The avifauna of the Pond Inlet region, N.W.T.

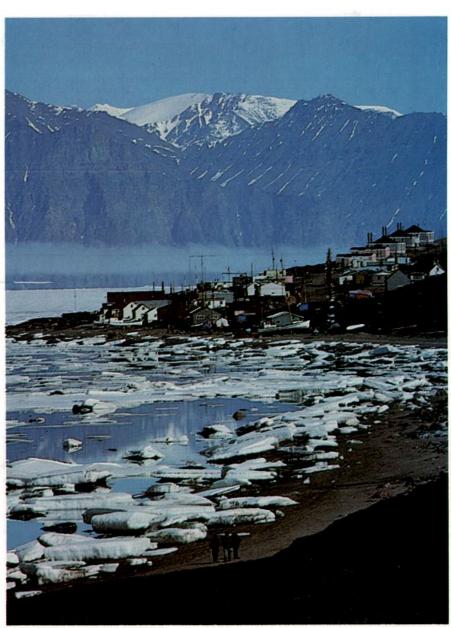
A spectacular mountain wilderness with a diverse arctic avifauna Wayne E. Renaud, W. Gavin Johnston and Kerwin J. Finley

ABSTRACT The status of 53 species of birds recorded in the Pond Inlet area in 1978-79, and seven additional species reported in previous years by other observers, is summarized. Thirty-six species provably or probably breed in the area, and an additional six species have been recorded as certainly or probably breeding in adjacent areas. The breeding species include most high arctic and pan-arctic species, and a smaller proportion of low arctic forms. Old World wintering forms that are local breeders or migrants include Brant, Ringed Plover, Ruddy Turnstone, Red Knot and Wheatear. The avifauna may be the most diverse in the Canadian arctic archipelago north of 70° N Lat.

POND INLET IS ONE of three marine channels dividing the 2300-km-long mountain chain that rims the Canadian eastern arctic from northern Ellesmere Island to southern Baffin Island. Adiacent lands on Bylot Island to the north and Baffin Island to the south of the inlet are mostly high, rocky and barren, and in many areas are covered by glaciers and snow caps. However, some coastal and interior lowlands provide small areas of a variety of terrestrial and aquatic habitats. Although located 1400 km north of the tree line, the Pond Inlet area has a diversity of high and low arctic species including several species of seabirds.

Previous accounts of the birds of the Pond Inlet area have been confined to brief observations (M'Clintock 1859, Low 1906, Lloyd 1922, Soper 1928, Shortt and Peters 1942, Baird 1940, Bray 1943, Duvall and Handley 1946, Ellis 1956, Tuck and Lemieux 1959, Van Tyne and Drury 1959). Horring (1937), and Kempf et al. (1978), reported more fully on the status of breeding birds; however, until 1978, when studies were undertaken in connection with proposed offshore drilling in northwest Baffin Bay, no long-term studies of bird distribution and status had been done. This paper describes the seasonal changes in status and distribution of all species known to have been recorded in the Pond Inlet area (Fig. 1; Table 1).

Except for studies conducted on Bylot Island (Tuck and Lemieux 1959, Van Tyne and Drury 1959, Kempf et al. 1978), the nearest avifaunal accounts are from Arctic Bay, Baffin Island, 220 km to the west (Renaud et al. 1979), Eglinton Fiord, Baffin Island, 270 km to the



Village of Pond Inlet. Photo/Wayne Renaud

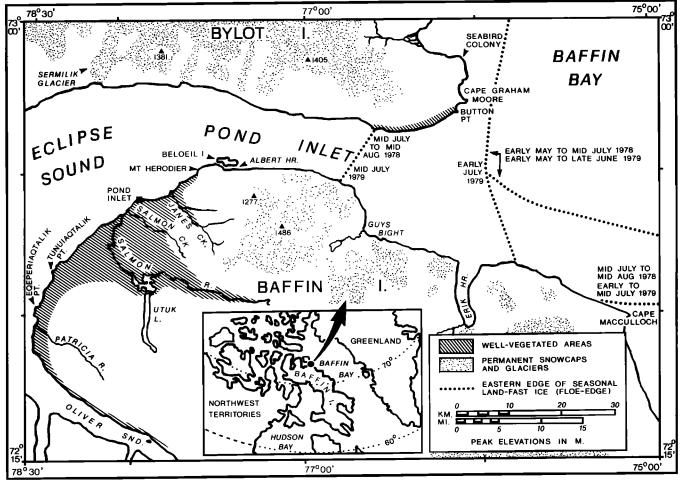


Figure 1.

southeast (Wynne-Edwards 1952), Truelove Lowland, Devon Island, 350 km to the northwest (Hussell and Holroyd 1974, Pattie 1977), and the Melville Peninsula, 400 km to the south-southwest (Bray 1943).

Bylot Island was established as a federal bird sanctuary in 1954 in order to protect the major nesting area of the Greater Snow Goose and two seabird colonies. Bylot Island, Eclipse Sound,

METHODS

DURING 1978 AND 1979, a team of biologists (including the authors) from LGL Ltd., studied various aspects of marine ecology in the northwest Baffin Bay area as part of the Eastern Arctic Marine Environmental Study (EAMES). Aerial surveys of coastal and offshore areas were conducted almost weekly from early May to mid-October in 1978, and from early May to mid-July 1979 and in September-October 1979. Small portions of each aerial survey were within the Pond Inlet study area. Birds were also recorded incidental to studies of marine mammals at the floe-edge in

eastern Pond Inlet in 1978 and 1979, and were the subject of a more intensive study there in June-July 1979. Information on offshore seabird distribution was also obtained during shipboard studies of seabird ecology in July-September in 1978 and 1979. All observations of terrestrial birds and terrestrial breeding of marine birds were made incidental to these marine studies, mostly near Pond Inlet settlement and at Button Point.

CLIMATE AND WEATHER

TABLE 2 GIVES MEAN daily temperatures and total precipitation for the April to October period when most birds are present in the area. The climate of Pond Inlet is Polar Continental and is typical of other high arctic communities. Winters are long with persistent cold; for over three months the sun is continuously below the horizon. The coldest month is February with a mean temperature of -26°C. April and May are often the most pleasant months, being characterized by abundant sunshine and few snowy or windy days.

Most snow disappears from low-lying areas in June, and ice in Pond Inlet breaks up in July and early August. July and August are the warmest months although even then snow showers may occasionally occur at sea level. Temperatures during these months rarely rise above 12° C (max.: 20° C), in coastal areas; however, inland areas that are less influenced by cool breezes off the sea ice or water may become considerably warmer.

The tundra vegetation begins to turn color during the third week of August when evening temperatures drop below freezing. Ponds and lakes usually freeze over during the second or third week of September. The sea ice begins to reform in early October and is usually well-consolidated by the end of the month.

The first day of continuously above freezing maximum temperatures occurred on June 5, 1978 and June 7, 1979. Streams and rivers began flowing by June 20, 1978 and June 15, 1979. However, owing to sublimation, large areas north of Utuk Lake were mostly snowfree by late May. The first permanent

120 American Birds, March 1981

Table 1 Summary of bird records for the Pond Inlet area (as defined in Fig. 1) ['+' = present, 'B' = evidence of breeding, 'B'' = possibly breeding, '?' = status uncertain.]

| | Soper 1928 | Hørring 1937 | Shortt & Peters 1942 | Ellis 1956 | Van Tyne & Drury 1959 | Tuck & Lemieux 1959 | Kempf <i>et al.</i> 1978 | Other | Snyder 1957 | Godfrey 1966 | 1978 | 1979 \ 11118 Keport |
|---|------------|--------------|----------------------|------------|-----------------------|---------------------|--------------------------|---------------------------|---------------|---------------|----------|---------------------|
| Common Loon | | В? | | | + | _ | + | _ | В | ? | _ | - |
| Yellow-billed Loon | <u> </u> | + | + | _ | <u>—</u> В? | _ | <u> </u> | _ | — В | _ | B? + | + + |
| Arctic Loon Red-throated Loon | · — | + | В | + | - | + | В | _ | В | В | B | В |
| Northern Fulmar | + | + | + | + | + | + | + | + 1 | _ | _ | + | + |
| Whistling Swan | ? | | _ | _ | _ | _ | | _ | _ | _ | _ | - |
| Canada Goose | _ | _ | _ | ? | + | _ | _ | _ | — В | <u>—</u> В | + | + + |
| Brant Barnacle Goose | _ | _ | _ | ? | | _ | _ | _ | <u> </u> | - | _ | - |
| Snow Goose | В | _ | + | + | + | _ | В | \mathbf{B}^2 | В | В | В | В |
| Mallard | _ | | _ | _ | _ | _ | _ | + 2 | _ | _ | _ | _ |
| Oldsquaw | + | + | В | + | _ | + | В | _ | В | В | В | B? |
| Common Eider King Eider | B? B? | B + | + | + | + | + | В — | $\frac{-}{B^2}$ | B B | B B | + B? | B B? |
| Red-breasted Merganser | D. | _ | _ | | + | _ | В | _ | _ | _ | + | B. |
| Rough-legged Hawk | _ | _ | | _ | ? | _ | _ | _ | | _ | + | + |
| Gyrfalcon | + | _ | _ | _ | В | _ | В | _ | В | В | + | + |
| Peregrine Falcon | _ | _ | _ | + | _ | _ | — В | _ | B B | ? B | — В | B? B? |
| Rock Ptarmigan Sandhill Crane | + | + + | + | ? | _ | + | В | 3,4,5 | , в В | ? | ъ + | В: В? |
| Whooping Crane | _ | | _ | _ | _ | _ | _ | +2 | _ | <u>-</u> | <u>.</u> | _ |
| Ringed Plover | + | ? | + | + | _ | | В | _ | В | В | + | B? |
| American Golden Plover | _ | _ | _ | _ | + | _ | В | | В | В | В | В |
| Black-bellied Plover Ruddy Turnstone | | _ | _ | + | _ | _ | B B | _ | B — | B B | B + | B + |
| Red Knot | _ | _ | | _ | _ | _ | _ | _ | _ | _ | + | + |
| Pectoral Sandpiper | - | _ | _ | + | _ | _ | _ | _ | | _ | B? | В |
| White-rumped Sandpiper | _ | _ | + | _ | _ | | В | _ | В | B? | В | В |
| Baird's Sandpiper | — | _ | _ | B — | _ | _ | B — | _ | B — | B B? | B — | B + |
| Sanderling Purple Sandpiper | + | + | + | _ | _ | + | + | | B | В: | + | + |
| Red Phalarope | _ | _ | <u>.</u> | + | _ | + | + | _ | _ | _ | В | + |
| Pomarine Jaeger | _ | _ | | _ | + | _ | _ | _ | В | _ | + | + |
| Parasitic Jaeger | _ | + | _ | _ | | _ | B? | _ | В | В | + | + D |
| Long-tailed Jaeger Skua | _ | + | + | + | B | _ | B — | _ | В — | В | В + | B — |
| Glaucous Gull | + | + | + | + | + | + | В? | _ | В | В | В | В |
| Iceland Gull | | _ | _ | | _ | _ | _ | _ | _ | _ | + | + |
| Great Black-backed Gull | _ | + | _ | _ | + | _ | _ | _ | | | + | + D2 |
| Thayer's Gull Franklin's Gull | + | _ | + | + | _ | _ | ? | _ | B | B | B? | B? + |
| Ivory Gull | | _ | _ | + | _ | _ | _ | | _ | _ | + | + |
| Black-legged Kittiwake | _ | В | + | + | В | В | + | _ | В | В | В | В |
| Ross' Gull | _ | _ | _ | | | _ | _ | _ | | | | + |
| Sabine's Gull Arctic Tern | _ | + | _ | + | + | _ | — В | _ | <u>В</u> | — В | ++ | ++ |
| Thick-billed Murre | В | В | + | В | В | В | + | $\overline{\mathrm{B}^4}$ | В | В | В | В |
| Dovekie | | _ | _ | + | + | _ | _ | _ | _ | | + | + |
| Black Guillemot | _ | + | + | + | + | | + | _ | В | В | В? | B? |
| Common Puffin | — В | | _ | _ | _ | _ | + B | _ | — В | — В | 1 | + |
| Snowy Owl Horned Lark | В ? | _ | + | ++ | _ | + | B B | | В В | В В | + B | B |
| Common Raven | + | + | + | + | + | + | + | _ | В | В | + | В |
| Wheatear | _ | _ | | _ | _ | _ | | +6 | В | В | _ | + |
| Water Pipit | | _ | + | + | | _ | В | _ | В | В | В? | В? |
| Yellow Warbler Hoary Redpoll | _ | <u> </u> | | _ | _ | _ | _ | $\frac{-}{?^3}$ | <u>—</u> В | <u> </u> | + | + |
| Common Redpoll | | <u>Б</u> | _ | _ | _ | _ | _ | _ | В | B? | - | + |
| Lapland Longspur | + | В | + | В | _ | | В | _ | В | В | В | В |
| Snow Bunting | + | + | + | + | + | + | В | _ | В | В | В | B? |
| - | | | | | | | | | | | | |

¹Low 1906, ²Lloyd 1922, ³Bray 1943, ⁴M'Clintock 1859, ⁵Baird 1940, ⁶ D. Spencer, *fide* R. Predy.

Volume 35, Number 2



Black-legged Kittiwake. About 2000 pairs nest at the seabird colony north of Cape Graham Moore. Photo / Wayne Renaud.

winter snowfall at the village occurred September 17, 1978 and September 27, 1979. In 1978, freeze-up of the sea began to occur in late September; in 1979 seaice did not form until mid-October.

TERRESTRIAL HABITATS

Few AREAS IN THE Canadian arctic exhibit more extreme altitudinal variation; both vegetation and terrestrial bird distribution are greatly influenced by the resulting local variation in the timing of snowmelt and subsequent length of the growing season. In 1978 and 1979, which

were years with below normal June temperatures, many species of birds failed to breed in areas above 150 m above sea-level, although during mid-summer these areas contained vegetation communities no less well-developed than corresponding sites near sea-level where densities of breeding birds were high.

Excessively dry and exposed areas, even near sea-level, may have poorly-developed plant communities, usually dominated by purple mountain saxifrage (Saxifraga oppositifolia). The Horned Lark is the only species that regularly occupies these habitats. The tundra more

characteristic of lowland areas supports a complete ground cover of vascular plants, mosses and lichens. Dominants in these communities include prostrate willows (primarily Salix arctica), several graminoids, and mountain avens (Dryas integrifolia). These communities are inhabited by Long-tailed Jaeger, American Golden Plover, Baird's Sandpiper and Lapland Longspur. Late melting snow on the lee sides of hills provides moisture for "seepage slope" communities, which contain a greater graminoid component, and are inhabited by White-rumped Sandpiper and (more locally) Pectoral Sandpiper.

The best-developed shrub communities on moist sites are dominated by white mountain heather (Cassiope tetragona), blueberry (Vaccinium uliginosum var. alpinum), Labrador tea (Ledum decumbens) and Richardson's willow (Salix richardsonii). In protected areas these willows grow to a height of 55 cm with a stem girth of 4 cm; Polunin (1948), the only botanist to have written about the area, noted that these were "by far the biggest land plants known so far in the Canadian Eastern Arctic." Although well-developed shrub communities are extensive in some areas.

Table 2. Summary of temperatures and precipitation at Pond Inlet village (averages taken from A.E.S. 1970).

| | | Apr. | May | June | July | Aug. | Sept. | Oct. |
|------------------|------|-------|-------|------|------|------|-------|-------|
| Mean Daily | Ave. | -21.6 | -8.8 | 1.3 | 5.1 | 4.7 | -1.1 | -10.3 |
| Temp. | 1978 | -24.3 | -10.3 | 0.3 | 4.7 | 3.9 | -4.8 | -17.2 |
| (0) | 1979 | -19.7 | -10.1 | -0.8 | 5.4 | 3.0 | -0.I | -12.4 |
| Total Ppin. | Ave. | 0.46 | 1.42 | 0.76 | 2.59 | 2.16 | 1.93 | 1.63 |
| (water equiv. | 1978 | 0.48 | 0.90 | 0.30 | 2.29 | 3.78 | 1.30 | 1.48 |
| in cm) | 1979 | 1.58 | 0.44 | 0.70 | 2.65 | 3.14 | 0.50 | 0.69 |

particularly along Janes and Salmon creeks, they do not appear to support any characteristic bird species.

Graminoids dominate in wet sites, and in places may grow to 35 cm in height and form tussocks. However, tussock tundra is very locally distributed and no thermokarst terrain exists. The most extensive wetlands are located near the mouth of Salmon River where a complex of raised beaches and ponds is utilized by nesting Red-throated Loon, Snow Goose, Oldsquaw, and (in at least some years) Red Phalarope.

The streams and rivers, most of which are fed by melting glaciers, are little utilized by birds. The major exception is the Salmon River where a moderate Arctic Char run probably accounts for the presence of Thayer's Gull, Glaucous Gull, and smaller numbers of loons and mergansers. The leads that form at river and creek mouths, especially Salmon River, in mid-to-late June support concentrations of loons, ducks, gulls and Arctic Terns.

Much of the terrain abutting northern and eastern Pond Inlet is rocky with little or no vegetation. Steep rocky mountain slopes, some rising to 1000+ m high, are occupied by only a few nesting Glaucous Gulls and Snow Buntings. Except for a narrow 16-km-long slope that extends southwest from Button Point,

there is little vegetated terrain along southeastern Bylot Island; even on this slope the diversity of both vegetation and birds is limited by early snowmelt, rapid drainage and very dry conditions caused by the southerly aspect and steep slopes. the only moist areas are along a few streams fed by melting glaciers at higher elevations. Between Cape Macculloch and Albert Harbour on the Baffin coast, vegetation is restricted to a few small pockets along rivers draining into Guys Bight and Erik Harbour.

Both 1978 and 1979 appeared to be years with low lemming numbers; however, in 1979 Brown Lemming (*Lemmus sibiricus*) was locally common in grassy areas in the village.

MARINE HABITATS

THE EXTENT OF THE sea-ice exerts both positive and negative influences on the distribution of seabirds by excluding them from areas of solid land-fast ice, but provides important feeding areas at certain ice-edges. During the winter and early spring, a recurrent ice-edge at the east end of Pond Inlet defines the eastern edge of the land-fast ice; east of this ice-edge, the packice of Baffin Bay is in motion all winter. The Black Guillemot is the only seabird that winters near this ice-edge. In late

April and May, as increasing amounts of open water become available along the ice-edge, the area becomes important to Northern Fulmar, Thick-billed Murre, Black Guillemot, Black-legged Kittiwake and Glaucous Gull. From May to July, Oldsquaw, King and Common eiders, and Arctic Tern migrate northwestward along the edge but large numbers seldom stop for very long. The offal of marine mammals left near Inuit hunting camps along the ice-edge attracts concentrations of Northern Fulmars, Glaucous Gulls, Ivory Gulls, Long-tailed Jaegers, Common Ravens and even occasional Ruddy Turnstones

The fast-ice of the eastern portion of Pond Inlet cracks and recedes in stages that are predictable from year to year (Fig. 1); the central and western areas of the inlet break up rapidly from mid-July to early August. The term 'floe-edge' used in the species accounts refers to the ice-edges present at the east end of Pond Inlet before the onset of rapid break-up in midsummer.

As the fast-ice in Pond Inlet and Eclipse Sound disintegrates in July, fulmar, kittiwake and small numbers of guillemot penetrate westward; fulmar and kittiwake often appear at the village when large shoreleads have formed in the otherwise unbroken fast-ice. During the open water season, from August to October, the largest feeding concentrations of seabirds in the area occur near the coasts of eastern Pond Inlet and adjacent Baffin Bay. After break-up during August and September, tideflats and beaches, most notably near the mouths of Salmon Creek and Salmon River, are utilized by migrant shorebirds and Water Pipit.



Red Phalarope, an irregular (?) breeder in coastal wetlands. Photo / Wayne Renaud.

MAN-INFLUENCED HABITATS

THE VILLAGE OF Pond Inlet, with a population of about 650, is the only permanent habitation in the area, seasonally-occupied outpost camps are located at Button Point and Guys Bight The ground at the village becomes free of snow before most other areas, and many of the first spring passerines and shorebirds were recorded there. Favored habitats included the raw sewage dump, the garbage dump and seepage slopes below the village houses. In fall, the village provides the last snowfree area where passerines can find weed seeds and refuse.

Volume 35, Number 2

SPECIES ACCOUNTS

T HE FOLLOWING ACCOUNTS summarize the status of 53 recorded in the area in 1978 and 1979, and 7 species reported by others. With few exceptions, our information from 1978-79 was based on sight records.

SPECIES OBSERVED IN 1978-79

Yellow-billed Loon (Gavia adamsii).

Rare visitant; possibly breeds. One or 2 individuals were seen at the floe-edge, June 18-July 5, 1978 (3 observations). Observed at Salmon R mouth in early August, 1978 (1 caught in a char net and later shown to KJF), and June 13, 1979. Two adults in breeding plumage with a large immature (either this species or G. immer) flew e calling near the village Sept. 15, 1978 but the color of the bill could not be determined. A Yellow-billed or Common Loon flew e near the village Sept. 8, 1979. (See also notes on Common Loon.)

Arctic Loon (Gavia arctica).

Rare breeder. One in winter plumage off Eqeperiaqtalik Pt., Sept. 12, 1978, and one in breeding plumage at Salmon R. mouth, June 13-26, 1979 Kempf *et al.* (1978) provide the only breeding record: 2 adults with 2 young at a lake near Eqeperiaqtalik Pt., Aug. 5, 1977.

Red-throated Loon (Gavia stellata).

Widely distributed breeder on lowland lakes and ponds. Arrival: June 18, 1978 and June 10, 1979. Max. count at Salmon R. mouth: 37 June 25, 1979. Seven nests with eggs were found in the village-Salmon R. area June 25-July 23; most were near the coast but 1 nest was found 12 km inland. Last seen Sept. 13, 1978 and Sept. 18, 1979.

Northern Fulmar (Fulmarus glacialis).

Abundant visitant. Summer observations probably include birds from Buchan Gulf (85 km s.e. of Cape Macculloch) where an estimated 25,000 pairs nest (Brown et al. 1975). Up to several hundred occur along the floe-edge from early May until break-up, when they disperse w into Pond Inlet and Eclipse Sound.; particularly common at Inuit hunter kills. Arrival at the village: July 11, 1978 and July 9, 1979. Thousands feed near coasts of e. Pond Inlet and adjacent Baffin Bayduring August and September (max.: 9000 s. of Cape Macculloch Sept 13, 1979; 7600 near Button Pt., Sept. 9, 1979). Complete departure by Oct. 10, 1978 and Oct. 17, 1979.

Canada Goose (Branta canadensis).

Rare visitant in 1979 to Salmon R. mouth, 1 on June 14 and 16; and floe-edge, 1 on June 24.

Brant (Branta bernicla).

Spring and fall transient; rare breeder. Migrants occur at the floe-edge from early to mid-June; small flocks occasionally stop to rest. The observation of 3 flocks totalling 120 flying w along ice-covered Pond Inlet n. of Beloeil I., June 5, 1978 indicates that at least some of those breeding on the central arctic islands may migrate *via* Pond Inlet and Eclipse Sound. Rare near village; 1 with a flock of Snow Geese at village June 10, 1978, and 4 adults with 6 flying juveniles at Salmon R. mouth, Sept. 8-11, 1979. Heyland (1970) reported a nest on s. Bylot I., probably just w. of our area, and Duvall and Handley (1946) sugested breeding, without supporting details, at Pond Inlet. However, Tuck and Lemieux (1959), Van Tyne and Drury (1959) and Kempf *et al* (1978) did not report nesting for n.e. Baffin or Bylot I., and the species is likely only an irregular breeder in this area.

Snow Goose (Chen caerulescens).

Common breeder along Salmon R. drainage, lowlands w. of the lower Salmon R., and near Cape Macculloch; uncommon elsewhere. First seen June 1, 1978 and May 29, 1979. A total of 13 nests was found on dry hillsides and hilltops, mostly 1-3 km from the Salmon R., June 25-July 8, 1979 (ave. clutch size, 4.13 eggs; range, 2-8). After hatching

in 1978 most broods in the Salmon R drainage moved to lakes along Salmon R., n. of Utuk L. (e.g., 35 + broods July 26). In 1977 Kempf et al. (1978), estimated 670 + adults between Salmon R. mouth and Utuk L. Peak hatch in 1978 probably occurred during the third week of July; in 1979 pipped eggs were found July 8 (4-egg clutch). Most Snow Geese leave in the last few days of August. Last seen Sept 9, 1978 and Sept. 13, 1979. The main migration to and from s.w. Bylot I., where 20,000 nest (H. Body in CW.S. 1972), occurs to the w. of the Pond Inlet area (P. Aglak, pers. comm.). One blue-phase individual was seen with a flock of 7 white-phase geese June 14, 1979.

Oldsquaw (Clangula hyemalis).

Common breeder in wetlands both inland and along coast. Spring migrants appear at the floe-edge in late May; dispersal onto terrestrial habitats occurs with snowmelt. Arrival at village: June 17, 1978 and June 10, 1979. Especially common at river and creek mouths, and in coastal leads in mid-June and early July (max.: 150 at Salmon R mouth June 17, 1979). In 1978, peak hatch occurred in the last week of July (e.g., 5 broods of 4-6 young near village July 28, 1978). Large numbers moult along coasts n. of Cape Graham Moore and s. of Cape Macculloch in August-September (max.: 2600 s. of Cape Macculloch Sept. 8, 1978). Common until Sept. 30, 1978 and Oct. 7, 1979; latest records Oct. 7, 1978 and Oct. 13, 1979.

Common Eider (Somateria mollissima).

Fairly common spring transient at the floe-edge; rare breeder. The first migrants appear at the floe-edge about mid-May and small flocks, often with King Eiders, occur until late July. Those noted in July, however, are mostly males (max.: 100 off Button Pt. July 15, 1978). None was seen at the village in 1978. Arrival there in 1979: June 15 (max.: 8 on June 28). A female nested unsuccessfully at the village in early July 1979 (S. Steltner, pers. comm.). Kempf et al. (1978) recorded a brood near Patricia R. mouth Aug. 3, 1977. Adult mages are scarce after mid-July. Over 6000 female-plumage eiders, including some male Common Eiders, were seen near Cape Macculloch July 16, 1978. Probably females and young remain until at least early October

King Eider (Somateria spectabilis).

Very common spring transient at the floe-edge; uncommon breeder Migrants appear at the floe-edge by the first week of May; dispersal inland, however, usually occurs with snowmelt. Only 2 certain observations at the village in 1978: 1 on May 2 (presumably this species since Common Eider did not arrive at the floe-edge until later), and 2 on July 3 at Salmon R. mouth. Observations of eider broods at Salmon R. mouth in late August-early September, 1978 were probably King Eiders. In 1979, eider flocks (again presumably this species) were seen at the village in the first week of May (P. Idlout, pers. comm), then none was seen there again until June 14 (11 individuals); seen regularly thereafter. Few males were identified in midsummer, but flocks of up to several thousand female-plumage eiders pass during an se migration (mostly in the e. portion of Pond Inlet) from mid-July to late August. Flocks of up to several thousand King Eiders including broods occur along s.w. Bylot I., and n.e. Baffin I., e. of Albert Harbour during August-September. Several hundred were keeping holes open in new ice, along coasts of the e. inlet Oct. 10, 1978 and Oct 17,

Red-breasted Merganser (Mergus serrator).

Rare breeder. Arrival at floe-edge: June 17, 1978 and June 18, 1979 A total of 7 observations; all adult groups consisted of 1-3 individuals A female with a brood of 8 flightless young was seen at Salmon R mouth Sept. 10-13, 1979. Probably the same female, with 3 flightless young near Salmon Creek mouth Sept. 14, 1979, was our latest record. Kempf et al. (1978) observed a brood near the outlet of Utuk L., Aug. 9, 1977. The nearest previously known breeding area, on s Baffin I., is located 600 km s.e. (Palmer 1976).

Rough-legged Hawk (Buteo lagopus).

Rare transient; may breed. Single individuals in light-phase plumage were seen at the village May 31, 1978 and Oct. 9, 1979. Breeds w of this area at Curry I., s. Eclipse Sound (nest with 1 large young Aug. 13, 1975—D. Spencer, *fide* R. Predy), and along Aktineqjuak R., s w Bylot I. (Tuck and Lemieux 1959).

Gyrfalcon (Falco rusticolus).

Rare breeder. A total of 9 observations of single birds June 10-Oct. 3; all but one were white-phase birds. Kempf *et al.* (1978) recorded a pair with flying young near Utuk L., Aug. 10-11, 1977.

Peregrine Falcon (Falco peregrinus).

Rare visitant; possibly breeds. Observed near the village lowlands in June 5, 1979 and Sept. 11, 15 and 27, 1979. All were single adults except on Sept. 15 when 2 adults flushed from a steep hillside s.w. of Janes Creek mouth and repeatedly dived and screamed at the observer; an hour later an adult and an immature were seen at Salmon R mouth. Ellis (1956) observed one at the village July 22, 1953. While considerably beyond the breeding range as given in Godfrey (1966), Van Tyne and Drury (1959) observed immatures in 1954 at Aktineq R, s.w. Bylot I. In August-September 1978, adult and immature Peregrine Falcons were seen at the murre and kittiwake colony near Cape Hay, n.w. Bylot I. (L.A. Patterson, pers. comm.). Peregrine Falcons have also recently been found nesting far to the n. at Truelove Lowland, Devon I. (Pattie 1977).

Rock Ptarmigan (Lagopus mutus).

Permanent resident. One breeding record, a brood of 10+ half-grown young near the village July 28, 1978. During spring, seldom more than 1 or 2 were seen in a day. More common by late September and October when flocks of up to 20 were reported. Many fresh feeding craters were seen along Salmon R. during December, 1978.

Sandhill Crane (Grus canadensis).

Rare breeder. One was seen along the lower Salmon R., Aug. 7, 1978. One, and probably 2, seen 2 km w. of Button Pt., June 28 and July 1, 1979, acted as though nesting. Kempf *et al.* (1978) recorded 2 adults with 1 flightless young near Utuk L., Aug. 8, 1977.

Ringed Plover (Charadrius hiaticula).

Uncommon transient; rare/uncommon breeder. Arrival: June 7, 1978 and June 3, 1979 (max.: 5 on June 6, 1979). Rare in July-August. A male displaying at the village June 18-24, 1979 was the only evidence of local breeding. Scattered individuals (max.: 5 on Sept. 10) remained on the tideflats until Sept. 12, 1979. All small plovers are included here as Ringed Plovers, although the neck-banding on some individuals appeared to be more similar to that of the Semipalmatus Plover (C. semipalmatus). Only Ringed Plover has been collected at Pond Inlet (Soper 1928, Hørring 1937, Shortt and Peters 1942). Fairly common breeder in s.w. Eclipse Sound: Robertson R. mouth, five individuals showing evidence of having broods Aug. 6, 1978.

American Golden Plover (Pluvialis dominica).

The most frequently seen breeding shorebird both inland and in coastal areas. Arrival: June 12, 1978 and June 3, 1979. Plovers arrived in groups of up to 8 individuals, dispersed and began displaying by June 15, 1978, and June 10, 1979. Three nests found June 29-July 23, each with 4 eggs. Departure in 1978 not known but some individuals remained on the tundra until Sept. 17, the day of first permanent winter snowfall; in 1979 some fed on the tundra until Sept. 10 and a few remained on the tideflats until Sept. 23 (max.: 23 on Sept. 10).

Black-bellied Plover (Pluvialis squatarola).

Rare breeder along coast; absent inland. Arrival: June 12, 1978 and June 10, 1979. One pair nested near Salmon R. mouth in both years; 4 eggs, July 13, 1978 and July 7, 1979. At least 2 other males displayed 3 km w. of there in late June 1979. Last seen Sept. 17, 1979.

Ruddy Turnstone (Arenaria interpres).

Uncommon transient; rare breeder. Arrival: June 3, 1978 and June 1, 1979. Regularly seen on seepage slopes and beaches along coast until late June (max.: 10 on June 16, 1979); rare in July-August. Last seen Sept 12, 1979. We found no evidence of breeding, but Kempf *et al.* (1978) recorded 2 pairs nesting at Tunuiaqtalik Pt., in 1977.

Red Knot (Calidris canutus).

Fairly common spring transient; June 3-22, 1978 and June 3-July 4, 1979 (max.: 17 on June 3, 1978). One fall record, 1 on Sept. 11, 1979.

Pectoral Sandpiper (Calidris melanotos).

Rare breeder along seepage slopes of lower Salmon R. One record in 1978: 1 adult giving a distraction display Aug. 7. Arrival in 1979: June 16; up to 4 seen displaying daily thereafter. A nest with 3 eggs June 27 contained 4 eggs the following day. Last seen Sept. 12, 1979

White-rumped Sandpiper (Calidris fuscicollis).

Common breeder near coast where it is as numerous as Baird's Sandpiper; much rarer inland. Restricted to seepage slopes and wet meadows. Arrival: June 18, 1978 and June 5, 1979 (although not common until mid-June in 1979). Four nests, each with 4 eggs, were found June 27-July 7. Flocks remained on the Salmon R./Salmon Creek tideflats until Sept. 16, 1979 (max.: 72 Sept. 10).

Baird's Sandpiper (Calidris bairdii).

Common breeder in dry habitats both coastally and inland. Arrival: June 12, 1978 and June 1, 1979. Nests found near the village June 23 (3 eggs) and July 9, 1979 (4 eggs); and at Button Pt., June 29-July 2, 1979 (4 eggs). Broods, still in the nest July 13, 1978 (3 chicks; 3 chicks and 1 egg). Small flocks gathered on the tideflats through September (max.: 21 on Sept. 13, 1979); in 1979, from 1-4 were seen regularly until Oct. 3.

Sanderling (Calidris alba).

None seen in 1978. Uncommon transient at the village June 4-19, 1979 (max.: 7 on June 10). Occurs as a rare breeder on s.w. Bylot I. (Van Tyne and Drury 1959), and could be expected to nest in the Pond Inlet area.

Purple Sandpiper (Calidris maritima).

Rare/uncommon transient. One individual June 16 was the only record in 1978. From 1-4 daily at or near the village June 5-17, 1979 Occurs as a breeder on n.w. Bylot I. (Tuck and Lemieux 1959), and could be expected to breed locally. Presumed fall migrants have been observed previously as early as July 31, 1977 (Kempf et al. 1978) From 1-11 on rocky rideflats off Salmon Creek mouth Sept. 8-26, 1979.

Red Phalarope (Phalaropus fulicarius).

Rare/uncommon breeder. Arrival at floe-edge: June 17, 1978 and 1979; at village: June 21, 1978 and June 18, 1979. Scattered pairs nested in wetlands near the village and Salmon R. mouth in 1978. single broods less than 1 week old July 25 and 29. Less common in 1979 with no certain breeding records. Last seen Sept. 18, 1978

Pomarine Jaeger (Stercorarius pomarinus).

Uncommon transient at the floe-edge; present on our arrival June 16, 1978 and 1979 (max.: 3 on June 18, 1978). An unidentified immature jaeger was seen in Pond Inlet Oct. 4, 1978.

Parasitic Jaeger (Stercorarius parasiticus).

Uncommon summer visitant; probably breeds locally during years with peak lemming populations. One or 2 noted irregularly June 17-Aug. 6, 1978, and June 14 to at least July 8, 1979. Last seen Sept 9, 1978. Breeds on s.w. Bylot I. (Tuck and Lemieux 1959).

Long-tailed Jaeger (Stercorarius longicaudus.)

Fairly common breeder near the village in both 1978 and 1979; more common as a summer non-breeder. Arrival at village: June 2, 1978 and June 7, 1979. In 1978, up to 20 were present in the shore lead off the village through late June and July. Loose groups of up to 12 also were seen hunting along Salmon Creek in late June 1978, and along the grassy slopes below the village in late June 1979. Several pairs nested within 5 km of the village each year. One nest with 2 eggs n of the village June 30, 1978; one fledged young Aug. 7, 1978. Complete departure in both years by late August.

Skua (Catharacta sp.).

One was seen at close range at the floe-edge June 18, 1978.

Glaucous Gull (Larus hyperboreus).

Very common summer resident. The first spring migrants appear at



Ringed Plover, an uncommon transient and rare breeder. Photo / Wayne Renaud.

the floe-edge in late April or early May. Dispersal inland somewhat delayed; arrival at the village: May 22, 1978 and May 24, 1979. Most abundant at the village in late May/early June (max.: 105 at dump June 2, 1979); numbers decline by mid-June. About 50 pairs nested on an island in Oliver Sound (72°17.4′N; 77°53.0′W) in 1978, and 2 pairs nested on rocks in the Salmon R., near Utuk L., in 1979 (2 nests, each with 3 eggs July 8). In both 1978 and 1979, solitary pairs nested on cliff ledges along the mountainous s. coast of Bylot I., and a colony of 50-60 pairs nested s. of the seabird colony near Cape Graham Moore. Flocks of up to 110 occur along the lower Salmon R., from August until early October. Small groups, mostly young of the year, were still present Oct. 15, 1978 and Oct. 17, 1979.

Iceland Gull (Larus glaucoides.)

Rare/uncommon summer visitant seen only at the village. Noted in 1978 on June 6-11 and Sept. 9, and regularly in 1979 June 4-27 (max.: 5 adults June 4).

Great Black-backed Gull (Larus marinus).

Rare visitant. Single adults were seen at an ice crack near Beloeil I. (June 8, 1978), along the coast near Mt. Herodier (Sept. 26, 1978) and at the floe-edge (May 21, 1979).

Thayer's Gull (Larus thayeri).

Very common visitant; probably breeds. Most common near the settlement; arrival: June 3, 1978 and May 28, 1979. Large flocks gather at the village dump in early to mid-June (max.: 95 June 10, 1979). Remained common near the village through the summer; much less common at the floe-edge. Suspected of breeding on a small island n. of Albert Harbour where newly-fledged young were observed in August 1978. Numbers increase again near the village in September (max.: 100 Sept. 11, 1979). Adults rare after mid-September. Departure of immatures: Sept. 29, 1978 and Oct. 7, 1979.

Franklin's Gull (Larus pipixcan).

An adult in breeding plumage observed and photographed at the village dump June 9-14, 1979 provided the first record for the Northwest Territories (photos examined and identification verified by W. E. Godfrey, National Museum of Canada, Ottawa).

Ivory Gull (Pagophila eburnea).

Spring and fall transient; early summer visitant. Arrives at the floe-edge in late May. Non-breeders remain to feed at Inuit hunter kills until July when the ice-edge breaks back and less offal is available. Max. at the floe-edge in 1978 was 6 on May 29. In 1979, flocks of up to 50 were present at kills along the floe-edge and the total population may have exceeded 100 individuals. Latest summer record July 18, 1978. Earliest autumn record Sept. 9, 1978 (1). Ivory Gulls are the latest migrants to pass through the Pond Inlet area in autumn and few had arrived by the time aerial surveys ceased Oct. 19, 1978. The largest flocks were observed feeding on seal offal near the village in 1979: 17 from Oct. 7-13 and 375 on Oct. 16.

Black-legged Kittiwake (Rissa tridactyla).

Abundant breeder on the cliffs 8 km n. of Cape Graham Moore; an estimated 2000 pairs nested there in 1979. Arrival: May 15, 1978 and May 25, 1979 (May 18 just to the s.e.). Kittiwakes disperse w through Pond Inlet and into Eclipse Sound at break-up and flocks of up to several hundred gather to feed along tiderips through early October (max. at village/Salmon R. mouth: 640 Sept. 16, 1979). In 1978 the first individuals were seen at the settlement Aug. 1. A flock of 18 at Salmon R. mouth June 14, 1979 represented the only spring record w of the floe-edge.

Ross' Gull (Rhodostethia rosea).

An adult in breeding plumage was closely observed flying, and later sitting on the sea-ice with kittiwakes, at the seabird colony n. of Cape Graham Moore July 2, 1979.

Sabine's Gull (Xema sabini).

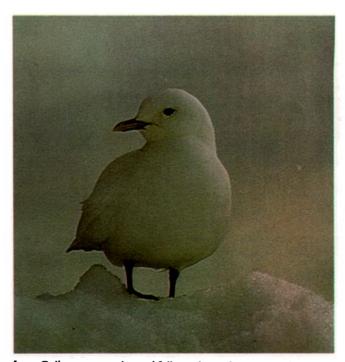
Rare transient at the floe-edge. Single adults June 17-30, 1978 (3 observations) and June 26, 1979. Has nested on w. Bylot I. (Tuck and Lemieux 1959) and hence may be expected to breed occasionally in this area.

Arctic Tern (Sterna paradisaea).

Common summer visitant and local breeder. Spring arrival at the village: June 17, 1979. Up to 50 were noted in leads off Salmon R. and Salmon Creek in late June/early July 1979, but none nested. Kempf et al. (1978) found Arctic Terns nesting at the mouth of Salmon Creek in 1977. Last seen Sept. 18, 1978.

Thick-billed Murre (Uria lomvia).

The only colony in the area, located on cliffs 8 km n. of Cape Graham Moore, s.w. Bylot I., comprises 20,000 breeding pairs (Brown et al. 1975). Arrival at the floe-edge occurs in first half of May; peak numbers occur from early June to early July (e.g., 22,000 along an ice-edge near the colony July 1, 1979). Numbers present along the ice-edge from mid-June to late July vary daily from thousands to almost none. Eggs are laid in late June or early July and most hatch by late July; chicks fledge in mid- to late August. Few murres disperse w into w.



Ivory Gulls occur as spring and fall transients; they are especially common at the floe-edge in late May-early July and near the village in October where they gather to feed on seal and whale offal. Photo / Kerwin Finley.

126 American Birds, March 1981

Pond Inlet and e. Eclipse Sound after breakup. There were only 3 records at the village: 1 adult Aug. 9, 1978, 1 flightless chick Sept. 14, 1978, and 1 adult flying over the sea-ice May 31, 1979. The main exodus occurs in late August and early September, but a few remain until late September.

Dovekie (Alle alle).

Abundant spring migrant in the Baffin Bay pack-ice just e. of this area from mid- to late May. Rare at the floe-edge until June when flocks of up to 100 apparent non-breeders occur, usually when onshore winds blow pack-ice against the floe-edge (max.: 4 flocks totalling 135 June 19, 1978). Present at the floe-edge until at least July 19, 1978. Scattered individuals were observed offshore in Pond Inlet and Eclipse Sound in mid-August and September, 1978 and mid-September, 1979. Several flocks of 20-40 were observed in Baffin Bay s.e. of Cape Macculloch Sept. 28, 1979.

Black Guillemot (Cepphus grylle).

Permanent resident; rare in winter, and uncommon/fairly common at the floe-edge during June-July. Shortt and Peters (1942) reported that guillemots wintered at the Pond Inlet floe-edge. None was seen during aerial surveys of the floe-edge in mid-March 1978, but scattered individuals were observed along n.e. Bylot I. (Renaud and Bradstreet 1980). The main spring influx begins in early to mid-May; from then until late July up to 100+ may be seen along the floe-edge. Guillemots likely nest in scree slopes along s.e. Bylot I., n. of Cape Graham Moore, but it is doubtful that they nest extensively along the inner inlet as indicated by Brown et al. (1975). After break-up some disperse w along s. Bylot I. (max.: 61 seen during a coastal aerial survey from Button Pt., to Sermilik Glacier Aug. 25, 1978). Rare along s.w. Pond Inlet and s.e. Eclipse Sound: 1 flushed from a cliff at Beloeil I., July 30, 1978 (breeding?); 1-3 Salmon R. mouth June 26-28, 1979.

Snowy Owl (Nyctea scandiaca).

Rare transient; known to breed locally, although no evidence of nesting was found in 1978 or 1979. Only 2 records: 1 at the floe-edge June 30, 1978 and 1 flushed off an iceberg near the village Sept. 26, 1979. In past years nests have been found near the settlement (Joe Enook, pers. comm.) and Kempf et al. (1978) observed a nest along the Salmon R., in 1977.

Horned Lark (Eremophila alpestris).

Common breeder along coast; uncommon inland. Arrival: June 9, 1978 and May 29, 1979. Nests were found July 13, 1978 (4 eggs) and June 27, 1979 (4 young about 1 day old). Particularly common along gravel ridges between the village and Salmon Creek, where as many as 10-12 could be seen singing in June. Last seen Sept. 13, 1978 and Sept. 27, 1979.

Common Raven (Corvus corax).

Common permanent resident. Ravens gather along the floe-edge from May to July to feed at Inuit hunter kills (max.: 64 June 8, 1978). They disperse to coastal areas after ice break-up in July/August and begin to gather at the village dump by late September (max.: 50 Oct. 4, 1978; 95 Oct. 7, 1979). The village raven population numbered about 65 in winter 1978-79 (cf. Finley 1979). One recently-used nest was located on a cliff ledge about 10 km s.e. of Pond Inlet in July, 1979.

Wheatear (Oenanthe oenanthe).

Rare visitant; probably breeds. One male was seen near Button Pt., June 29, 1979. D. Spencer (fide R. Predy) observed 2 Wheatears at Mt. Herodier Aug. 18, 1975. S. Steltner (pers. comm.) saw 1 at the village dump in late June 1978, and observed this species several times at the village, usually during August 1972-1977. There are no definite breeding records of Wheatears on n. Baffin I., n. of Eglinton Fiord (Wynne-Edwards 1952), but the discovery of a newly-fledged brood at Aktineq Glacier, s.w. Bylot I., in 1977 (Kempf et al. 1978) suggests that local breeding can be expected.

Water Pipit (Anthus spinoletta).

Uncommon breeder; locally distributed. Arrival: May 29, 1979. Sing-

ing males and adults with nesting material or giving distraction displays were noted in ravines throughout the area. The largest number (4+ pairs) was seen near the w. base of Mt. Herodier in late June 1979. Observed daily during September (max.: 18 in groups of 1-5, Sept. 15, 1979). Last seen Oct. 5, 1978 and Oct. 3, 1979.

Yellow Warbler (Dendroica petechia).

A dead immature found by D. Workman near the Salmon R. mouth Oct. 7, 1978 is now in the National Museum, Ottawa (S. Steltner, pers. comm.).

Hoary Redpoll (Carduelis hornemanni).

Permanent resident. A total of 9 redpoll records, 2 in 1978 and 7 in 1979: June 3-October 11 (max.: 8 on Sept. 15, 1979). The 4 groups identified to species were Hoary Redpolls. Freuchen recorded 4 pairs nesting at Pond Inlet June 18, 1924 (Hørring 1937). Bray (1943) noted that "the natives say . . . they [redpolls] are commoner in winter than in summer . . . at Pond Inlet."

Lapland Longspur (Calcarius lapponicus).

Very common breeder. Arrival: May 19, 1978 (although none was again noted until June 16) and May 29, 1979. During late June up to 100 (mostly singing males) could be seen during an afternoon hike Seventeen nests were found; 15 with eggs, June 28-July 16. In 1978 nearly-fledged young were first seen July 23; in 1979 fledged young were first observed July 7. Departure in 1978 occurred by mid-September. In 1978, flocks of up to 12 occurred until Sept. 18 and a few individuals remained until Oct. 1.

Snow Bunting (Plectrophenax nivalis).

Fairly common breeder; restricted to rocky tundra and ravines. Arrived about mid-April in 1978 and 1979 (J. Enook and P. Idlout, pers comm.). In 1978 small flocks of up to 22 (May 14) were common by mid-May, but in 1979 few were observed until late May. One nest found along Salmon Creek contained 2 eggs June 22 and 3 eggs the following day. Last seen Oct. 8, 1978; 4 still present Oct. 19, 1979

SPECIES NOT OBSERVED IN 1978 OR 1979

Common Loon (Gavia immer).

This is considerable confusion over which species of large loon nests on n. Baffin I. According to Hørring (1937), Freuchen observed adult and young Common Loons off Salmon R. mouth in July 1924 However, Hørring remarked that "Freuchen in his notes on the Great Northern Divers from more southerly localities hardly distinguished between Colymbus immer and C. adamsii, and his accounts are therefore all stated under . . . [Common Loon] . . . to which they apply in all probability." Were it not for several subsequent observations of apparent Common Loons, one would be tempted to conclude that Freuchen's records for Pond Inlet were of Yellow-billed Loons Van Tyne and Drury (1959) gave hypothetical status to Ferris' observations of a Common Loon at Salmon R. mouth in late June 1954, and noted that their Inuit informants recognized the Common Loon and had an Inuktitut name for it (although they did not mention Yellow-billed Loon). In 1977, Kempf et al. (1978) noted a Common Loon at Aktineq R., off s. Bylot I. July 19, and another at Utuk L., Aug 9, but expressed doubt that the species nested locally. Freuchen's records were probably the basis of including Pond Inlet in the breeding range of the Common Loon in 1957 (Snyder 1957), although Godfrey (1966) later questioned whether the Common Loon breeds at so northerly a latitude.

It thus appears that both Common and Yellow-billed loons have occurred in the Pond Inlet area, although determination of the breeding status of the two species must await further observations. Common Loon nests on s. Baffin I., and w. Greenland (Salomonsen 1950, Godfrey 1966), and Yellow-billed Loon nests on Melville Peninsula and s Somerset I. (Godfrey 1966).

Whistling Swan (Olor columbianus).

Soper (1928) gave one uncertain record: "a short distance inland from Ponds inlet on Sept. 2, 1923, a flock of large, white birds resembling

swans was observed high overhead bearing southwards. Their notes were different from those of geese, being soft, flute-like." The recent discovery of breeding Whistling Swans at Mala R., 90 km w.n.w. of Pond Inlet village in 1970 (Mary-Rousseliere and Heyland 1974), and a sighting of an adult with a young in the same area Aug. 9, 1975 (D. Spencer, *fide* R. Predy), suggest that swans may, indeed, occur occasionally near Pond Inlet.

Barnacle Goose (Branta leucopsis).

One uncertain record near Button Pt., June 8, 1954 (Ellis 1956). The only specimen for Baffin I., was collected far to the s. at Boas R., in August 1924 (Taverner 1927).

Mallard (Anas platyrhynchos).

Lloyd (1922) reported a female at Pond Inlet during summer 1912.

Whooping Crane (Grus americana).

Lloyd (1922) reported 2 at Pond Inlet during summer 1912. This rec-

ord was ignored by Snyder (1957) and Godfrey (1966), presumably because it was a second hand report made by an inexperienced observer. It seems most likely that the birds were Sandhill Cranes (*G. canadensis*), rather than Whooping Cranes.

Common Puffin (Fratercula arctica).

Kempf et al. (1978) observed puffins in Eclipse Sound on 5 occasions (2-5 birds per observation) in late July and August 1977. One photographed at Cape Hay, n.w. Bylot I. Aug. 17-Sept. 4, 1978 was thought to be the Greenland subspecies F. a. naumanni (W.E. Godfrey, pers comm.). Thus, the few puffins noted in the Canadian high arctic may be dispersing from colonies located in n.w. Greenland (Salomonsen 1950).

Common Redpoll (Carduelis flammea).

Snyder (1957) indicated nesting along s.e. Eclipse Sound and Godfrey (1966) also suggested possible breeding in n.e. Baffin I. We know of no specific records for the Pond Inlet area.

DISCUSSION

TABLE 3 SUMMARIZES the biogeographical affinities of proven and suspected breeding species in the Pond Inlet area. The Ringed Plover, Ruddy Turnstone and probably rarely Brant and Wheatear are the only Old World wintering forms known to breed locally; the local migrant Red Knot is probably the European subspecies (cf. Synder 1957). The Hoary Redpoll of n. Baffin I., is apparently referrable to the Greenland race (cf. Synder 1957).

A total of 18 pan-arctic (throughout the arctic) breeders may nest in the area (15 have been proven) compared to 12 low arctic (7 proven) and 12 high arctic (8 proven) species; hence, the total number of suspected breeding species is 42 (30 proven; 6 probable; 6 possible).

The breeding species have predominantly pan-arctic distributions. A smaller number of typical high and low arctic species breed. Only 2 species characteristic of the high arctic are not known to breed in the Pond Inlet area: Ivory Gull and Red Knot. Red Knot did not breed in the low tundras visited by us in 1978 and 1979 [or by Kempf et al. (1978) in 1977]. The complete absence of Ivory Gulls during August of both 1978 and 1979 suggests that they also do not nest in this area.

Low arctic forms are represented by nine proven or probable, and another three possible breeders. Only the American Golden Plover, Horned Lark and Water Pipit are widely distributed in the Pond Inlet area, and of these only the American Golden Plover is common. The other species appear to be on the periphery of their ranges in the Pond Inlet area. Of interest is the complete absence of many typical low arctic species as breeders (e.g. Whistling Swan, Canada Goose, Willow Ptarmigan, Northern Phalarope).

This peculiar mixture of high and low arctic species, including several "North Atlantic" seabirds (Thick-billed Murre, Black Guillemot, Black-legged Kittiwake) produces a unique breeding avifauna that is certainly the most diverse yet documented for that latitude (73°N) and probably the most diverse in the Canadian arctic islands north of 70°N Lat

Table 3. Breeding range biogeography of species nesting in the Pond Inlet area. Cosmopolitan species are listed under their predominant distribution within their arctic range. Species suspected of breeding on the basis of summer occurrence only are indicated '?'; other species known to breed on s.w. or n.w. Bylot Island and that may eventually be found breeding in the area are enclosed in parentheses: '(?)'.

| Geographic Affinity | Pan-arctic | Low Arctic | High Arctic |
|------------------------|----------------------------|--|--|
| Continuously or | Red-throated Loon | Arctic Loon | Glaucous Gull |
| Discontinuously | Oldsquaw | Red-breasted Merganser | Rock Ptarmigan |
| Circumpolar | Common Eider | Horned Lark | Black-bellied Plover |
| | King Eider | Water Pipit | Ruddy Turnstone |
| | Gyrfalcon | Yellow-billed Loon? | Red Phalarope |
| | Long-tailed Jaeger | Peregrine Falcon? | Hoary Redpoll |
| | Arctic Tern | (Pomarine Jaeger ?) | Brant? |
| | Thick-billed Murre | (Rough-legged Hawk ?) | (Sanderling ?) |
| | Black-legged Kittiwake | (Sabine's Gull ?) | (Purple Sandpiper ?) |
| | Snowy Owl | | |
| | Common Raven | | |
| | Lapland Longspur | | |
| | Snow Bunting | | |
| | Parasitic Jaeger? | | |
| | Black Guillemot? | | |
| New World | Snow Goose | Sandhill Crane American Golden Plover Pectoral Sandpiper | White-rumped Sandpiper Baird's Sandpiper Thayer's Gull ? |
| Old World | Ringed Plover (Wheatear ?) | | |

ACKNOWLEDGEMENTS

THE INFORMATION PRESENTED here was gathered during, and incidental to, research funded by Petro-Canada Exploration, Inc. as part of the Eastern Arctic Marine Environmental Studies (EAMES) and conducted by LGL Ltd. Our co-workers contributed many important records included here and commented on the manuscript: M.S.W. Bradstreet, J. Field, M.A. Gollop, S.R. Johnson, W.R. Koski, J. Kristenson, P L. McLaren, G. Miller, L.A. Patterson, C.J. Risley, and R.E. Salter. We thank W.J. Richardson and R.A. Davis for their comments on an earlier draft of the manuscript. Excellent logistic support for the EAMES studies was provided by G. Glazier, H. Hume and G. Koenig.

S. Steltner made additional sightings and provided copies of field notes made by D. Spencer (originally to R. Predy, former game officer). W.E. Godfrey kındly examined the slides of Franklin's Gull and Common Puffin.

Publication of this paper was partially funded by Petro-Canada Explorations Inc.

LITERATURE CITED

- A E.S. (ATMOSPHERIC ENVIRONMENT SERVICE). 1970. Temperature and precipitation. 1941-1970. The North—Yukon Territory and Northwest Territories. Dept. Environment, Downsview, Ontario.
- BAIRD, P.D. 1940. British expedition to North Baffin Island, 1938-39. *Polar Rec*ord 19:225-227.
- BRAY, R. 1943. Notes on the birds of Southhampton Island, Baffin Island and Melville Peninsula (with comments by T.H. Manning). Auk 60:508-539.
- BROWN, R.G.B., D.N. NETTLESHIP, P. GERMAIN, C.E. TULL and T. DAVIS. 1975. Atlas of eastern Canadian seabirds. Can. Wildl. Serv., Ottawa. 220 pp.

- C W S (Canadian Wildlife Service) 1972. Arctic ecology map series. Descriptive reports. 2nd ed. Information Canada, Ottawa. 324 pp.
- DUVALL, A.J. and C.O. HANDLEY. 1946. Report on wildlife reconnaissance of the eastern Canadian Arctic. Special Report, U.S. Dept. of Int., Fish and Wildl. Serv., ms. rept. 138 pp. (Also Can. Wildl. Serv., Ottawa, Rept. C.W.S. 239. 138 pp.)
- ELLIS, D.V. 1956. Observations on the migration, distribution and breeding of birds in the Canadian Arctic during 1954 and 1955. *Dansk Ornith. Foren. Tiddsskr.* 50:207-230.
- FINLEY, K.J. (compiler). 1979. The seventyninth Audubon Christmas Bird Count: Pond Inlet, Baffin I., N.W.T. *Am. Birds* 33:374.
- GODFREY, W.E. 1966. The birds of Canada. Natl. Mus. Canada Bull. 203. 428 pp.
- HEYLAND, D.J. 1970. Brant breeding on Bylot Island, N.W.T. Can. Field-Nat. 84:397.
- HØRRING, R. 1937. Birds collected on the fifth Thule Expedition. Rept. 5th Thule Exped. 1921-24, 2, No. 6 (Zool.: Birds). 134 pp.
- HUSSELL, D.J.T. and G.L. HOLROYD. 1974. Birds of the Truelove Lowland and adjacent areas of northeastern Devon Island, N.W.T. Can. Field-Nat. 88:197-212.
- KEMPF, C., X. HARMEL, B. SITTLER, and A. PIANTANIDA. 1978. Notes geomorphologiques, ornithologiques et mammalogiques sur L'île Bylot et la région de Pond-Inlet.—Canada. Raport d'expédition 1977. Groupe de Recherche en Ecologie Arctique, Scheltigheim, France.
- LLOYD, H. 1922. Some of Captain Henry Toke Munn's observations on the birds of Baffin Island and vicinity. *Can. Field-Nat.* 36:49-50.
- LOW, A.P. 1906. The cruise of the Neptune. Ottawa. 355 pp.
- MARY-ROUSSELIERE O.M.I., GUY and J.D. HEYLAND. 1974. The whistling swan nesting on northern Baffin Island, Northwest Territories. *Can. Field-Nat.* 88:92.
- M'CLINTOCK, F.L. 1859. The voyage of the 'Fox' in the Arctic seas. A narrative of the discovery of the fate of Sir John Franklin and his companions. John Murray, London. 402 pp. + map.

- PALMER, R S (Ed) 1976 Handbook of North American birds. Vol. 3. Waterfowl (Part 2). Yale Univ. Press, New Haven 560 pp.
- PATTIE, D.L. 1977. Population levels and bioenergetics of arctic birds on Truelove Lowland. pp. 413-436. *In:* L.C. Bliss (Ed.). Truelove Lowland, Devon Island, Canada: a high arctic ecosystem. Univ Alberta Press, Edmonton, Alberta 714 pp.
- POLUNIN, N. 1948. Botany of the eastern Canadian Arctic. Part III: vegetation and ecology. *Natl. Mus. Canada Bull.* 104 Ottawa. 304 pp.
- RENAUD, W.E. and M.S.W. BRAD-STREET. 1980. Late winter distribution of black guillemots in northern Baffin Bay and the Canadian high Arctic. Can Field-Nat., 94:421-425.
- _____, S.R. JOHNSON and P.D. HOLLING-DALE. 1979. Breeding birds of Arctic Bay, Baffin Island, N.W.T., with notes on the biogeographic significance of the avifauna. Arctic 32:122-134.
- SALOMONSEN, F. 1950. The Birds of Greenland. Vols. 1 and 2. Munksgaard, Copenhagen. 608 pp.
- SHORTT, T.M. and H.S. PETERS. 1942 Some recent bird records from Canada's Eastern Arctic. *Can. Journ. Res.* 20 338-348.
- SNYDER. J.D. 1957. Arctic birds of Canada. Univ. Toronto Press, Toronto, Ontario. 310 pp.
- SOPER, J.D. 1928. A faunal investigation of southern Baffin Island. *Natl. Mus. Canada Bull.* 53. 143 pp.
- TAVERNER, P.A. 1927. Some recent Canadian records. Auk 33:217-228.
- TUCK, L.M. and L. LEMIEUX. 1959 The avifauna of Bylot Island. *Dansk Ornuth Foren. Tidsskr.* 53:137-154.
- VAN TYNE, J. and W.H. DRURY, Jr 1959. The birds of southern Bylot Island, 1954. Occasional Papers of the Museum of Zoology 65:1-37. Univ. Michigan, Ann Arbor, Michigan.
- WYNNE-EDWARDS, V.C. 1952. Zoology of the Baird Expedition (1950). 1. The birds observed in central and southeastern Baffin Island. *Auk* 69:353-392.

—LGL Ltd., environmental research associates, 44 Eglinton Ave. W., Toronto, Ontario M4R 1A1.

Volume 35, Number 2