw one at Bartlett Cove on March 17, 1961. Streveler saw an individual alongside the Gustavus road near the monument boundary on October 5, 1967.

DOWNY WOODPECKER (Dendrocopos pubescens)

The downy woodpecker is an uncommon resident of southeastern Alaska. Trautman lists an individual sighted on June 26, 1965, by E.E.Good and/or R.K.Burnard.

NORTHERN THREE-TOED WOODPECKER (Picoides tridactylus)

The northern three-toed woodpecker is an uncommon resident of southeastern Alaska. Casey saw three males near Blackwater Pond (Bartlett Cove) on July 14; Streveler and Martin saw two adults feeding newly fledged young at Bartlett Cove on July 19; Jacot saw an individual about a half-mile from Bartlett Cove on October 6, 1959; Butts noted one near Bartlett Lake on November 14, 1961. Gordon and Streveler noted a single bird at the junction of the Gustavus flats with the ridge to the east, January 28, 1968.

ORDER PASSERIFORMES
Perching Birds

SAY'S PHOEBE (Sayornis saya)

Say's phoebe is found in Alaska during the breeding season, arriving in late May and leaving by the end of August. Gabrielson gives only one record for the southeastern region (a migrant). Trautman lists individuals in Glacier Bay for June 22 and 24; this writer heard and saw one at Goose Cove on August 12; and Welch reported the species for Muir Inlet on August 22.

Trautman suspected nesting on the basis of observing a "pair on territory (?) at Forest Creek." During the 1967 field season more evidence was obtained which may suggest nesting of Say's phoebe in Glacier Bay. On June 22 Crawford and this writer were hiking near the lake at the foot of The Nunatak when the former discovered a nest on a tiny ledge on a cliff under an overhang. It was only six feet from the ground, so it was an easy matter to see the four blind chicks with gaping yellow bills and a covering of purple down. The writer sat down near the nest to await and identify the adult. After a few minutes it arrived, but seemed reluctant to approach the nest. It sat in low brush or on the ground above the cliff, occasionally darting up to catch an insect. Finally it caught a moth and went directly to the nest. Unfortunately the light was behind the bird, and no markings were obtained.

A second visit was made the next morning, when the light was perfect. After an hour's wait with no action the writer looked again into the nest, and was surprised to find it completely empty. The adult was never seen again, so its identity remains a mystery, as does that of the agent which took the young out of the nest without disturbing a single twig. (The nest appeared to be out of reach of any mammalian predator.)

The nest was 7-8" across at the base, 4" in total height, and its cup was 3" in inside diameter. It was constructed mainly of moss, with some twigs and lichens, and was lined with a small amount of long, white hair (probably mountain goat) along with either filoplumes or cotton from Dryas.

From the flycatching activity of the bird and the nature of the nest, it seems that the bird in question might well have been Say's phoebe.

WESTERN FLYCATCHER (Empidonax difficilis)

The western flycatcher breeds in southeastern Alaska and winters farther south. Gabrielson indicates that this flycatcher is a fairly common summer resident of southeastern Alaska, but records for Glacier Bay are quite sparse. The Harriman Expedition took three specimens at Point Gustavus on June 10, 1899, which are now in the U.S. National Museum. Bailey saw one on the shore of Glacier Bay on August 15.

Breeding was established for Glacier Bay with the finding of a nest with three fresh eggs on July 19 near Coppermine Cove by Dixon of the Alexander Expedition.

Empidonax sp. Unidentified individuals of this genus were noted by Trautman on June 30, July 23 and 30.

OLIVE-SIDED FLYCATCHER (Nuttallornis borealis)

This flycatcher is thought by Gabrielson to occur in southeastern Alaska only as a rather unusual migrant. Trautman listed individuals for June 18 and 21.

VIOLET-GREEN SWALLOW (Trachycineta thalassina)

This beautiful swallow is found in southeastern Alaska during the breeding season only, but no nests are known for the region. Butts saw 10-15 individuals in Dundas Bay on May 10, 1964, and one near the bluffs on the north side of Beartrack Cove on July 1, 1961. This writer saw an individual at Goose Cove on June 7. Trautman listed two for June 18, four for the 20th, individuals for the 25th and 29th and two for July 18. He suspected nesting on the basis of seeing two pairs at Forest Creek and one pair in Adams Inlet between

June 18-20. Janda reported this species in a mixed group of swallows a mile up the Adams Glacier outwash on July 13, and reports seeing several near the big dock at Bartlett Cove during the nesting seasons of 1963 through 1967, although breeding has not been confirmed.

TREE SWALLOW (Iridoprocne bicolor)

The tree swallow is also found in southeastern Alaska only during the breeding season. Bailey found it common at Glacier Bay for the period June 12-20, and Jewett reported it for July 15-16, indicating that it was even more abundant than the barn swallow.

Jacot found tree swallows abundant in 1959, with flocks of 50 to 200 birds seen not uncommonly, but noted a sharp decrease in numbers the following year. Records for 1961, 1962, 1965 and 1967 also show a relative scarcity of this species, but Casey indicated that they were common around the big dock at Bartlett Cove during the summer of 1966. In 1967 this writer noted a few around the Salmon River bridge in early June and Streveler saw some at Bartlett Cove in early June and early July, but they were certainly not abundant.

The earliest recorded arrival for Glacier Bay is April 23 and the latest departure is July 30.

BANK SWALLOW (Riparia riparia)

The bank swallow reaches its breeding grounds in the more northerly parts of Alaska by an interior route, for the most part by-passing the southeastern region. Trautman saw at least eight pairs flying in and out of nesting holes and later saw young flying in Adams Inlet between June 22 and July 22.

BARN SWALLOW (Hirundo rustica)

The barn swallow is a common breeding bird in Glacier Bay, in some years (such as 1967) far outnumbering the other species of swallows. Its distribution in Glacier Bay and the span of egg dates are both wide, as indicated by the following breeding records: This writer watched two adults making repeated trips to a nest on a cliff at Goose Cove on June 7; Janda found a nest in a crevice near Vivid Lake on June 13, 1967; the Alexander Expedition noted about 50 pairs nesting on a cliff, with young nearly half-grown by July 15; Streveler reported that the young from the many nests on the big dock at Bartlett Cove were ready to fly on July 17; Crawford found a nest on a cliff on Lone Island in which two small chicks were seen on July 22; and this writer saw a nest with one chick in Tarr Inlet and a nest with two eggs and a day-old chick in one of the Ibach cabins at Reid Inlet,

both on July 23.

The earliest spring arrival for Glacier Bay is May 3 and the latest fall departure is August 26.

STELLER'S JAY (Cyanocitta stelleri)

Steller's jay is a permanent resident of the coastal forests of southeastern Alaska. Gabrielson notes that "several observers have remarked that they are rare and hard to find in the spring, but that they become conspicuous and numerous when the young get on the wing." National Park Service records for Glacier Bay show no sightings at all for May, June or July and indicate that the birds are common some winters and almost completely absent others. They are found at least as far north as Geikie Inlet.

During 1967 at Bartlett Cove, Streveler recorded them first on August 18, and occasionally thereafter through December; several were seen by him at Gustavus later in the winter, but the date was not recorded. A summer record from the literature is Jewett's sighting of several at Beartrack Creek on July 15 and at Dixon Harbor on July 17.

BLACK-BILLED MAGPIE (Pica pica)

The magpie winters regularly in southeastern Alaska, usually arriving in September and moving north again by early April. The various expeditions visited Glacier Bay during the summer months and thus missed the bird; but National Park Service records list it regularly during the winter at Bartlett Cove, where a few individuals are usually in evidence, and also for Excursion Inlet, the Gustavus area, Dundas Bay, Rush Point, Strawberry Island, Berg Bay, Willoughby Island, Tidal Inlet, Goose Cove, and elsewhere. Early fall arrival and late spring departure dates for Glacier Bay are September 11 and April 14.

COMMON RAVEN (Corvus corax)

The raven is a permanent resident in southeastern Alaska. It has been reported in Glacier Bay for every month and can be seen throughout the monument, often walking the beach turning over clumps of rockweed and eating the invertebrates found underneath. Butts saw one of a pair carrying nesting material in mid-March, but definite breeding evidence was first recorded by Trautman with the sighting of two adults and two young at Forest Creek on June 22.

The raven was regarded with respect by the native peoples of southeastern Alaska, as alsewhere, and the white man is probably expressing somewhat the same feeling in crediting the bird with extraordinary intelligence. Certainly it shows an apparent appreciation of the power of flight that is unusual among birds when it half folds its wings and rolls upside-down, coasting in this attitude for a moment before righting itself with a satisfied croak.

Anybody who has been fortunate enough to make the acquaintance of the raven will probably have similar stories to tell of its remarkable behavior.

NORTHWESTERN CROW (Corvus caurinus)

The crow, like the raven, is a conspicuous permanent resident of Glacier Bay. Like crows elsewhere, it tends to flock up in the fall and winter, though the groups have not been reported to number more than one or two hundred birds. Berg Bay appears to be a favored location, as flocks have been noted there in different years. Butts recorded several groups in that area which totaled about 750 birds on October 28. At least in the Bartlett Cove area, these flocks are highly mobile, being seen only sporadically at monument headquarters.

Dispersal occurs prior to the nesting season, when the usual group consists of ten birds or less. Jewett found the first breeding evidence with the sighting of a pair with four young on South Marble Island on July 14. Trautman found the only nest so far recorded for Glacier Bay on July 19 at Sealer's Cove, and saw an adult and young near Muir Point on July 23. This writer found an old crow's egg which had evidently been dropped by an egg-robbing bird near a bald eagle nest near Russell Island.

CHESTNUT-BACKED CHICKADEE (Parus rufescens)

The chestnut-backed chickadee is a permanent resident of southeastern Alaska and is the only breeding chickadee in the region. It has been noted for all months at Glacier Bay, with many more birds heard than seen.

There are no definite breeding records for the monument, although it is entirely likely that nesting does take place. Butts observed mating activity in late March, and Trautman suspected nesting on the basis of seeing a "family group, 2 adults 3 young?" at Bartlett Cove on July 31.

RED-BREASTED NUTHATCH (Sitta canadensis)

The red-breasted nuthatch reaches southeastern Alaska in the summertime and may breed here, but apparently withdraws for the winter. It is rather uncommon and has been reported for Glacier Bay only once. Butts saw an individual feeding along with many chickadees in the spruces at Bartlett Cove on March 17, 1961.

BROWN CREEPER (Certhia familiaris)

The brown creeper is resident in southeastern Alaska.

According to Gabrielson, Brooks took an individual at Point Gustavus on April 11, 1913.

Grinnell reported that an adult male was collected and another observed by Stephens on July 4. This writer saw a group of five at Bartlett Cove on July 6 and noted individuals at the same place on July 7, August 27 and September 23, and saw one at Beartrack Cove on August 4. Corson reported two for July 20-21.

This writer's most interesting sighting of the brown creeper occurred at Reid Inlet, far up the bay, on September 21. There are only four spruce trees and a small patch of alder growing there, remnants of the garden planted years ago by the Ibachs, to add a touch of the forest to this otherwise austere glacial scene. And yet there was the creeper, actively feeding in company with a pair of kinglets.

Our only winter record is that of Butts, who saw two in the alders at Bartlett Cove on January 31, 1962.

DIPPER (Cinclus mexicanus)

The dipper is resident in southeastern Alaska; it has been recorded from widespread places and throughout the year in the monument. Records exist from Bartlett Cove (January), Wood Lake (December), South Sandy Cove (February), Vivid Lake (June), Charpentier Inlet (June, breeding suspected), Carolus River (July), Shag Cove (August), Excursion River (October), Goose Cove (October). All sightings (except perhaps one) were made along streams, rivers, or adjacent lake shores.

WINTER WREN (Troglodytes troglodytes)

The winter wren is resident in southeastern Alaska. Individuals have been reported for Bartlett Cove for almost every month, but are infrequently seen. Janda reports that one will usually take advantage of the fall upsurge in the population of "daddy longlegs" and catch them on the screen door.

The only records away from Bartlett Cove are this writer's sightings of individuals near Sebree Cove on September 5 and at Reid Inlet on September 21, and Streveler's sighting of an individual in the Beardslee Islands on September 17, 1967.

ROBIN (Turdus migratorius)

The robin breeds in southeastern Alaska, usually arriving in late April or early May and remaining until September or October. The Alexander Expedition collected an adult and a young at Glacier Bay on July 8. Trautman suspected breeding on the basis of seeing flying young, recently fledged, on Red Mountain (east of Goose Cove) on July 18. A robin nested under the dock at the Bartlett Cove lagoon,

but abandoned the nest apparently due to constant foot traffic. The only successful nest on record is one found by Streveler at Bartlett Cove, the chicks of which had fledged by June 28.

The robin is most commonly seen in the more heavily vegetated portions of the monument, but this writer also saw them occasionally at the Reid Inlet and Goose Cove field camps in the upper bay. Early arrival and late departure dates for the monument are March 22 and September 30.

VARIED THRUSH (Ixoreus naevius)

The varied thrush is a common summer resident throughout the forested sections of southeastern Alaska. It usually arrives in March or April and leaves in September or October, but occasionally remains for the winter. It is abundant in the lower section of Glacier Bay from April through October, and has been recorded twice during winter at Bartlett Cove: Jacot saw one on November 28, 1958 and Streveler observed a very weak individual on January 19-20, 1968.

Trautman found a nest with two unfeathered young on June 14 in the Klotz Hills. Grinnell reported a nest with four newly-hatched young on July 16 and found old nests abundant through the woods at Coppermine Cove (near Rush Point) during the period July 10-20.

Outside of the winter records given above, early arrival and late departure dates for Glacier Bay are March 23 and October 30.

HERMIT THRUSH (Hylocichla guttata)

The hermit thrush is a common breeding bird in southeastern Alaska, arriving in late April or early May and leaving in September or October. Trautman found a nest with four eggs on June 20 on the Casement Glacier outwash and saw two pairs of adults feeding young near Muir Point on July 10. Grinnell notes that Littlejohn found a nest, also containing four eggs, on July 7, 1907. Howe saw an adult feeding young near Johns Hopkins Glacier on July 12, 1966, and Jewett noted young at Dixon Harbor on July 17.

This thrush is as much at home among the stunted willows near the snouts of the glaciers, where it feeds on such things as soapberries, as it is at the margins of the deep forest around Bartlett Cove, where salmonberries make up part of its diet.

Early arrival and late departure dates for Glacier Bay are May 2 and October 30.

SWAINSON'S THRUSH (Hylocichla ustulata)

Swainson's thrush is a summer resident of southeastern Alaska, arriving in May and leaving in August or September. It is less

common than the hermit thrush and spends less time in the region, so that records are fewer. The Harriman Expedition collected specimens from Point Gustavus and Glacier Bay proper on June 11 and 12, 1899, as did the Alexander Expedition on July 17 at Coppermine Cove. Trautman listed individuals for June 11 and July 29, and suspected breeding on the basis of seeing what appeared to be young of the year at Bartlett Cove on July 30. This writer saw two at Adams Inlet on August 7, of which one also seemed to be a young bird.

The lack of records for this species no doubt reflects its close resemblance to the more common hermit thrush. In early July, 1967, its song was heard considerably more often at Bartlett Cove than that of the hermit thrush. Early arrival and late departure dates so far available are June 11 and August 7.

GRAY-CHEEKED THRUSH (Hylocichla minima)

The gray-cheeked thrush migrates to its Alaskan breeding grounds primarily on the east side of the mountains. Gabrielson does not even list it for southeastern Alaska, describing it as "one of the characteristic birds of the willow and alder fringes along the small streams of the tundra," but Gordon regards it as "not too scarce during nesting season in low alder hillsides around Juneau." The habitat closer to the glaciers of the monument evidently suits its needs, for Trautman listed the species almost every other day during his 51-day study period. He also found two nests, one with two eggs and one with three, at Forest Creek on June 24.

MOUNTAIN BLUEBIRD (Sialia currucoides)

The mountain bluebird appears occasionally in southeastern Alaska as a migrant. The only record for Glacier Bay is this writer's sighting of a pair of females at Goose Cove on September 13. The birds were watched over a period of a half-hour as they perched on small willow bushes scattered around the open outwash, and were approached to within 30 yards at one point. They would occasionally fly up into the air to catch some insect, but would more often leave their perch momentarily to catch something at ground level among the stalks of Dryas that covered the plain.

GOLDEN-CROWNED KINGLET (Regulus satrapa)

The golden-crowned kinglet is a common permanent resident of southeastern Alaska but has been only sparingly recorded for Glacier Bay. The Alexander Expedition noted a very few on both shores of the monument and collected specimens on June 30 and July 4. Jewett saw them on July 15. National Park Service records list the species for June, August, September and November, mostly for

the Bartlett Cove area. The exception was an individual seen in the isolated spruces of the Ibach garden at Reid Inlet on August 21 by Mrs. Charlotte Hok. This writer saw an individual in the same place on September 21 in company with a second kinglet (which was not identified).

RUBY-CROWNED KINGLET (Regulus calendula)

The ruby-crowned kinglet breeds in southeastern Alaska, arriving in April and leaving, for the most part, in September. Gabrielson and the Harriman Expedition both noted its presence in Glacier Bay in June. The Alexander Expedition reported it as being more common in the monument than anywhere else in southeastern Alaska, and collected five specimens.

The song of this kinglet was the most conspicuous sound of the forest at Bartlett Cove during late May and early June. In early July a thin, high squeaking sound had taken its place, and came--as nearly as this writer could determine--from young of the year of this species.

Early arrival and late departure dates so far recorded for Glacier Bay are April 24 and September 23.

WATER PIPIT (Anthus spinoletta)

The water pipit is an abundant breeding bird in suitable terrain in Alaska. It spends the summer in the arctic zone, whether at 12,000 ft. in the southern Rocky Mountains or at sea level in northern Alaska. Gabrielson lists very little summer information for the species in the southeastern region, but in the more barren portions of the monument closer to the glaciers it is a common breeding bird. Trautman found eight nests on the east shore of Muir Inlet between Forest Creek and The Nunatak and on the Casement Glacier outwash. He listed 30-plus eggs and 30-plus young seen at the nests from June 13 to July 12, and noted young daily in July. Crawford found a nest at Reid Inlet which contained six eggs on June 24; two eggs and four chicks on the 26th; and not less than four chicks on the 28th. This writer found another nest at Reid Inlet, also on June 26, which had four eggs and one chick at 11 A.M. and two eggs and three chicks at 5:30 P.M.

Pipits gather in flocks after the breeding season and migrate slowly southward. This writer watched a group of fifteen feeding in leapfrog fashion on the mudflats at the Salmon River mouth on September 24. A bird would fly to the head of the advancing flock, land, and feed until it had been passed over by the birds behind it, when it would again fly to the head of the flock. Stefansson has described the same sort of behavior among grazing caribou in the Canadian Arctic. The impression is that the flock is progressing at a good rate, which it is, although any individual is moving quite slowly during those intervals when it is feeding.

Early arrival and late departure dates so far available for

Glacier Bay are June 7 and October 25.

NORTHERN SHRIKE (Lanius excubitor)

The northern shrike is found in southeastern Alaska during migration and in the winter. Butts reported individuals for February 25 and April 5, 1962, just east of the Good River, and for March 23, 1964, near the mouth of the Salmon River; Streveler saw them regularly in the Gustavus area and once at Bartlett Cove during winter 1967-68.

This writer first saw this shrike on September 12 as it sat on one of the antenna masts at Goose Cove. It eventually flew to the other mast and was seen feeding on red meat, which turned out to be the hindquarters of a deer mouse impaled on a piece of wire. The only other sighting made by this writer was of a single individual along the Gustavus road on September 24.

ORANGE-CROWNED WARBLER (Vermivora celata)

The orange-crowned warbler is a fairly common breeding bird in southeastern Alaska, usually arriving in May and leaving in September. The Harriman Expedition recorded it in June, but the Alexander Expedition failed to note its presence at all. Gabrielson listed it for Glacier Bay on June 7; Bailey saw two at Berg Bay on June 15; and Jewett found it fairly common in the willows at Beartrack River on July 15.

Trautman found three nests, each with five eggs, on June 14, 15 and 24 in the Muir Inlet area and noted 20-plus young through late July. He observed that orange-crowned warblers were found "everywhere but mostly along outwash channels."

National Park Service records for this warbler are few, although to judge by its song it is common in the alders at Bartlett Cove. The earliest recorded spring arrival and latest fall departure for Glacier Bay are April 27 and September 13.

YELLOW WARBLER (Dendroica petechia)

The yellow warbler is a rather infrequently-reported breeding bird in southeastern Alaska, although some of the lack of records may be explained by Gabrielson's statement that these birds "are not only among the later arrivals but they are also among the first to become inconspicuous. While they remain in Alaska until September, they are hard to find after the males have stopped singing and the young are large enough to forage for themselves. After that they slip silently away through the foliage and appear to be much more rare than is actually the case." Gordon finds them fairly common during the nesting season.

Trautman listed yellow warblers 29 times in 51 days, sometimes

seeing as many as 40 in a single day (June 14), although from one to five was more usual. He found a nest with five eggs on June 22 and saw many young in the lower elevations after June 30.

Like some other warblers, this bird appears to be equally at home in the alder thickets at the margins of the dense spruce forest around Bartlett Cove and in the stunted willows close to the glaciers. The earliest spring arrival for Glacier Bay is May 31 and the latest fall record thus far available is July 30.

MYRTLE WARBLER (Dendroica coronata)

Gabrielson writes that the myrtle warbler appears in southeastern Alaska largely as a migrant, although it may breed sparingly in the region. (Again, Gordon finds it fairly common during the nesting season.)

Butts saw an individual on June 8, 1961. Trautman recorded one for June 14, and Bailey reported them common on June 15. No nests have been found in the monument, but this writer saw an adult feeding a young at Bartlett Cove on July 6, and Jewett reported "a roving family of five" at Beartrack Cove on July 15.

Early arrival and late departure dates for Glacier Bay are April 27 and September 26. The fall record was for an individual in winter plumage seen by this writer at Bartlett Cove.

TOWNSEND'S WARBLER (Dendroica townsendi)

Gabrielson lists Townsend's warbler as an uncommon summer resident of the coniferous forests of southeastern Alaska, but Gordon has found it to be very common, "though one must know its song to be aware of its abundance."

There are three records for Glacier Bay. Gordon reported an individual in the woods near Bartlett Cove on May 23, 1967. Grinnell noted that a full-plumaged male, which was acting as though a nest were nearby, was collected by Hasselborg at Glacier Bay on July 9. Jewett saw two in the willows along the Beartrack River on July 15.

MacGILLIVRAY'S WARBLER (Oporonis tolmiei)

Southeastern Alaska lies at the northernmost edge of the breeding range of MacGillivray's warbler, which is seen rarely in the region. The first record for Glacier Bay was Corson's sighting of an individual on July 20-21, 1966. This writer saw an individual in an alder bush near Goose Cove on July 21. Janda, familiar with the bird from Montana, identified one at Bartlett Cove in the summer of 1966.

Gabrielson writes that "this is another warbler that skulks in the thickets and brush patches. Although it is a rather

strikingly colored bird, the opportunities to view it are usually somewhat limited," and notes that "this species offers unusual opportunities for study by resident Alaskan bird students." This writer believes that a student who knew the song and worked the alders in the breeding season would find this warbler more frequently in Glacier Bay than the above records would indicate.

YELLOWTHROAT (Geothlypis trichas)

The yellowthroat is rare in southeastern Alaska, which it reaches in the breeding season from the interior. Trautman listed individuals for July 17, 18, 20 and 22.

WILSON'S WARBLER (Wilsonia pusilla)

Wilson's warbler is common in southeastern Alaska in the breeding season. Trautman listed it for 36 of the 51 days of his study period and saw as many as 30 in a single day, although two to eight per day was more common. He found a nest with four eggs on June 18 and noted more than 20 young during the season. Janda saw an adult feeding a young at Bartlett Cove on July 3.

Wilson's warbler may be seen in the alder and willow shrub throughout the monument. It is probably no more abundant than the orange-crowned warbler, but seems to allow itself to be seen more often. Its song is heard very frequently in the breeding season.

Early spring and late fall dates for Glacier Bay are May 2 and September 4.

AMERICAN REDSTART (Setophaga ruticilla)

The American redstart breeds on the eastern side of the mountains in British Columbia, and appears in southeastern Alaska as a rare straggler. Ridgway of the Harriman Expedition took a male at Point Gustavus at the entrance to Glacier Bay on June 12, 1899, establishing the first published Alaska record for the species. Trautman listed an individual seen by E.E.Good and/or R.K.Burnard on July 20.

RED-WINGED BLACKBIRD (Agelaius phoeniceus)

Like the redstart, the red-winged blackbird breeds on the other side of the mountains and reaches southeastern Alaska only rarely (although it may be extending its range). The only record for Glacier Bay is of a female or immature watched over a period of 11 days from August 30 to September 9 by this writer at Goose Cove. Since it is a new sighting, the following summary of field

marks is given: size of robin; overall brown; heavily streaked on breast, the streaking continuing around to and including the nape; back scaly, with some orangish feather edgings; white wingbars visible, but no red at shoulder; crown decidedly darker than overall tone; light stripe over eye and pronounced yellow-orange stripe from below gape backward toward shoulder; eye dark.

The bird was frequently seen feeding on the seeds of beach rye-grass. It would gather three or four stalks under itself at a time to support its weight, sitting right up next to the heads, and then pick a seed, which it would mouth around until the husk popped away before swallowing it. It would then reach out, grab another stalk with its bill, and pass it to its feet with the rest and go on feeding. Of the four species of birds regularly seen sitting on the rye-grass stalks, it was easily the largest and the most adept feeder, although its greater weight did make it necessary to use more than one stalk for support.

The blackbird was constantly escorted by four cowbirds, and they made a strange family as they flew and fed together around the Cove for almost two weeks.

RUSTY BLACKBIRD (Euphagus carolinus)

The migration route of the rusty blackbird carries it mainly up the eastern side of the mountains, but it has been reported in southeastern Alaska as a fairly common migrant and occasional winter resident. Trautman listed four for July 28.

BROWN-HEADED COWBIRD (Molothrus ater)

The brown-headed cowbird is another bird which is normally found on the eastern side of the mountains but sometimes straggles to southeastern Alaska, and which may be extending its range. It is not listed at all in Gabrielson, but "Birds of Southeast Alaska" lists it as rare for all four seasons. It was first recorded for Glacier Bay when Trautman collected an individual in Muir Inlet on June 13. Janda reported "one positive, two probable" near the Casement Glacier outwash on September 10, 1966.

Janda and this writer saw two on the road at Gustavus on June 2, 1967. This writer watched the four that were in company with a red-winged blackbird between August 30 and September 9 at Goose Cove, and saw an individual fly from the back of a calf to the ground, then to the back of another cow in the Gustavus pastures on September 16.

PINE GROSBEAK (Pinicola enucleator)

The pine grosbeak is resident in southeastern Alaska, although its numbers may thin out in the winter as some move south along the coast. Bailey noted a couple of small flocks at the head of Berg

Bay on June 17. Grinnell wrote that Dixon found it fairly common on the west shore of Glacier Bay from July 10 to 20. Jewett saw a female at the Beartrack River on July 15, and Trautman listed the species six times in July while working in the forested areas around Mt. Wright. He saw a pair of adults with one young near Muir Point on July 5.

Butts lists two spring sightings for 1961. He saw seven on March 11 and one male and seven females on March 17, both along the road to Gustavus. Streveler saw two at Gustavus on November 25, 1967, our only fall sighting.

GRAY-CROWNED ROSY FINCH (Leucosticte tephrocotis)

The rosy finch is resident in southeastern Alaska, breeding in the mountains and wintering at lower elevations. It is a common bird in upper Glacier Bay, especially at higher altitudes (although it is often seen feeding on the beach). The Harriman Expedition found it at the top of Mt. Wright on June 11, 1899, and Bailey believed that those he saw at the head of Muir Inlet on June 19 were nesting or preparing to nest. On June 28 Mrs. Manya Wik saw an adult repeatedly entering a crevice on a cliff above Reid Inlet and heard the chicks responding. Trautman noted two young on June 26, juveniles begging for food throughout July, and at least 35 young, many bob-tailed, on July 26, all on or near the Casement Glacier outwash.

Rosy finches were conspicuously present all summer at Reid Inlet, where flocks of young were noted on July 23 and thereafter, and on The Nunatak, where this writer believes nests will eventually be found.

COMMON REDPOLL (Acanthis flammea)

The common redpoll is fairly common in southeastern Alaska during the winter and is uncommon in the breeding season. As with some other species which ordinarily move much farther north to nest, this bird finds suitable summer habitat in Glacier Bay near the receding glaciers, where it can be seen regularly in small flocks.

Trautman, working in the Muir Inlet area, noted an average of one or two dozen birds almost daily from June 11 to July 31, and counted as many as 110 in a single day (July 28). This writer listed redpolls 21 times during the field season, at Reid Inlet, Gilbert Island, Hugh Miller Inlet, Adams Inlet, Goose Cove and Nunatak Cove, and Streveler saw several flocks near the Grand Pacific Glacier on July 13, 1967. All of these areas are sparsely vegetated.

Breeding was first suspected by Jacot, who saw an abundance of the birds on Sealer's Island on July 7, 1960. Trautman found many nests, from the Casement Glacier to the Klotz Hills, which were already abandoned by the time of his arrival on June 13. He also saw parents feeding young, some of them still in down tufts, throughout

June. This writer noted flocks of immature birds at Reid Inlet in July. At least a few individuals pass through and/or winter in the forested parts of the monument: this writer saw a flock of eleven at Berg Bay on September 11, and Streveler reported about 100, mixed in with a flock of red crossbills, feeding on spruce seeds, at Bartlett Cove on February 3, 1968.

PINE SISKIN (Spinus pinus)

The pine siskin is a common permanent resident of southeastern Alaska, but records for Glacier Bay are sparse. The Alexander Expedition noted an individual on the west shore of Glacier Bay; Corson saw five on July 20-21; and Bailey reported flushing a flock of a dozen from among the alders on October 13. Trautman listed from two to 13 a day while working in the Klotz Hills and Muir Point area, and first saw young being fed by adults on July 6.

RED CROSSBILL (Loxia curvirostra)

The red crossbill is a fairly common permanent resident of southeastern Alaska. It is notably erratic, remaining in an area or moving on in response to the conifer seed crop, and nesting in practically every month. National Park Service records indicate that flocks of 15 to 35 were common in March and April of 1959 and then disappeared until the period March-May 1961, when a dozen were seen regularly. They next appear in the record on August 25, 1967, when Martin saw a pair at Echo Creek, on the outside coast, and on September 16 and 17, 1967, when Gordon reported 15 and 30, respectively, near Bartlett Cove. Sightings of large flocks (50-several hundred individuals) were numerous throughout the winter of 1967-68 at the latter locality and the Gustavus area. Perhaps this sizable wintering population was a result of the region's bumper spruce seed crop.

WHITE-WINGED CROSSBILL (Loxia leucoptera)

The white-winged crossbill is an uncommon permanent resident of southeastern Alaska. Like its red cousin, it is most frequently seen in roving bands which appear, stay for a short time, and then disappear, perhaps not to return for years. It also shares with the red crossbill, pine siskin and pine grosbeak the tendency to nest irregularly, at almost any season. Gabrielson writes that Brooks listed a male from Glacier Bay on April 11, 1913. Jacot noted a few mixed with red crossbills on March 4, 1959, and Butts saw 10-12 on May 15, 1964, both at Bartlett Cove.

SAVANNAH SPARROW (Passerculus sandwichensis)

The savannah sparrow is present in southeastern Alaska as a common migrant and as a fairly common breeding bird. Jewett reported a pair with young on North Marble Island on July 14 and

saw full-grown young and adults near the mouth of the Beartrack River on July 15. Trautman found two nests, each with five eggs, at Forest Creek on June 24; saw four small young on Sealer's Island on July 3; and noted bob-tailed young being fed by adults daily after July 10. Streveler found a nest with five eggs on the Bartlett River on June 19, noting that it had barely escaped flooding by a tide of 18.1 feet--which would mean that it was probably destroyed by the tides of 18.5 and 18.6 feet two or three days later. Crawford found a nest with five eggs on June 22 at Goose Cove, where this writer found an empty nest in the salt grass well below the high tide line. (If it had contained eggs, they were probably floated away by the salt water.) This writer also found a nest with five eggs at Reid Inlet on June 30.

The savannah sparrow is found throughout the monument in grassy areas, from the pasturelands of Gustavus all along the miles of beaches right up close to the glaciers, as at Reid Inlet. During the summer of 1967 it was easily the most abundant sparrow to be seen; it was impossible to walk through the salt grass or beach rye-grass without continually flushing birds. Its song was heard constantly early in the season, and in contrast to the varied repertoires of such singers as the fox, song and golden-crowned sparrows, was entirely constant, the little songster never tiring of singing its phrase in exactly the same way over and over. For most of the summer it was the only bird which would perch on rye-grass stalks--indeed, this habit alone would serve to identify it, if its chip wouldn't--but later in the season it was joined in this behavior by the tree sparrow, red-winged blackbird and brown-headed cowbird.

This sparrow ordinarily arrives in Alaska in May and leaves in September or October. Early spring and late fall dates for Glacier Bay are late April and October 2.

OREGON JUNCO (Junco oreganus)

The Oregon junco is a common breeding bird of southeastern Alaska, and a population remains for the winter. Grinnell reported that it was rather common on both shores of Glacier Bay, and that well-grown young were collected on June 30 and July 9. Trautman noted "almost full-tailed young" on July 10 near Muir Point and found stripe-breasted young common at Bartlett Cove on July 30.

This junco appears in National Park Service records sparingly for the months November through February, with one to six being sighted occasionally. The first arrivals for the breeding season are usually noted in March, and the outward movement is usually over by late September.

TREE SPARROW (Spizella arborea)

The tree sparrow is a fairly common migrant and an uncommon

winter resident in southeastern Alaska. Howe saw an individual eating seeds of rye-grass on Lester Island on January 22, 1967. This writer first identified three at Goose Cove on September 8, having been attracted to them by their loud, shorebird-like "peet", and saw ten on the 9th and seven on the 13th at the same place; individuals were also noted at Berg Bay on September 11 and at Bartlett Cove on the 19th.

An individual was once seen feeding on rye-grass at Goose Cove, but it appeared to be much less adept at this than the red-winged blackbird then in the area. The sparrow dropped a seed, and immediately fluttered to earth to pick it up--something the blackbird, with so much energy invested in gathering together in its toes enough stalks to hold it up, would never do as long as there was another seed left on the stalks. The sparrows were also observed hopping over to flowers, stretching their necks, and picking a seed or two from them as if browsing.

GOLDEN-CROWNED SPARROW (Zonotrichia atricapilla)

The golden-crowned sparrow is a common migrant and a fairly common breeding bird in southeastern Alaska. Three nests were found at Reid Inlet during the 1967 field season, and to judge by the numbers of adults around, many more might have been found.

The first nest found by this writer held four eggs from June 8-12 and four young from June 25-28. On the 29th two young were seen near the nest and on the 30th it was abandoned. The second nest had three eggs when found on June 11 and four eggs on the 12th. Four chicks were found in the nest on June 25, establishing the incubation time as not more than 14 days. The third nest was found by Crawford and contained four eggs on June 24-26. On the 28th there were three chicks along with one egg which never did hatch. Janda found a nest with three eggs near Vivid Lake on June 13, 1967. Breeding evidence was also obtained by Trautman, who noted adults feeding bob-tailed young on July 18.

The golden-crowned sparrow seems to be found throughout the monument in willow and alder scrub during migration, but in the summer it appears to favor the country closer to the glaciers, especially for breeding purposes. Its song, with its many variants, was the one most frequently heard at Reid Inlet in mid-June. It is notably more common during migration, with early spring and late fall dates for Glacier Bay of May 2 and October 1.

FOX SPARROW (Passerella iliaca)

The fox sparrow is a fairly common breeder and an uncommon winter resident in southeastern Alaska. Jewett saw three juveniles on South Marble Island and young just out of the nest on North Marble Island on July 14. Trautman found two nests with three eggs each near Forest Creek on June 24 and a nest with four eggs on July

12 near Muir Point. He also noted one young on Sealer's Island on July 12 and fledglings daily after July 15.

This sparrow is like some of the small warblers in being equally at home in the alder margins of the deep forest around Bartlett Cove and in isolated patches of brush near the glaciers. Trautman's daily bird counts indicate that it was one of the most abundant land birds seen during his study period, matched in numbers only by the redpoll and approached by some of the warblers.

There are no winter records for Glacier Bay. The earliest spring arrival is March 7. This writer found them abundant at Reid Inlet on September 21, feeding on a plentiful crop of soapberries. The latest fall record is October 17.

LINCOLN'S SPARROW (Melospiza lincolnii)

Lincoln's sparrow is in southeastern Alaska during the breeding season. Trautman saw small young out of the nest being fed by adults in a swamp near the Klotz Hills on July 4; and Jewett reported them common at Beartrack Cove and saw juveniles, some fully fledged and others recently out of the nest, on July 14.

This sparrow was not common in the upper bay in 1967, but could be seen sparingly in the alders and willows along stream bottoms.

Early spring and late fall departure dates so far available are June 17 and September 2.

SONG SPARROW (Melospiza melodia)

The song sparrow is a fairly common breeding bird and an uncommon winter resident of southeastern Alaska. The Harriman Expedition collected two breeding birds at Point Gustavus on June 10 and 12, 1899. Gordon saw an individual in the alders near the beach at Blue Mouse Cove on July 1, 1967. Trautman noted bobtailed young at Sealer's Island on July 12 and 19 and at Sebree Island on July 20, and saw an adult carrying food at Bartlett Cove on July 30. This writer noted several young on Lone Island on July 1.

The Alaskan forms of the song sparrow are notably darker than the races found farther south, as is the case with certain other species of southeast Alaska birds. In addition they prefer the beach environment, a specialization that is in contrast with their behavior elsewhere. This writer watched one catching insects that would fly up from among the barnacles on the exposed rocks at South Marble Island on June 20, and studied another that appeared to be getting small creatures by probing among the barnacles at Bartlett Cove on September 28.

This writer found song sparrows rather uncommon in the summer of 1967, and noticed that they were most likely to be found on small grassy islands of the same type preferred by nesting gulls. An increase in numbers was evident in the fall, and a rather vocal

individual added a touch of spring to the nippy autumn air at Bartlett Cove in early October.

Wintering individuals have been reported by Jacot for October, December, January and March at Bartlett Cove and Willoughby Island.

LAPLAND LONGSPUR (Calcarius lapponicus)

The Lapland longspur is found in southeastern Alaska as a fairly common migrant and is more often seen in the fall than in the spring. This writer saw flocks of 20 to 100 birds in the salt grass almost daily at Goose Cove from August 31 until leaving that field camp on September 14, and sighted five at Berg Bay on September 11 and flocks of ten and 50 on the flats near the Salmon River mouth on September 24 and 30, respectively. Bailey saw a band of twelve very tame birds feeding among dried vegetation in the Beardslee Islands on October 11. Streveler saw a flock of about 30 at Goose Cove on October 25, 1967.

Butts lists two spring sightings. He saw 150-200 at Gustavus on May 11 and 50 at Bartlett Cove on May 12, both 1964.

SNOW BUNTING (Plectrophenax nivalis)

The snow bunting is found sparingly in southeastern Alaska throughout the year, with somewhat increased numbers during the spring migration. Bailey suspected breeding on the basis of seeing the birds in twos and threes near the Muir Glacier on June 19. Trautman saw at least eight bob-tailed young near the Casement Glacier on July 2 and saw young frequently thereafter. The only nest so far recorded for Glacier Bay was found by Crawford near one of the Ibach cabins at Reid Inlet among the rocks shoring up the garden. It was possible to see the three eggs in the nest from June 24, when it was first discovered, until the date of the last visit, June 29.

In the summer the snow bunting appears to favor the barren country right next to the glaciers, but it has been reported in fall and winter farther down the bay as well. Streveler and this writer saw an individual at Bartlett Cove on October 3 and 6, respectively; Streveler and Janda saw one on Triangle Island, and about 75 at the Ibach cabins (Reid Inlet) eating sea beach sandwort stalks on November 7, 1967. Howe saw more than a hundred feeding on ryegrass seeds at the Bartlett River on January 20, 1967; and Butts saw from six to 50 on three occasions in the Bartlett Cove and Gustavus areas during March, 1962.

An interesting note is that the Institute of Polar Studies crew on the Casement Glacier observed snow buntings out on the ice at 3500 feet elevation, feeding on iceworms (which do indeed exist) during the summer of 1967.

HYPOTHETICAL LIST

REDHEAD (Aythya americana)

Gabrielson has no well-substantiated record of this species in Alaska. It is listed as "rare" during spring and fall in Birds of Southeast Alaska.

On October 25, 1967, NPS Research Biologist Dick Prasil identified one bird in a small flock of Barrow's goldeneyes winging over Goose Cove as a redhead. Howe, Janda and Streveler paid this flock moderate attention and noted no bird which struck them as belonging to this species. They felt that Prasil may have mistakenly identified one of the goldeneyes in eclipse-female plumage.

GYRFALCON (Falco rusticolus)

Though Gabrielson has no records from southeastern Alaska, Birds of Southeast Alaska lists the gyrfalcon as "uncommon" during spring and fall, "rare" during winter.

Streveler saw a falcon near the FAA complex at Gustavus, on January 20, 1968. He described the sighting thus: "Very light-colored falcon seen stooping on some mallards; flew straight at me, landed 200 yds. away. Large, flew ponderously for a peregrine (though had a suggestion of sideburns). Soared up to a height of 75 yds." Streveler had become quite familiar with gyrfalcons in the arctic during 1964, and felt that the bird described above fit his time-blurred mental picture of this species.

SPRUCE GROUSE (Canachites canadensis)

Franklin's spruce grouse (C.c. franklinii) was reported on August 2, 1961, by Butts, who recorded approaching a "male and covey of five" to within five feet at Hugh Miller Inlet. Gabrielson indicates that "Franklin's Grouse is a comparatively rare bird in southeastern Alaska, so far as known is confined to Prince of Wales, Warren, and Zarembo Islands" some 175 miles south of Glacier Bay. The birds in question may have been blue grouse, but it is difficult to understand how a male could have been confused at a range of five feet. Perhaps the notation should have been "female and covey of five," which would have pointed definitely to the blue grouse.

WARBLING VIREO (Vireo gilvus)

The warbling vireo is another bird which breeds in British Columbia on the other side of the mountains and occasionally straggles into southeastern Alaska via the river valleys that cut through to the coast. Gabrielson lists only two specimens from the region, and Birds of Southeast Alaska indicates that it is rare

here. Butts listed individuals at Bartlett Cove on April 27 and June 7, and observed "many" at Tidal Inlet on August 2. It is suggested that at least the "many" may have been immature orange-crowned warblers.

OTHER BIRDS TO BE LOOKED FOR IN GLACIER BAY NATIONAL MONUMENT

Mr. Rich Gordon has kindly supplied this list of birds which one might reasonably expect to find in the monument, based on their occurrence elsewhere in southeastern Alaska, but which are as yet unreported.

Slender-billed shearwater	Ocean; summer.
Leach's petrel	Ocean; outer coast; summer.
Shoveler	Migration and summer.
Ring-necked duck	Migration.
Solitary sandpiper	Migration.
Sharp-tailed sandpiper	Migration; especially outer coast.
Red phalarope	Migration; salt water, especially outer coast.
Glaucous gull	Winter.
Saw-whet owl	Year around; woods.
Red-shafted flicker	Migration and summer.
Traill's flycatcher	Summer. Fairly common in alder swamps around Juneau.
Hammond's flycatcher	Summer; woods.
Horned lark	Migration. Could conceivably breed.
Wheatear	Migration. Could conceivably breed.
Townsend's solitaire	Migration.
Bohemian waxwing	Winter. Irregularly common in Juneau.
Northern waterthrush	Summer; wet brushy woods.
Slate-colored junco	Winter.
White-crowned sparrow	Migration.

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