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Nesting Status of the Common Eider in the Central Alaskan Beaufort Sea, Summer 2001



Prepared for

BP EXPLORATION (ALASKA) INC.
Environmental Studies Group
P.O. Box 196612
Anchorage, Alaska 99519-6612



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ABSTRACT

Global sea duck populations appear to be in decline, including the Pacific race of the common eider (*Somateria mollissima v-nigrum*). Whether or not this decline is expressed in nest numbers found in the vicinity of Alaska's North Slope oilfields is not known. To assess the nesting status of common eiders in this region, common eider, glaucous gull (*Larus hyperboreus*), and arctic tern (*Sterna paradisaea*) nests were located on 9 barrier islands along the central Alaskan Beaufort Sea coast from Thetis Island to the Stockton Islands during 12–16 July 2001. Common eider nests were most numerous, accounting for 82% (110 of 134) of all active nests within the approximately 308.1-ha area searched. Glaucous gull and arctic tern nests represented approximately 16% (21 of 134) and 2% (3 of 134), respectively, of all active nests. Mean and 95% confidence intervals of clutch size for common eider nests were 2.7 ± 0.43 eggs per nest ($n = 43$) and for glaucous gulls 2.4 ± 0.39 eggs per nest ($n = 16$). Active common eider nests were not distributed evenly across islands and island groups searched during 2001 either in proportion to island surface area ($P < 0.001$), or in proportion to the available island area with driftwood habitat ($P < 0.001$). In both cases, there were more active nests on the McClure Islands and Lion Point than expected, and fewer active nests on the Stockton Islands than expected. Of the islands searched during 2001, Narwhal Island supported the most active common eider nests (27%, 30 of 110) although nest density was highest on Duck Island #1&2 and on Lion Point. Duck Island #1&2 also supported the highest number and density of glaucous gull nests. Of the 620 active and failed common eider nest sites with habitat data, 3 nest sites (<1%) were within buildings, 23 nest sites (4%) had no driftwood, 307 nest sites (49%) were located in

low-density driftwood, 218 (35%) were in medium-density driftwood, and 69 (11%) were in high-density driftwood. More active nests than depredated nests were found in high-density driftwood, and fewer were in low-density driftwood on islands searched during 2001 ($P < 0.001$). Active and depredated nests were distributed similarly within medium-density and no driftwood habitats. Predation by arctic fox and glaucous gulls at the islands searched in 2001 had a marked impact on nesting success of common eiders (82% of 620 nests were depredated). Because common eiders are long-lived and exhibit remarkable fidelity to nest sites, it seems reasonable to concentrate nest searches on those islands which consistently support large numbers of nesting eiders. The most productive nesting islands from 1970–2001 have included Cross Island (mean = 116.8 nests/year), Pole Island (mean = 59.1 nests/year), Stump Island (mean = 48.9 nests/year), Egg Island (W) (mean = 45.8 nests/year), Lion Point (mean = 48.0 nests/year), and Thetis Island (mean = 39.4 nest/year). During the period 1970–1991, many islands had 14 or more years of data. During the period 1998–2001 most islands had 3 years of data. The mean annual number of nests for 25 islands was lower during 1970–1991 (485 nests/year) than during 1998–2001 (589 nests/year). Variation for individual islands was high and the paired difference for 1970–1991 (19 ± 11.6 [95% confidence limit] nests/island) and 1998–2001 (24 ± 13.3 [95% confidence limit] nests/island) by individual island was not significant ($P = 0.236$). Variation in timing of nest searches across years may influence the number of active nests counted because of missed late-initiated nests, early failed nests, or not recognizing some empty nests as hatched.

Key words: arctic tern, driftwood habitat, egg depredation, glaucous gull, *Larus hyperboreus*, *Somateria mollissima v-nigrum*

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Nesting Status of the Common Eider and Other Barrier Island Nesting Birds in the Central Alaskan Beaufort Sea, Summer 2001

INTRODUCTION

Global sea duck populations appear to be in decline, including the Pacific race of the common eider (*Somateria mollissima v-nigrum*; Elliot 1997; USFWS 1999). Oil and gas exploration and development activities have been implicated in nesting failures by causing disturbance, nest abandonment, habitat destruction, and facilitating nest and duckling depredation.

Although several hundred thousand eiders of 4 species migrate to the Beaufort Sea each spring (Dickson 1997), only 2000 to 3000 common eiders (*Somateria mollissima v-nigrum*) nest along the Beaufort Sea coast of Alaska (Johnson and Herter 1989, Johnson 2000). Most common eiders nest in loose aggregations or colonies on coastal sand and gravel barrier islands and many of the most productive aggregations occur in driftwood accumulations on relatively high-elevation islands that lie in the flood plumes of large rivers. Common eiders initiate nests during mid- to late June (Johnson and Herter 1989), producing an average of 4 eggs, which they incubate for approximately 26 days. Female common eiders generally select nest sites in areas with relatively dense driftwood and/or beach rye grass (*Elymus arenarius*) that provide concealment for the hen and nest. However, common eider nests are sometimes located on bare sand/gravel without driftwood or vegetative cover. Peat banks may also be used for nesting, with hens making nest bowls within the eroded and terraced peat shorelines. Hatching success is positively correlated with cover density (Schamel 1977, Johnson et al. 1987). Broods remain near lakes, in tidal ponds or lagoons, or in the nearshore-ocean for up to 6 to 12 weeks before migrating out of the Beaufort Sea (Johnson 2000). Details on the biology of common eiders in the Alaskan Beaufort Sea are described by Johnson (2000).

Predation on eggs and ducklings by arctic foxes (*Alopex lagopus*) and glaucous gulls (*Larus hyperboreus*) can be heavy in some years (Larson 1960), and has been shown to be a major factor in population declines of common eiders in southern

Sweden (Pehrsson 1973). A study that assessed impacts of petroleum development activities on nest success of common eiders on Thetis Island, off the Colville River delta, indicated that restrictions in low-level aircraft over-flights, limited human intrusions, and removal of arctic foxes, substantially increased common eider hatching and fledging success compared to most other wild populations (Johnson 1984, Johnson et al. 1987).

Other species that nest on barrier islands include glaucous gulls and arctic terns (*Sterna paradisaea*). In the Alaskan Beaufort Sea, glaucous gulls nest on coastal gravel/sand bars and low islands (Johnson and Herter 1989), and are most abundant on barrier islands adjacent to river outflows. As with common eiders, glaucous gulls probably select these islands because they are surrounded by open water during spring runoff, which isolates these sites from mammalian predators. Barrier islands provide gravel/sand areas with sparse vegetation, which is the preferred nesting habitat for arctic terns (Hawksley 1957 in Johnson and Herter 1989).

Study Rationale

Recently there has been concern over the apparent decline in 10 of the 15 species of North American sea ducks (Elliot 1997, USFWS 1999). These include species occurring within the central Alaskan Beaufort Sea: long-tailed duck (*Clangula hyemalis*), common eider, king eider (*Somateria spectabilis*), spectacled eider (*Somateria fischeri*), Steller's eider (*Polysticta stelleri*), black scoter (*Melanitta nigra americana*), surf scoter (*Melanitta perspicillata*), and white-winged scoter (*Melanitta fusca deglandi*). Specific concern has been expressed with the reported 54% decline in the number of common eiders migrating past Point Barrow in the spring between 1976 and 1994 (Suydam et al. 1997, USFWS 1999). The Alaska Natural Heritage Program, the U.S. Geological Survey Biological Resources Division and the Alaska Audubon have listed the common eider as a species of concern.

The development of oil and gas reserves in the nearshore Beaufort Sea increases the risk of damage and/or disturbance to biological resources from industry related activities such as aircraft over-flights,

marine vessel traffic, construction of gravel islands, drilling activities, accidental oil or fuel spills, and increased predator populations. Understanding the impact of ongoing operations and projected developments to productivity and survival of common eiders is essential for planning and development of mitigation strategies. Continued monitoring of nesting common eiders on the barrier islands will provide useful information to resource agencies and industry during planning, development, and operation of nearshore oil and gas facilities.

Since the early 1970s, sporadic agency and industry sponsored studies have documented the nesting effort of common eiders on Beaufort Sea barrier islands between the Colville and Canning Rivers (Schamel 1974; Gavin 1976; Divoky 1978; Johnson and Richardson 1981; Johnson 1984; USFWS, Office of Ecological Services, Fairbanks, Alaska [unpublished data]; Noel et al. 1999a, 2001; Noel and Johnson 2000; Flint et al. 2001; Lanctot et al. 2001). Research efforts declined during the 1990s, but with prospects for development in the Point Thomson Unit, were resumed in 1998 (Noel et al. 1999a, 2001; Noel and Johnson 2000; Flint et al. 2001; Lanctot et al. 2001). Since 2000, LGL Alaska Research Associates, Inc. and the U.S. Geological Survey, Alaska Science Center have cooperatively censused the central Alaskan Beaufort Sea barrier islands for nesting common eiders. Dividing the effort among these islands has allowed for the collection of a more complete data set.

Issues

Four aspects of oil and gas development can affect common eiders and other species that nest on barrier islands in the central Alaskan Beaufort Sea: (1) disturbance and displacement during nesting, (2) loss of nesting habitat, (3) potential increased predation by arctic foxes, glaucous gulls, grizzly bears (*Ursus arctos*), and polar bears (*Ursus maritimus*) that may be attracted to development, and (4) exposure to spilled oil or fuel from nearshore developments.

Objectives

The objectives of this study were to:

1. Determine the distribution and abundance of common eiders and other species nesting on barrier islands in the central Alaskan Beaufort Sea for 2001.
2. Determine the presence of mammalian and avian predators on these barrier islands and document nest depredation.

3. Mark a sample of common eider females to determine nest site fidelity among selected barrier islands.

ISLAND DESCRIPTIONS

It is important to understand that the configurations of the barrier islands along the coast of the central Alaskan Beaufort Sea are constantly changing (Figure 1). Ice movement and ice override along the northern sides of the barrier islands often rearrange large quantities of sand and gravel on the barrier islands, primarily during late winter/spring when heavy winter ice is driven against the barrier islands by strong easterly winds. During the summer and fall open water period, strong winds, waves, and long-shore currents move large quantities of sand and gravel westward, thereby eroding away northern and eastern portions of the islands and adding to the western ends of the islands.

In addition to these constructional events caused mainly by ice, winds, waves, and currents, strong west and southwest winds during the fall often cause storm surges that result in significant increases in nearshore sea level and flooding of low-lying portions of the barrier islands. These flooding events often rearrange driftwood and other buoyant debris (i.e., common eider nesting habitat) in such a way that it is concentrated on the highest portions of the barrier islands (Figure 2). In some instances, large sections of tundra or vegetation on barrier islands may be affected by these storm surges. The surges of seawater onto tundra and other vegetation on the barrier islands usually result in the loss of these communities and further exposure to winds, waves and ice accelerates the processes of coastal erosion and barrier island habitat alteration.

The following descriptions of the barrier islands used as nesting habitat by common eiders along the central Alaskan Beaufort Sea coast are based on both historical and current information about the islands. Island descriptions are based on a combination of digital base maps provided by BP Exploration (Alaska) Inc. (BPXA) Cartography Department; field notes; aerial videography of the islands during 2000-2001 provided by Mike Anthony of the U.S. Geological Survey, Alaska Science Center; and descriptions by Angus Gavin (1976). The digital maps for the Jones/Return Islands based on 1981-1993, 1500 ft aerial photography (BPXA Cartography metadata) were updated using 2000 photography. Digital maps for islands from Reindeer

Island to Flaxman Island were updated based on 1998 aerial photography. Updated files were used for area and distance computations. Elevation data in descriptions are based on the most recent digital maps, unless otherwise cited. Some comparisons of changes between map sets are given to illustrate the dynamic nature of these islands.

The Jones Islands

Thetis Island (52 ha) is located in the spring flood plume of the Colville River about 9 km northeast of the river delta and 8.6 km from the coastline. Thetis Island is approximately 4.8 km long with a maximum width of ~500 m, although most of the island is less than 100 m wide. The maximum elevation of the island is about 6 ft (2 m, Gavin 1976) with about 30% of the island surface higher than 1 m above sea level. Substrates consist of fine sand and gravel (Gavin 1976). Driftwood and vegetation that may provide nesting cover for eiders occurs on less than 10% of the island surface. Areas with vegetation, including *Puccinellia phryganodes*, and *Artemisia* sp., are primarily located in the central portion of the island. An exploratory drilling pad was constructed on the western lobe of Thetis Island and remains as the highest portion of the island. A small cabin was located near the middle of island but has since eroded away. Current human use of this island was documented during common eider nesting surveys in 1999-2001 (Noel and Johnson 1999, Noel et al. 2001). During 1999, Thetis Island remained intact, but during 2000 and 2001 the island was separated by small channels into 3 pieces.

Spy Island (60 ha) is located about 18 km from the Colville River delta and 5.7 km from Oliktok Point. Spy Island is approximately 5.5 km long with a maximum width of 200 m, although most of the island is less than 100 m wide. The maximum elevation of the island is about 3-4 ft (1 m, Gavin 1976), with about 15% of the area higher than 1 m above sea level. Substrates consist of silt, very fine sand, and gravel (Gavin 1976). There is no vegetation cover on the island and driftwood cover occurs across 25% of the island surface. Spy Island has increased 20% in surface area based on comparisons of 1981-1993 mapping with 2000 mapping.

Leavitt Island (42 ha) occurs as a spit west of Pingok Island, and is often attached to Pingok Island. Located 6.3 km offshore from No Point (Milne Point Unit F Pad), Leavitt Island is approximately 5 km long with a maximum width of 150 m, although most

of the island is less than 100 m wide. The maximum elevation of this island is 6.2 ft (2 m), with 26% of the island surface higher than 1 m above sea level. Substrates consist of silt, sand and various sizes of gravels (Gavin 1976). High to medium density-driftwood cover occurs across about 20% of the island surface, but there is no vegetation cover. Leavitt Island was attached to Pingok Island during eider nest searches in 1999, but a break that formed between Pingok and Leavitt during 2000 still exists. Leavitt Island has decreased 12% in surface area based on comparisons of 1981-1993 mapping with 2000 mapping.

Pingok Island (~300 ha) is located 3.4 km north of Milne Point. Pingok Island is 6.8 km long with a maximum width of 950 m, although most of the island is less than 500 m wide. Nearly 85% of Pingok Island is covered by tundra vegetation. Maximum elevation on the island is 16.6 ft (5 m) on the western tundra lobe. Fine gravels cover 15% of the island surface and are found along the seaward side of the island and at either end (Gavin 1976). Driftwood accumulations on gravel areas and beach ryegrass mounds at the eastern edge of the island that may provide nesting cover for eiders occur across 25% of the island's gravel surface. The gravel portion of Pingok Island has increased 36% in surface area based on comparisons of 1981-1993 mapping with 2000 mapping.

Bertoncini Island and Peat Island (38 ha) are located 3.4 km north of the coastline northeast of Milne Point. Bertoncini Island is 5.2 km long, with a maximum width of 320 m, although most of the island is less than 50 m wide. The maximum elevation of Bertoncini Island is 10.3 ft (3 m) on the tundra covered portion, and 10% of the gravel surface is higher than 1 m above sea level. Bertoncini Island was described by Gavin (1976) as completely tundra covered with fine silt, sand and gravels. Comparison of maps in Gavin (1976) with 1981-1993 and 2000 mapping indicates that tundra covers approximately 21% of the island, and gravel spits have formed off both the west and east ends of the island. Connectivity between Bertoncini Island and Bodfish Island to the east has changed in recent years. Portions of the spit on the west end of Bertoncini may also have extended to Peat Island and then westward to Pingok Island in past years, and there appears to be inconsistency in the designation of the location and extent of the island boundaries. Peat Island was a small island consisting almost entirely of peat mounds and the remains of a dwelling (vertical driftwood

poles and a collapsed roof structure); the peat portion of this island disappeared during a fall storm in the late 1980s and now consists entirely of sand and gravel that is sometimes connected to Bertoncini Island and/or Pingok Island. The gravel portion of Bertoncini Island has increased 25% in surface area based on comparisons of 1981-1993 mapping with 2000 mapping.

Bodfish Island (60 ha) is located east of Bertoncini Island 3.3 km from the mainland coast. Bodfish Island is 2 km long with a maximum width of 700 m. Maximum elevation is 16.7 ft (5 m) on the tundra covered portion of the island, with 20% of the gravel surface of the island higher than 1 m above sea level. Bodfish Island was described by Gavin (1976) as completely tundra covered. Recent mapping indicates that tundra covers 52% of Bodfish Island and gravel spits have developed on both the east and west ends of the island. Scattered driftwood covers about 5% of the island's gravel surface. The gravel surface area of the island has increased 31% based on comparisons of 1981-1993 mapping with 2000 mapping.

Cottle Island (104 ha) is located approximately 2.6 km from the coastline. Cottle Island is 8.1 km long with a maximum width of 300 m, although most of the island is less than 100 m wide. Current mapping identifies 3 patches of tundra with elevations greater than 10 ft (3 m) covering 12% of the island. About 30% of the gravel surface is higher than 1 m above sea level. Gavin (1976) described Cottle Island as long and thin, composed of sand and fine gravels with a small patch of tundra, but otherwise unvegetated. Driftwood occurs across about 15% of the island surface. Gavin (1976) shows a distinct breach between Cottle Island and Long Island. Mapping since 1981-1993 has consistently shown a connection between Cottle Island and Long Island, although a low area between the islands that over-washes is evident. The gravel area of the island has increased 20% based on comparisons of 1981-1993 mapping with 2000 mapping.

The Return Islands

Long Island (110 ha) is located 2.8 km from coast, with the eastern third of the island 4.2 km from Kuparuk River delta. The eastern portion of Long Island is within the spring flood plume of the Kuparuk River. Long Island is 10.8 km long, 125 m wide, and has no vegetation. The maximum elevation is 9.2 ft (3 m) with 28% of the surface area higher than 1 m above sea level. Gavin (1976) described

Long Island as a long thin island, broken in places by narrow, shallow cuts, and composed of silt, sand, and various grades of gravel, with considerable debris (logs, etc.). Scattered driftwood occurs across about 6% of the island surface. During summer 1999, Long Island was contiguous. Long Island was divided into 2 parts based on mapping from 1981-1993, and into 3 parts based on 2000 mapping. The gravel surface area has increased 22% based on comparisons of 1981-1993 mapping with 2000 mapping.

Egg Island (10 ha) is located 2.1 km from the coast within the spring flood plume of the Kuparuk River. Egg Island is 2 km long with a maximum width of 150 m, although most of the island is less than 75 m wide. Maximum elevation is 5.8 ft (1.8 m), with 32% of the island surface area higher than 1 m above sea level. Gavin (1976) describes Egg Island as composed of silt, fine sand, and a mixture of gravels with little or no vegetation and some driftwood. Scattered driftwood covers 5-10% of the island surface. During summer 1999, Egg Island was contiguous, but during 2000 and 2001 the island was split into 2 parts similar to previous descriptions (Gavin 1976). The island surface area has decreased 4% based on comparisons of 1981-1993 mapping with 2000 mapping.

Stump Island (52 ha) is less than 1 km from the coast and lies within the spring flood plume of the Kuparuk River. Stump Island is approximately 6.5 km long with a maximum width of 500 m, although most of the island is less than 75 m wide. Maximum elevation is 6.8 ft (2 m), and 17% of the surface area is higher than 1 m above sea level. Gavin (1976) describes Stump Island as composed of silt and fine sand with some pea sized gravel, no vegetation, and some driftwood. Driftwood occurs across 25% of the island. The surface area of Stump Island has increased 33% based on comparisons of 1981-1993 mapping with 2000 mapping.

The Midway Islands

Reindeer Island (35 ha) is located 12 km from the coast north of Prudhoe Bay. Reindeer Island is 3.5 km long with a maximum width of 300 m, although most of the island is less than 100 m wide. Gavin (1976) described Reindeer Island as a low, long, thin island with an elevation of 3-4 ft (1-1.2 m), composed of silt and fine sand with no vegetation. Detailed topographic information does not exist for Reindeer Island; about 20% of the island's surface is higher than 1 m above sea level. Driftwood occurs across

about 10% of the island surface. Reindeer has been split into 2 parts since summer 2000.

Argo Island has existed as only a submerged shoal since our common eider nesting surveys began in this area in 1999.

Cross Island

Cross Island (58 ha) is 17 km from the Sagavanirktok River delta. Cross Island is 4 km long with a maximum width of approximately 350 m. Detailed topographic information does not exist for Cross Island; about 40% of the island's surface is higher than 1 m above sea level. Gavin (1976) described Cross Island as composed of silt and sand with coarse gravels and some patches of vegetation, and an old cabin near the center of the island which did not appear to be active. Scattered driftwood, patches of concentrated driftwood, and some vegetation that provide nesting cover for eiders occur on about 20% of the island surface. Cross Island is used as a whaling station by Nuiqsut whaling captains and contains numerous structures and whale bones. The western end of the island has been modified by piling gravel to an elevation of 20 ft (6 m) or higher to support buildings.

No Name Island (5 ha) is a narrow spit southeast of Cross Island, 14 km from the Sagavanirktok River. No Name Island is broken into several pieces, and is at most 100 m wide and 0.8 km long. Elevation was 3-4 ft (1 m) above sea level (Gavin 1976). There is no detailed topographic information for No Name Island; about 30% of the island is higher than 1 m above sea level. Gavin (1976) described No Name Island as composed of silt, sand, and fine gravel with no vegetation and scattered driftwood. About 5% of the island surface contains scattered driftwood.

The McClure Islands

Narwhal Island (38 ha) is located 15 km north of Point Brower. Narwhal Island is split into 2 parts with a total length of 3.8 km. The maximum width of the island is 275 m, although most of the island is less than 100 m wide. Detailed topographic information is not available for Narwhal Island; about 30% of the island surface is higher than 1 m above sea level. There are a few buildings and wooden structures on the western lobe of the island. Gavin (1976) described Narwhal Island as composed of silt, fine sand with some pockets of coarse gravel, and a fair amount of driftwood. About 10% of the island surface contains potential nest cover material.

Jeanette and Karluk Islands (19 ha) are located 16 km north of the mainland coast. Jeanette Island and Karluk Island occur as 6 small pieces, 3 km in total length. The maximum width is approximately 130 m, although most of the islands are less than 70 m wide. Gavin (1976) described Jeanette and Karluk as low islands about 3-4 ft (1 m) high composed of silt, fine sand, and some pea sized gravel with scattered driftwood. Detailed topographic information is not available for these islands; an estimated 20% of the surface is higher than 1 m above sea level, with about 5% of the surface containing potential nest cover material. Because it is difficult to distinguish boundaries for these islands, even for historical mapping (Gavin 1976), we have combined these islands for discussion and analyses.

The Stockton Islands

Pole Island (71 ha) is located 14.2 km from the Shaviovik River delta. Based on current nomenclature, Pole Island is 5.1 km long; with a maximum width of 450 m. Gavin (1976) described Pole Island as 3-4 ft (1-1.2 m) above sea level, composed of silt, sand and pea gravel with coarser gravels along the higher elevations. No detailed topographic information exists for Pole Island; about 40% of the island's surface area is higher than 1 m above sea level. About 30% of the island contains potential nest cover material. Remains of several structures have accumulated sand and support clumps of beach ryegrass which are used for nesting by common eiders and glaucous gulls. Gavin (1976) notes a Cold Island as the second island in the Stockton chain. The location of Cold Island, according to Gavin's (1976) map, is between Pole Island and Belvedere Island. Gavin's description of Cold Island fits what appears on current maps as Belvedere Island (Gavin 1976). Gavin's description of Belvedere Island matches the unnamed shoals south of the current Belvedere Island (Gavin 1976).

Belvedere Island (29 ha) is located 12.7 km from the mainland coast. As currently represented on maps, Belvedere Island is 4.4 km long, and composed of several pieces. The maximum width is 250 m, although most of the island is less than 50 m wide. Gavin (1976) described this island as 3-4 ft (1-1.2 m) in elevation, composed of silt, sand and fine gravel, with patches of coarser gravels, and no vegetation. No topographic information exists for Belvedere Island; about 30% of the island is higher than 1 m above sea level, with about 10% of the island containing potential nest cover materials.

The Maguire Islands

Challenge Island (19 ha) is located 5.5 km from the mainland coast between Bullen Point and Point Hopson. Challenge Island is 3.5 km long with a maximum width of 170 m, although most of the island is less than 50 m wide. Gavin (1976) described Challenge Island as 3-4 ft (1 m) in elevation, composed of silt, fine sand and some gravel with no vegetation. No topographic information exists for Challenge Island; about 30% of the island is higher than 1 m above sea level. About 10% of the island surface contains potential nest cover material. The divisions between Challenge and neighboring Alaska Island have changed over the years, as with other island groups. Challenge Island, as described by Gavin (1976), represented only a portion of what is currently mapped as Challenge Island.

Alaska Island (25 ha) is located 3.9 km from the mainland coast. Alaska Island is 3.6 km long, with a maximum width of 200 m, although most of the island is less than 100 m wide. No topographic information exists for Alaska Island; about 20% of this island is higher than 1 m above sea level. Gavin (1976) describes Alaska Island, the largest island in the Maguire group, as quite narrow and composed of silt, fine sand and some gravel, with scattered pieces of driftwood. About 10% of the island's surface contains potential nest cover material. It appears that part of what was once Alaska Island is now part of Challenge Island (Gavin 1976).

Duchess Island (34 ha) is located 3.9 km from the mainland coast. Duchess Island is 3.9 km long with a maximum width of 350 m. No detailed topographic information exists for Duchess Island; about 30% of the island is higher than 1 m above sea level. Gavin (1976) described Duchess Island as composed primarily of silt and fine sand, with some gravels, and no vegetation. About 15% of the island surface contains potential nest cover material. Current mapping shows Duchess and North Star islands (below) connected, although previous mapping has shown these islands as discontinuous.

North Star Island (26 ha) is located 3.7 km from the mainland coast. The island is 3.4 km long with a maximum width of 250 m, although most of the island is less than 100 m wide. An exploration pad was constructed on North Star Island and remains at the western end of this island. Gavin (1976) described North Star Island as composed of silt, sand and pea sized gravel, without vegetation, and subject

to ice scour. No topographic information exists for North Star Island; an estimated 30% of the island is greater than 1 m high. Approximately 15% of the island contains potential nest cover material. BPXA's Northstar Development is located on an artificial island formerly called Seal Island, which is north of the Return Island group (Figure 1).

Flaxman Island

Flaxman Island (367 ha) is 2.4 km north of the coast near the western edge of the Canning River delta. Flaxman Island consists of an eastern tundra-covered portion and a western gravel portion. This western spit has been variously referred to as *Flaxman Island-West* or *Mary Sachs Island*. The gravel extension was connected to the tundra covered portion of Flaxman Island according to Gavin (1976), but has been disconnected in recent years. The western gravel island (56 ha; Flaxman Island-West or Mary Sachs Island) is 5 km long and generally less than 150 m wide. This gravel portion of Flaxman Island was described by Gavin (1976) as about 3 ft (1 m) in elevation and composed of silt, sand and some gravel. No detailed topographic information exists for Flaxman Island-West; about 20% is higher than 1 m above sea level. About 5% of Flaxman Island-West contains potential nest cover material.

The eastern tundra portion of *Flaxman Island-East* is 6 km long, with a maximum width of 1 km, although most of the area is less than 500 m wide. Two abandoned exploration pads are located on this tundra portion of Flaxman Island. There is a gravel spit along the northwestern edge of Flaxman Island-East, and approximately 14 ha of this 297 ha island is composed of sand and gravel. About 30% of this 14 ha sand and gravel island is higher than 1 m above sea level. About 10% of the gravel portion of this island contains potential nest cover material.

Lion Point

Lion Point (6 ha), a gravel spit off the northwest corner of Tigvariak Island, is 5.5 km from the Shavirovik River delta. Lion Point is 1.9 km long, with a maximum width of 140 m, although most of the island is less than 50 m wide. The maximum elevation of this island is 2.6 ft (1 m), with no area higher than 1 m above sea level. This island is composed of loose gravels with some areas of fine sands. Driftwood is scattered across about 5% of the island surface. Lion Point was not connected to Tigvariak Island in 2001, although this spit has been connected in the past.

METHODS

We coordinated our search area during July 2001 with biologists from the U.S. Geological Survey, Alaska Science Center (ASC) to cover as many of the islands between Thetis Island and Brownlow Point as possible (Figure 1, Table 1). Nest searches were conducted by LGL Alaska Research Associates, Inc. (LGL) on Thetis Island, the Midway Islands (Reindeer), Cross Island, the Endicott Causeway, Duck Island #1&2, the McClure Islands (Narwhal and Jeanette), Lion Point, and the Stockton Islands (Pole and Belvedere). Nest searches were conducted by the ASC on Spy Island, the Jones-Return Islands, the Maguire Islands, and Flaxman Island in conjunction with common eider and long-tailed duck studies (Lanctot et al. 2001, Figure 1). The ASC searches were not as intensive as our searches for coverage across the island surface, and nest scrapes and driftwood cover were not recorded, although biologists visited islands several times to monitor nesting success (Flint et al. 2001, Lanctot et al. 2001). Our searches during 12-16 July 2001 covered the entire surface area of each barrier island and documented the number of nesting common eiders, glaucous gulls, and arctic terns (Figure 2, Table 1). During surveys, we recorded the number of active nests, failed nests, and nest scrapes for each species, and recorded any evidence of predators. Access to the islands was by Bell 212 twin-engine helicopter (Figure 2).

Nest searches were conducted on foot by 2 to 5 observers spaced across the width of the island. For each observation we recorded the species, nest type (scrape or nest), nest status (active, depredated, or unknown), and driftwood density and/or presence of vegetation near the nest or scrape. We tried to avoid flushing incubating hens from nests. If a hen did flush, the number of eggs was recorded and eggs were then covered with down and twigs to minimize their exposure to predators.

Driftwood density was classified into 4 categories based on a visual estimate of the percentage of ground covered by driftwood within a 1-m diameter area centered on the nest bowl. Density categories included none (0%), low (1% to 33%), medium (34% to 66%), and high (67% to 100%) density (Figures 3 and 4, after Johnson et al. 1987).

Survey track lines were recorded at 15-sec intervals using Garmin® XL12 Global Positioning System (GPS) receivers. Data from GPS receivers

were downloaded daily and exported as ASCII text files. Nests were then geo-referenced by matching GPS recorded positions with date, time, and GPS number records in the nest site database. Available island areas were calculated using MapInfo Professional™ Geographic Information System (GIS). Area calculations were based on gravel habitats mapped at 1:6000 and 1:63,360-scale.

Nesting effort for each island was calculated as the number of nests and nest scrapes divided by the total number of nests and nest scrapes found on all islands searched. Nests included a pronounced bowl with eggs and/or some associated down (Johnson et al. 1987; Johnson 1990, 2000). Nests were classified as active if they contained one or more live eggs, were occupied by a laying/incubating female, or contained thickened eggshell membranes (evidence of successful hatching, Figure 5). Nest scrapes were depressions in the ground with or without small sticks but with no associated down (Johnson et al. 1987, Johnson 1990). Scrapes are frequently made by juvenile females attempting their first nests, or by adult females during early nest prospecting. These scrapes are subsequently abandoned when the juvenile female fails to nest or the adult female nests in a more suitable location. In some instances, scrapes may also be remnants of failed nests (Johnson et al. 1987).

Nests were considered depredated when eggshell fragments in the nest bowl or vicinity indicated a bird or mammal had eaten or dislodged the eggs, or when nests with down contained no eggs. Predator type was determined by signs near the disturbed nest such as tracks or scat, the characteristics of remaining egg fragments, or direct observation of predators on the island. Depredated eggs with rounded openings were generally attributed to avian predators, especially when there were no signs of other predators. Nests with down and no eggs or egg shell fragments were generally considered depredated by avian species when avian predators were also observed on the island, and there were no obvious signs of other predators.

To determine nest site fidelity among islands, we continued to band and mark a sample of female common eiders with nasal disks (Figure 5: Federal Bird Marking and Salvage Permit No. 21414-J). Color combinations of nasal disks allowed us to identify individual females. Common eider hens were first banded and marked on Narwhal Island in 1999. Before applying any additional nasal disks, we looked for females marked in 1999 and 2000 on Narwhal

Island to determine if these disks had caused any damage to the nares. Additional banding and marking efforts in 2001 were conducted on Narwhal Island. A salmon dip net was used to capture female common eiders as they sat on their nests. Stainless steel tarsus bands and colored nasal disks were applied. Standard bill and tarsal measurements and body weight were recorded. Glaucous gull chicks were captured opportunistically, and marked with adult size stainless steel tarsus bands lined with plasticine. The plasticine allows proper fit of the adult size band and wears out as the chick grows (Figure 5).

Chi square analyses (χ^2 , Zar 1974), followed by habitat use-availability analyses (Neu et al. 1974, Manley et al. 1993) in some cases, were completed to test for differences in the distribution of active nests, predated nests and/or nest scrapes among islands and among habitats. Bonferroni-corrected confidence intervals were built about the used proportions of island habitats and compared to expected values based on the island surface area or the area of driftwood habitat cover for use-availability analyses (Neu et al. 1974, Manly et al. 1993). Expected values for use-availability analyses were calculated based on the area of individual islands or island groups, and estimated areas of driftwood habitat. Distributions of all nests and active nests among driftwood cover classes were assessed by comparing observed distributions to both even distributions, and distributions based on the proportions of nest scrapes and predated nests within each cover class using χ^2 analyses (Zar 1974). A Wilcoxon rank sum paired sample test (Zar 1974) was used to compare the current (1998-2001) mean number of active common eider nests for 25 islands with the historical mean (1970-1991).

RESULTS

This report presents the results of nest searches on Thetis Island, Reindeer Island, Cross Island, Duck Island #1&2, Narwhal Island, Jeanette Island, Lion Point, Pole Island, and Belvedere Island during July 2001 (Figure 1, Table 1).

Nesting Effort

Common eiders, glaucous gulls, and arctic terns were recorded nesting on central Alaskan Beaufort Sea barrier islands during July 2001 (Figures 6-12, Table 2). The total nesting effort was dominated by common eiders at 95% (total nests and pre-nesting scrapes recorded), followed by glaucous gulls at 4%, and arctic terns at 1% (Table 2). Common eider nests

composed 82% of the total number of active nests, followed by glaucous gulls (16%), and arctic terns (2%) (Table 2). Of the 620 common eider nests recorded, 18% were active nests with live eggs or incubating hens, and 82% were depredated (Tables 2 and 3). The largest number of nests occurred on Pole Island where all nests were depredated. All common eider nests on Belvedere Island, which was attached to Pole Island, were also depredated. Active nests were rarely greater than 50% of the total number of nests on any of the barrier islands searched (Tables 2 and 3).

Mean and 95% confidence intervals (95% CI) of clutch size for common eider nests was 2.7 ± 0.43 eggs per nest ($n = 43$), and for glaucous gulls was 2.4 ± 0.39 eggs per nest ($n = 16$). Two arctic tern nests had 1 egg each and one nest had 2 eggs. Many incubating common eider hens remained undisturbed, which limited data on nest clutch sizes.

For all 3 species combined and for common eider alone, total nesting effort, expressed as the sum of active and failed nests, nests of unknown fate, and nest scrapes, was highest on Pole Island (Table 2). Narwhal Island, Cross Island, and Lion Point each had less than half the total nesting effort seen at Pole Island. Nesting effort on the remaining islands was much lower. Glaucous gull nesting effort was highest on Cross Island and Duck Island #1&2, followed by Reindeer, Thetis, and Belvedere islands. Total glaucous gull nesting effort was lower on the remaining islands. Most of the arctic tern nesting effort was concentrated on Cross and Pole islands (Table 2).

Active common eider nests were not distributed evenly across islands and island groups searched during 2001 either in proportion to island surface area (Table 4, $\chi^2 = 159.38$, $df = 5$, $P < 0.001$), or in proportion to the available island area with driftwood habitat (Table 5, $\chi^2 = 559.15$, $df = 5$, $P < 0.001$). In both cases, there were more active nests on the McClure Islands and Lion Point than expected, and fewer active nests on the Stockton Islands than expected (Tables 4 and 5). Combined active and depredated common eider nests were also not distributed evenly across islands and island groups searched during 2001 based on island surface area (Table 6, $\chi^2 = 498.62$, $df = 5$, $P < 0.001$), or based on driftwood habitat area (Table 7, $\chi^2 = 1479.97$, $df = 5$, $P < 0.001$). Results for island area and driftwood habitat area were consistent for 3 of 6 cases; Thetis Island with fewer than expected nests, Cross Island with fewer than expected nests, and Lion Point with

more than expected nests (Tables 6 and 7). Results for island area and driftwood habitat area were inconsistent for 3 of 6 cases (Tables 6 and 7). Reindeer Island had fewer nests than expected based on island surface area, but numbers of nests were not different from expected based on available driftwood habitat area. The McClure Islands were within the expected number of nests based on island surface area, but had more nests than expected based on driftwood habitat area. The Stockton Islands had more nests than expected based on island area, but were within expected numbers based on driftwood habitat area (Tables 6 and 7).

Habitat

During 2001, the density of active common eider nests was highest at Duck Island #1&2, an artificial gravel exploration island, followed by Lion Point (Table 3). The density of active common eider nests on the remaining islands was much lower. The density of active glaucous gull nests was also highest on Duck Island #1&2 (Table 3).

Of 620 common eider nest sites, active and failed nests combined, with habitat data, <1% were inside abandoned buildings, 4% had no driftwood, 49% were located in low-density driftwood, 35% were in medium-density driftwood, and 12% were in high-density driftwood habitat (Figure 3, Table 8). Common eider nests were not distributed evenly among driftwood categories ($\chi^2 = 336.41$, $df = 3$, $P < 0.001$, Table 8). Nests occurred more frequently than expected, based on an even distribution, in medium- and low-density driftwood and less frequently than expected in high-density driftwood and no driftwood (Table 8). Common eider nest scrapes were also not distributed evenly among driftwood categories ($\chi^2 = 523.28$, $df = 3$, $P < 0.001$, Table 4). More common eider scrapes were in low-density driftwood cover, and fewer were in high-density, medium-density, and no driftwood.

These analyses, however, do not account for the availability of each category of driftwood habitat. Because the available area of each driftwood category is unknown, we compared the distribution of all nests with nest scrapes, and active nests with depredated nests to assess selection of habitat cover categories. The distribution of common eider nests was different from the distribution of scrapes among driftwood categories ($\chi^2 = 75.17$, $df = 3$, $P < 0.001$, Table 8). More nests than expected occurred in high- and medium-density driftwood, and fewer nests occurred in low-density driftwood. Nests and scrapes were not

different in distribution in areas with no driftwood cover. Similarly, more active nests than depredated nests were in high-density driftwood and fewer were in low-density driftwood ($\chi^2 = 60.83$, $df = 3$, $P < 0.001$). Active and depredated nests were distributed similarly within medium-density and no driftwood habitats.

Vegetation cover at common eider nest sites may include beach rye grass, seabeach sandwort (*Honckenyia peploides*), lungwort (*Mertensia maritima*), and *Puccinellia phryganodes*. Vegetation was recorded at 112 common eider nest sites on 4 islands (Figure 3, Table A-1). Most of these sites were on Pole Island (99 sites) and on Cross Island (10 sites). Of the 99 nest sites on Pole Island with vegetation cover, 94 included beach rye grass. Beach rye grass was noted at 4 of the 10 nest sites on Cross Island. Pole Island and Cross Island were the only barrier islands searched during 2001 with beach rye grass habitat.

Glaucous gull nest sites occurred more frequently than expected, based on an even distribution, in low-density driftwood and less frequently than expected in high-density driftwood ($\chi^2 = 10.16$, $df = 3$, $P = 0.017$, Figure 4, Table 8).

Depredation

All 510 failed common eider nests were thought to have failed due to predation, primarily by arctic fox and glaucous gulls (Table 3). An arctic fox was observed on Pole Island during the nesting surveys in 2001 and was probably responsible for most of the depredation on that island. The same fox was probably responsible for most of the depredation on Belvedere Island, which was attached to Pole Island. Numerous observations of fox tracks were recorded on each of these islands. All common eider and glaucous gull nests on Pole and Belvedere islands were unsuccessful during the 2001 nesting season.

Most depredations of common eider nests on the remaining islands were probably due to glaucous gulls. Glaucous gulls were observed on all barrier islands searched during 2001 (Table 1). No live arctic foxes or fresh fox sign were observed on any islands other than Pole Island, Belvedere Island and possibly Lion Point; but a dead arctic fox in winter pelage was noted on Narwhal Island. Polar bears may have been responsible for some of the depredated common eider nests on Reindeer, Cross, Narwhal, and Belvedere islands where polar bear tracks and/or beds were observed. Muskoxen (*Ovibos moschatus*) tracks, likely made by muskoxen

that accessed the island during winter, were observed on Pole and Belvedere islands but it is unlikely that muskoxen were responsible for any common eider nest depredation.

For the 7 failed glaucous gull nests, there was direct evidence of depredation for 2 of these nests. Five glaucous gull nests hatched before the nest searches were completed.

Banding

During 1999 and 2000, 13 common eider hens were captured, banded, and marked with nasal discs on Thetis Island (1 hen), Narwhal Island (5 hens), and Pole Island (7 hens, Figure 13, Table 9). Two additional common eider hens were captured and marked on Narwhal Island in 2001. Two of the marked birds were resighted one year after they were marked. A common eider hen marked on Narwhal in 1999 (No. 23, Table 9) was resighted on Narwhal Island in 2000, and a hen marked on Narwhal Island in 2000 (No. 25, Table 9) was resighted on Narwhal Island in 2001. Both resighted birds were checked at a distance for abnormal wear on the bill and general body condition. Both marked birds appeared to be in good condition with no obvious wear on the bill where the nasal discs were attached. Weights, measurements, nest identification number, clutch size, band numbers, banding dates, and disc color combinations of marked birds are listed in Table 9. Four glaucous gull chicks were banded during 2001, 2 on Jeanette Island and 2 on Reindeer Island (Table 10).

DISCUSSION

Nesting Effort

Common eiders, glaucous gulls, and arctic terns nest on Beaufort Sea barrier islands (Johnson and Herter 1989). Data on active common eider nests along barrier islands in the central Alaskan Beaufort Sea have been recorded for most years from 1970-2001 (Table 11). The most productive islands have been Cross Island, Pole Island, Lion Point, Egg Island, Thetis Island, and Stump Island (Table 11). For those islands with recent nesting data, active common eider nest density was greatest on Egg Island and Lion Point followed by Stump Island and Karluk Island (Figure 14). Cross Island has also been an important common eider nesting area, but nest density during 2001 was low (Table 11). In addition to these natural islands, some artificial exploration and production structures have been searched for nesting

common eiders since 1982 (Table 12). For the 2 locations searched during 2001, Duck Island #1&2 was the most productive with the highest numbers and density of common eider nests (Table 3).

Because common eiders are long-lived and exhibit remarkable fidelity to nest sites (Reed 1975 in Johnson 2000, Wiggins and Johnson 1992), nest searches could concentrate on those islands supporting the largest numbers of nesting common eiders. Of the 15 common eider hens that have been individually marked, 2 hens have been resighted nesting on the islands where they were originally captured (Table 9). The islands with the most marked hens (Pole and Narwhal) were disturbed by predators during 2001. There were no common eiders remaining in the areas where these marked birds were expected to nest in 2001. In addition, we have received no reports of marked birds on any other barrier island searched during 2000-2001.

To evaluate changes in the size of the nesting population of common eiders over time, we compared the mean number of active common eider nests by island during 1970-1991 to 1998-2001 (Figure 15). During the period 1970-1991, many islands had 14 or more years of data (Table 11). During the period 1998-2001 most islands had 3 years of data. The mean annual number of nests for 25 islands was lower during 1970-1991 (485 nests/year) than during 1998-2001 (589 nests/year). Variation for individual islands was high and the paired difference between 1970-1991 (19 ± 11.6 [95% CI] nests/island) and 1998-2001 (24 ± 13.3 nests/island) by individual island was not significant (Figure 15, Wilcoxon paired-sample rank sum test: $Z = 1.186$, $n = 24$, $P = 0.236$). Variation in timing of nest searches across years may influence the number of active nests counted because of missed late-initiated nests, early failed nests, or not recognizing some empty nests as hatched.

Habitat

Not all barrier island sand and gravel habitats represents good nesting habitat for common eiders, glaucous gulls, or arctic terns, but surface area totals provide a rough basis for comparison among islands. As described above, island configurations and island surface areas are annually variable. Channels and boundaries between individual islands are also not consistent from year to year, which confounds attempts to make inter-annual comparisons when the extent of individual islands is unclear.

It appears that the presence of remnant tundra on an island is associated with lower nesting effort for common eiders, even though remnant tundra can provide nesting habitat both on the tundra surface and along the peat shorelines. Pingok, Bodfish, Cottle, and Flaxman (East) islands, all with remnant tundra, have averaged less than 3 nests/year (Table 11). We identified 5 active common eider nests on Cottle Island in 1999. These nests were located on the peat bank above the beach. Many searches may not have included these shoreline tundra habitats, and may have missed these inconspicuous nests. However, it is also likely that the larger size and presence of tundra on these islands provide habitat for arctic foxes, which prey on nesting eiders and decrease nesting success. An arctic fox was sighted in 1998 on Flaxman Island (Noel et al. 1999a), in 1999 on Pingok Island (Noel and Johnson 2000), and in 2001 on Pole Island.

Female common eiders generally select nest sites with cover composed of beach rye grass/lymegrass, driftwood, and other debris (Schamel 1977; Johnson et al. 1987; Wiggins and Johnson 1991, 1992; Johnson 2000). Beach rye grass cover was rare on most of the 9 islands searched during 2001, except on Pole Island. Some small patches of beach rye grass were also noted on Cross Island. Most nests with vegetation cover during 2001 were in beach rye grass.

Schamel (1977) and Johnson et al. (1987) reported that hatching success was positively correlated with cover density in the vicinity of the nest site. Hatching success could not be determined in this study. However, more active than depredated nests occurred in high-density driftwood, and fewer active nests were in low-density driftwood in 2001. This is contrary to our findings in both 1998 and 1999, when there was no significant difference in driftwood cover for active and depredated common eider nests (Noel et al. 1999a, Noel and Johnson 2000), but agrees with our finding in 2000 (Noel et al. 2001).

Two other interrelated habitat factors that probably influenced common eider nesting habitat selection were: 1) island elevation, and 2) location of driftwood above the waterline. Common eiders that occupy high-elevation barrier islands have the highest nesting success and are the most productive (Johnson 2000). Several nests on the Jones-Return Island group disappeared during flooding in 2000 (R. Lanctot, U.S. Geological Survey, Alaska Science Center, pers. comm.). Height of driftwood above the waterline is determined by the elevation of the barrier island (Wiggins and Johnson 1991). Fall storm surges

typically move driftwood to the highest points on the barrier islands. The sand-gravel barrier islands with the highest elevation typically accumulate the most driftwood (Johnson 2000). Driftwood patches deposited high above the waterline can essentially protect nests from future storms and inclement weather. Another beneficial characteristic of high elevation islands is the potential for accumulation of wind-blown soil leading to development of vegetation, which is also used as nesting cover.

Depredation

Arctic foxes were responsible for most nest failures on islands searched during both 1998 and 1999, while glaucous gulls or other avian predators were responsible for most nest failures in 2000 (Noel et al. 1999a, 2001, Noel and Johnson 2000). In 2001, an arctic fox on Pole Island was probably responsible for most, if not all, of the depredation on Pole and Belvedere islands. This accounted for over half the depredation observed on all the islands surveyed in 2001. The total destruction of all nests on Pole Island by this arctic fox indicates that cover is probably meaningless when mammalian predators have access to an island. In most instances where foxes had access to an island, virtually all nests were destroyed. Arctic foxes locate prey by scent as well as by sight, and cryptic coloration and cover appear to matter little when foxes have access to an island. Cover is probably most important when the primary predators are avian. Driftwood and vegetation cover at common eider nest sites may help to conceal nests from avian predators. Common eiders nesting in low-density driftwood may be more vulnerable to avian depredation than those nesting in medium- and high-density driftwood. Wiggins and Johnson (1991, 1992) stated that eiders prefer areas with dense driftwood cover, partly for protection from predators.

Wiggins and Johnson (1991, 1992) found that arctic foxes and common ravens (*Corvus corax*) were the main predators of common eider eggs and that glaucous gulls were the main predators of common eider ducklings along the Endicott Causeway. Other studies have similarly found that arctic foxes prey on common eider eggs (Quinlan and Lehnhausen 1982; Wiggins and Johnson 1991, 1992). The Endicott Causeway, situated in the Sagavanirktok River delta, was constructed during winter 1984-1985. Driftwood and other debris that serve as nesting cover for common eiders began to increase, and 5 years after construction the causeway had a healthy and increasing common eider population. During 1992, an

arctic fox gained access to the causeway and subsequently the number of eider nests and eider nest success declined dramatically (Johnson et al. 1993). Little nesting has occurred on the causeway since this date (Table 12). But Duck Island #1&2, adjacent to the causeway, appears to support numerous common eider nests (Table 12). During surveillance of Howe and Duck Islands, grizzly bears have been noted feeding on nests on Duck Island #1&2 (LGL unpublished data). Most recently, Johnson (2000) reported that depredation by foxes, ravens, and gulls on common eider eggs and young is likely the major factor regulating the abundance of common eiders in the North Slope oilfields.

During this study, the principal predators identified on barrier islands were arctic fox in 1998 (Noel et al. 1999a), arctic fox and glaucous gulls in 1999 (Noel and Johnson 2000), glaucous gulls in 2000 (Noel et al. 2001), and arctic fox and glaucous gulls in 2001. The arctic fox present on the contiguous Jones-Return Islands (Long Island to Bertoni Island) during 1999, may have influenced common eider nesting during nest initiation resulting in fewer nesting attempts on these islands rather than more depredated nests. In contrast, the number of nesting attempts on Pole Island in 2001 was high; 279 nests were recorded, all of which failed. The fox on Pole Island in 2001 may have accessed the island after most nests had been initiated.

The fate of glaucous gull nests was more difficult to determine than the fate of common eider nests. When no eggs or chicks were found in a nest, determination of the status of glaucous gull nests was based on the presence of feathers. It is likely that some nests classified as failed during 2001 based on this criterion may have been active during previous nesting seasons but inactive in 2001. This could lead to an overestimate of the number of failed glaucous gull nests.

Avian depredation on common eider eggs observed in 2001 was due to glaucous gulls. During the summer months, glaucous gulls opportunistically prey on the eggs of other birds (Eberhardt et al. 1982, Hiruki and Stirling 1989), but because common eiders and glaucous gulls often nest in close proximity to each other, glaucous gulls prey most heavily on eider eggs (Johnson and Herter 1989). Parasitic jaegers (*Stercorarius parasiticus*) and common ravens also prey on eggs of common eiders. Female common eiders do not feed while they are incubating their eggs and thus are on a strict energy budget (Gorman and Milne 1971, 1972). Because of

this, eiders may not have sufficient energy reserves to deal with disturbances by predators during incubation.

Depredation on individual islands is annually variable depending on predator access (Johnson 2000, Table 6) and this variability may account for some of the differences in nest activity and success among islands and among years. Access of mammalian predators, such as arctic fox, grizzly bears, or polar bears, to large nesting colonies can decimate nesting success (Johnson et al. 1993, Noel et al. 1999b, Divoky 1978). Common eiders begin nesting on the barrier islands after ice connections to the mainland have melted and after delta islands have become surrounded by river floodwaters (Johnson et al. 1987). Arctic foxes on the sea ice moving to the mainland in late spring may have access to barrier islands in some years via the sea ice, traveling from ice floe to ice floe. In 1998, sea ice on the northern sides of Flaxman, Northstar, and Duchess islands remained intact past the initiation of eider nesting allowing an arctic fox access to nesting eiders on these islands (Noel et al. 1999a). In 1999, the sand-gravel connections between the Jones-Return Islands allowed an arctic fox access to nearly this entire island group (Noel and Johnson 2000). A similar situation occurred in 2001 on Belvedere and Pole islands.

Development

Oil exploration and development activities may cause disturbance to nesting or brood-rearing common eiders. Presence of people on the barrier islands during nesting may cause common eider hens to flush from their nests leading to abandonment of the nest and depredation on the unattended nests by glaucous gulls or other avian predators. Because common eider energy reserves are low during incubation, disturbance during this period may result in reduced fitness and survival as well as reduced reserves to protect ducklings (Gorman and Milne 1971, 1972). Even nests that are left unattended for a few minutes may be destroyed by avian predators. Disturbance of eider crèches by boat or low-level aircraft traffic may lead to depredation by glaucous gulls.

Oil development activities may affect predator abundance in various ways. Oil development and production infrastructure may create new habitat, which can attract certain avian predators such as glaucous gulls and common ravens. Some abandoned offshore exploration islands contain glaucous gull

nesting colonies. Ravens may nest in man-made structures such as towers and production modules. Landfill sites, uncovered dumpsters, and handouts provide food sources for glaucous gulls and ravens. Oilfield activities and garbage around landfill sites may also attract terrestrial predators, such as foxes and grizzly bears. These sources are unlikely to provide sufficient quantities of food to maintain these predators, which may then move to nearby nearshore islands and prey on bird eggs or ducklings (Noel et al. 1999b).

Certain types of industrial development may not adversely affect common eider nest success. Wiggins and Johnson (1991, 1992) found that common eiders could colonize man-made permanent gravel islands and causeways, such as the Endicott Causeway and Duck Island #1&2. Johnson et al. (1987) found that mitigation measures implemented during industrial activities on Thetis Island helped increase common eider hatching and fledging success on the island. The mitigation program included controlling development activities that could disturb nesting eiders such as aircraft over-flights and human intrusion, and also included removal of all foxes from Thetis Island. In addition, Johnson (1984) and Divoky and Suydam (1995) found that man-made nesting structures placed on barrier islands attracted nesting female common eiders. Such structures, along with other mitigation measures (garbage, fox and gull control) could be used as mitigation tools during industrial development on barrier islands.

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that was used to develop the island descriptions. Craig Reiser and Karen Truman of LGL Alaska Research Associates, Inc. assisted with the nest searches. We also thank Air Logistics of Alaska, Inc. for coordinating logistics for helicopter access to the islands during the field program.

LITERATURE CITED

- Dickson, D.L. (ed.) 1997. King and common eiders of the western Canadian Arctic. Canadian Wildlife Service Occasional Paper No. 94. Edmonton, Alberta. 75 p.
- Divoky, G.J. 1978. Identification, documentation, and delineation of coastal migratory bird habitat in Alaska. I. Breeding bird use of barrier islands in the northern Chukchi and Beaufort seas. Environ. Assess. Alaskan Cont. Shelf 1:482-548.
- Divoky, G.J and R. Suydam. 1995. An artificial nest site for arctic-nesting common eiders. J. Field Ornithology 66:270-276.
- Eberhardt, L.E., W.C. Hanson, J.L. Bengtson, R.A. Garrott, and E.E. Hanson. 1982. Arctic fox home range characteristics in an oil-development area. J. Wildl. Man. 46:183-190.
- Elliot, R.D. (ed) 1997. Conservation issues for North American Sea Ducks. A concept paper for a Sea Duck Joint Venture under the North American Waterfowl Management Plan. Report by Canadian Wildlife Service, U.S. Fish & Wildlife Service and U.S. Geological Survey (Biological Resources Division). Canadian Wildlife Service – Atlantic Region, Sackville, New Brunswick, Canada. 35 p.
- Flint, P.L., R.B. Lanctot, J. Fischer, J.C. Granson, T. Hollmen, J.B. Grand, M. Howell. 2001. Monitoring Beaufort Sea waterfowl and marine birds. Annual Progress Report. U.S. Geological Survey, Alaska Biological Science Center, Anchorage, Alaska, USA. 43 p + Append.
- Gavin, A. 1976. Wildlife of the North Slope. Unpublished report sponsored by Atlantic Richfield Co., Los Angeles, California. 71 p.
- Gorman, M.L. and H. Milne. 1971. Seasonal changes in the adrenal steroid tissue of the common eider, *Somateria mollissima*, and its relation to organic metabolism in normal and oil-polluted birds. Ibis 113:218-228.

- Gorman, M.L. and H. Milne. 1972. Crèche behaviour in the Common Eider *Somateria m. mollissima* L. *Ornis Scand.* 3:21-25.
- Hawksley, O. 1957. Ecology of a breeding population of Arctic terns. *Bird Banding.* 28:57-92.
- Hiruki, L.M. and I. Stirling. 1989. Population dynamics of the Arctic fox, *Alopex lagopus*, on Banks Island, Northwest Territories. *Can. Field-Nat.* 103(3): 380-387.
- Johnson, S.R. 1984. Continuing investigations of oldsquaws (*Clangula hyemalis* L.) during molt period in the Alaskan Beaufort Sea. Pages 549-635 in *Envir. Assess. Alaskan Cont. Shelf, Final Rep. Prin. Invest. Vol. 23.* BLM/NOAA, OCSEAP, Juneau, Alaska.
- Johnson, S.R. 1990. Colonization and habitat use by Pacific Eiders (*Somateria mollissima v-nigra*) on the Endicott Causeway, Beaufort Sea, Alaska 1989. Report for BP Exploration (Alaska) Inc., by LGL Limited. 23 p.
- Johnson, S.R. 2000. Pacific Eider. Pages 259-272 in J.C. Truett and S.R. Johnson (eds.) *Natural history of an Arctic oil field: development and the biota.* Academic press, San Diego.
- Johnson, S.R. and D.R. Herter. 1989. *The Birds of the Beaufort Sea.* BP Exploration (Alaska) Inc., Anchorage, Alaska. 372 p.
- Johnson, S.R. and W.J. Richardson. 1981. Beaufort Sea barrier island-lagoon ecological process studies: Final report, Simpson Lagoon. Part 3. *Birds. Environ. Assess. Alaskan Cont. Shelf* 7:109-383.
- Johnson, S.R., D.R. Herter, and M.S.W. Bradstreet. 1987. Habitat use and reproductive success of Pacific Eiders *Somateria mollissima v-nigra* during a period of industrial activity. *Biol. Conserv.* 41:77-90.
- Johnson, S.R., D.A. Wiggins, and R.J. Rodrigues. 1993. Use of gravel causeways by nesting common eiders, Beaufort Sea, Alaska, 1992. Report for BP Exploration (Alaska) Inc., by LGL Alaska Research Associates, Anchorage, Alaska. 25 p.
- Lanctot, R.B., J. Reed, D. Lacroix, P. Flint, J.C. Franson, T. Hollmén, M.D. Howell, J.B. Grand. 2001. Monitoring Beaufort Sea waterfowl and marine birds, 2001 Annual Progress Report. Report for Minerals Management Service by U. S. Geological Survey, Anchorage, Alaska, USA. 70 p.
- Larson, S. 1960. The influence of the Arctic fox *Alopex lagopus* on the distribution of Arctic birds. *Oikos* 11:276-305.
- Manley, B.F.J., L.L. McDonald, and D.L. Thomas. 1993. *Resource selection by animals: statistical design and analysis for field studies.* Chapman Hall, New York, NY. 177 p.
- Noel, L.E., and S.R. Johnson. 2000. Nesting status of the Pacific eider and other barrier island nesting birds on central Alaskan Beaufort Sea barrier islands, 1999. Report for BP Exploration (Alaska) Inc., by LGL Alaska Research Associates, Anchorage, Alaska. 31 p + Append.
- Noel, L.E., C.J. Perham, and S.R. Johnson. 1999a. Nesting status of the Pacific eider and other barrier island nesting birds on Flaxman Island and the Maguire Islands, Alaska, 1998. Report for BP Exploration (Alaska) Inc., by LGL Alaska Research Associates, Anchorage, Alaska. 25 p + Append.
- Noel, L.E., C.J. Perham, and S.R. Johnson. 1999b. The status of snow geese in the Sagavanirktok River delta area, Alaska: 1998 monitoring program. Report for BP Exploration (Alaska) Inc., by LGL Alaska Research Associates, Anchorage, Alaska. 22 p.
- Noel, L.E., R.J. Rodrigues, and S.R. Johnson. 2001. Nesting status of the common eider and other barrier island nesting birds in the central Alaskan Beaufort Sea, summer 2000. Report for BP Exploration (Alaska) Inc., by LGL Alaska Research Associates, Anchorage, Alaska. 34 p + Append.
- Neu, C.W., D.R. Byers, and J.M. Peak. 1974. A technique for analysis of utilization-availability data. *Journal of Wildlife Management* 38:541-545.

- Pehrsson, O. 1973. Chief prey as a factor regulating populations of eider (*Somateria mollissima*) and long-tailed ducks (*Clangula hyemalis*). Zool. Revy 35:89-92. (In Swedish with English summ.).
- Quinlan, S.E. and W.A. Lehnhausen. 1982. Arctic fox, *Alopex lagopus*, predation on nesting common eiders, *Somateria mollissima*, at Icy Cape, Alaska. Can. Field-Nat. 94:462-466.
- Reed, A.L. (ed.) 1975. Eider ducks in Canada. Can. Wildl. Service Report Series No. 47, Ottawa, Ontario.
- Schamel, D.L. 1974. The breeding biology of the Pacific eider (*Somateria mollissima v-nigra* Bonaparte) on a barrier island in the Beaufort Sea, Alaska. M.S. Thesis, University of Alaska, College.
- Schamel, D.L. 1977. Breeding of the Common Eider *Somateria mollissima* on the Beaufort Sea coast of Alaska. Condor 79:478-485.
- Suydam, R.,L. Quakenbush, M. Johnson, J. Craighead George, and J. Young. 1997. Migration of king and common eiders past Point Barrow, Alaska - spring and summer/fall, 1994. Pages 21-28 in D.L. Dickson (ed.) King and common eiders of the Western Canadian Arctic. Can. Wildl. Ser. Occas. Pap. 94. 75 p.
- U.S. Fish and Wildlife Service (USFWS). 1999. Population status and trends of sea ducks in Alaska. Unpublished Report. U.S. Fish and Wildlife Service, Migratory Bird Management, Anchorage, Alaska. 137 p.
- Wiggins, D.A. and S.R. Johnson. 1991. Use of gravel causeways by nesting common eiders, Beaufort Sea, Alaska, 1990. Report for BP Exploration (Alaska) Inc., by LGL Alaska Research Associates, Anchorage, Alaska. 32 p.
- Wiggins, D.A. and S.R. Johnson. 1992. Use of gravel causeways by nesting common eiders, Beaufort Sea, Alaska, 1991. Report for BP Exploration (Alaska) Inc., by LGL Alaska Research Associates, Anchorage, Alaska. 36 p.
- Zar, J. 1974. Biostatistical Analyses. Prentice Hall. Englewood Cliffs, N.J. 620 p.



Photo by Lynn Noel

Nest search crew and helicopter pilots on Reindeer Island, 16 July 2001.



Photo by Lynn Noel

Driftwood habitat on Reindeer Island, 16 July 2000.



Photo by Lynn Noel

Scattered driftwood habitats on Pole Island, 15 July 2000.



Photo by Lynn Noel

Elymus mounds with nesting common eiders on Pole Island, 15 July 2000.



Photo by Lynn Noel

Driftwood accumulation on east end of Narwhal Island, 11 July 2000.



Photo by Lynn Noel

Driftwood pile with common eider nest on Belvedere Island, 15 July 2000.

Figure 2. Bell 212 twin-engine helicopter used to transport search crew to barrier islands, and examples of island habitats searched for nesting common eiders, central Alaskan Beaufort Sea barrier islands, July 1999-2001.



Artemesia glomerata, no driftwood, Cross Island, 16 July 2001.
Photo by Lynn Noel



Aerenaria sp., no driftwood, Pole Island, 12 July 2000.
Photo by Lynn Noel



Elymus arenarius, low driftwood, Pole Island, 14 July 2001.
Photo by Bob Rodrigues



Low driftwood, Endicott, 6 July 2001.
Photo by Lynn Noel



Medium driftwood, Endicott, 6 July 2001.
Photo by Lynn Noel



High driftwood, Endicott, 6 July 2001.
Photo by Lynn Noel

Figure 3. Examples of common eider nest cover types, central Alaskan Beaufort Sea barrier islands, July 1998–2001.



Photo by Lynn Noel
No driftwood, Duck Island #1&2, 7 July 2001.



Photo by Lynn Noel
Peat block, no driftwood, Duck Island #1&2,
7 July 2001.



Photo by Lynn Noel
Lungwort (*Mertensia maritima*), no driftwood, Pole
Pole Island, 14 July 2001.



Photo by Lynn Noel
Low driftwood, Duck Island #1&2, 7 July 2001.



Photo by Lynn Noel
Medium driftwood, Pole Island, 14 July 2000.



Photo by Lynn Noel
High driftwood, Narwhal Island, 11 July 2000.

Figure 4. Examples of glaucous gull nest cover types, central Alaskan Beaufort Sea barrier islands, July 1998-2001.



Photo by Lynn Noel

Common eider eggs.



Photo by Lynn Noel

Glaucous gull eggs.

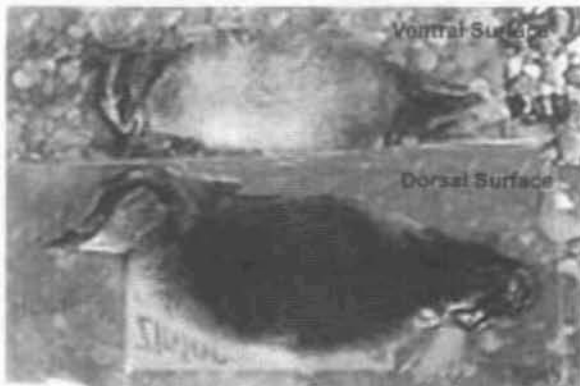


Photo by Lynn Noel

Common eider ducklings (deceased)



Photo by Lynn Noel

Glaucous gull chicks



Photo by Lynn Noel

Common eider hen with nasal disk.



Photo by Lynn Noel

Glaucous gull chick with leg band.

Figure 5. Eggs, young, and marks applied to common eider hens and glaucous gull chicks, on central Alaskan Beaufort Sea barrier islands, July 1999-2001.

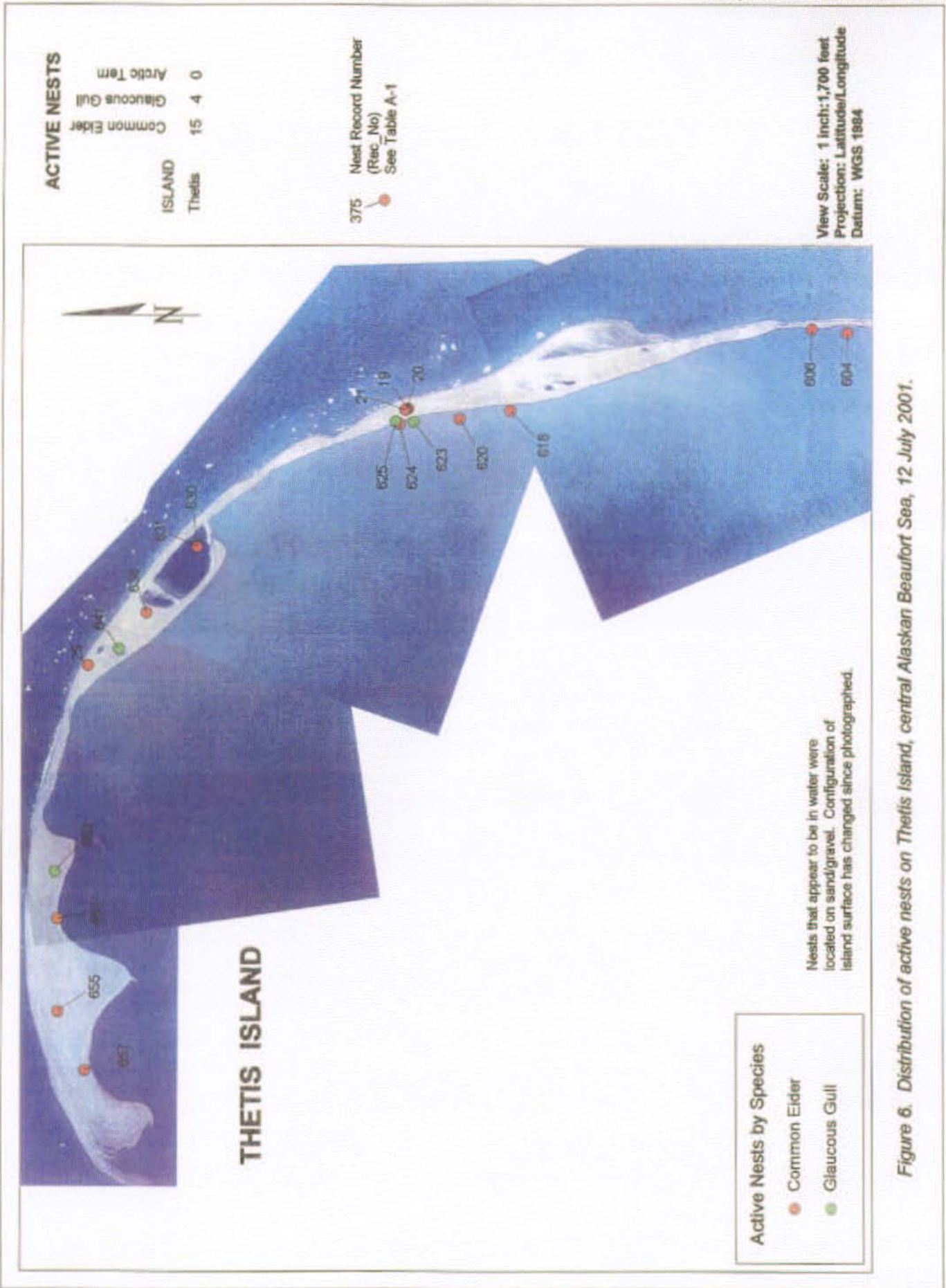


Figure 6. Distribution of active nests on Thetis Island, central Alaskan Beaufort Sea, 12 July 2001.

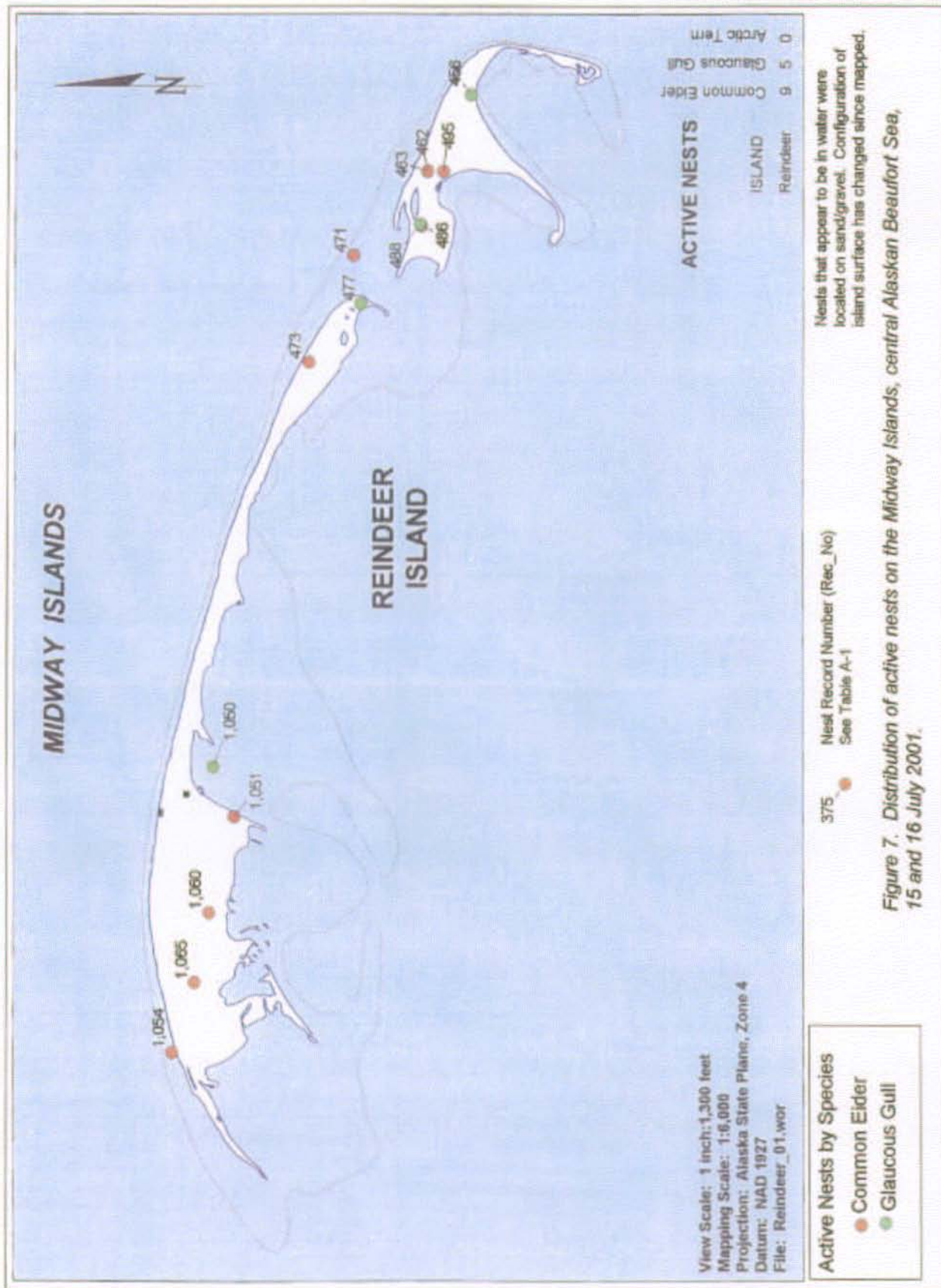


Figure 7. Distribution of active nests on the Midway Islands, central Alaskan Beaufort Sea, 15 and 16 July 2001.

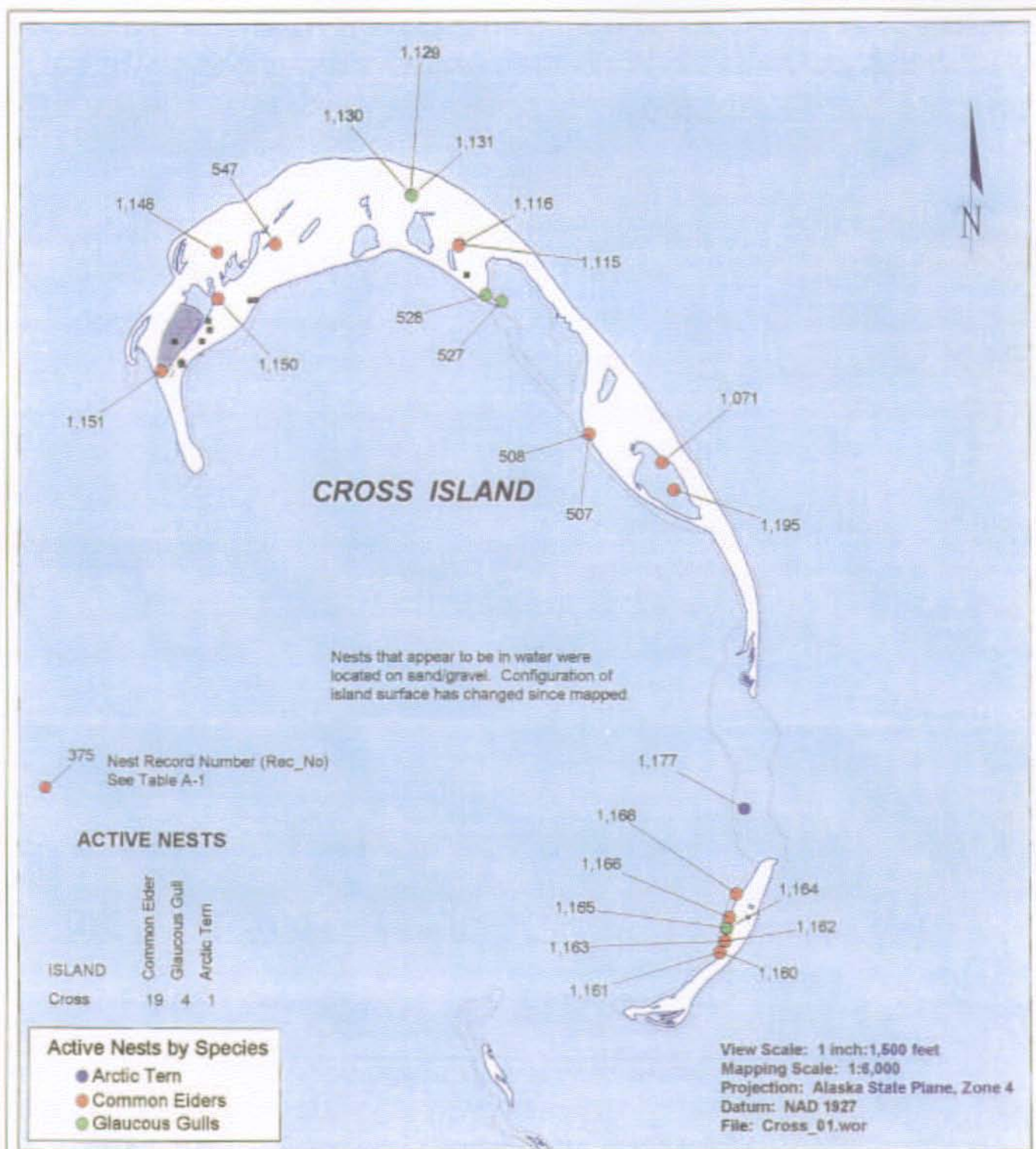


Figure 8. Distribution of active nests on Cross Island, central Alaskan Beaufort Sea, 16 July 2001.



Active Nests by Species

- Common Eider
- Glaucous Gull

375 Nest Record Number (Rec_No)
See Table A-1

ACTIVE NESTS

ISLAND	Common Eider	Glaucous Gull	Arctic Tern
Duck #1&2	18	6	0

Figure 9. Distribution of active nests on Duck Island #1&2, central Alaskan Beaufort Sea, 14 July 2001.

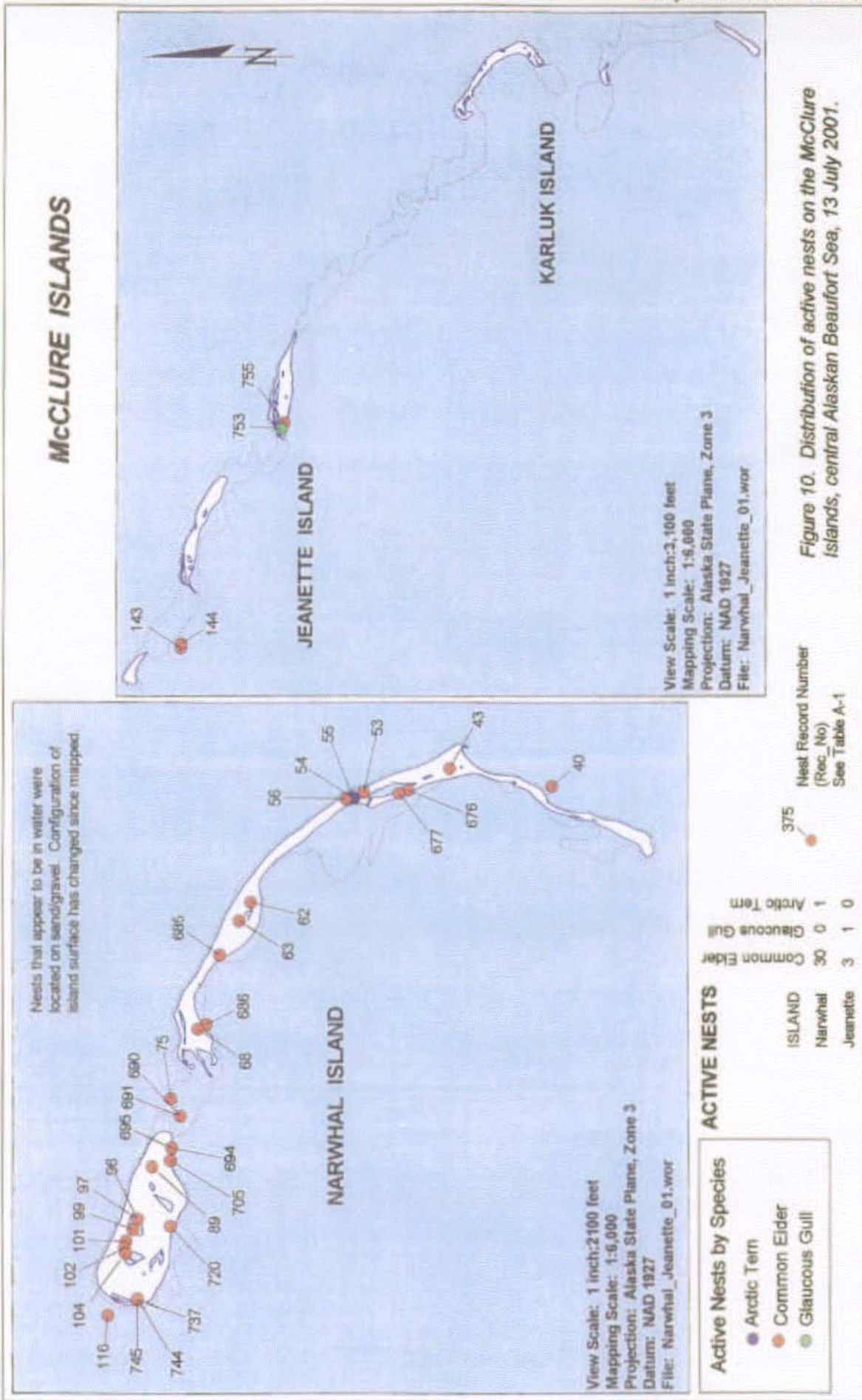


Figure 10. Distribution of active nests on the McClure Islands, central Alaskan Beaufort Sea, 13 July 2001.

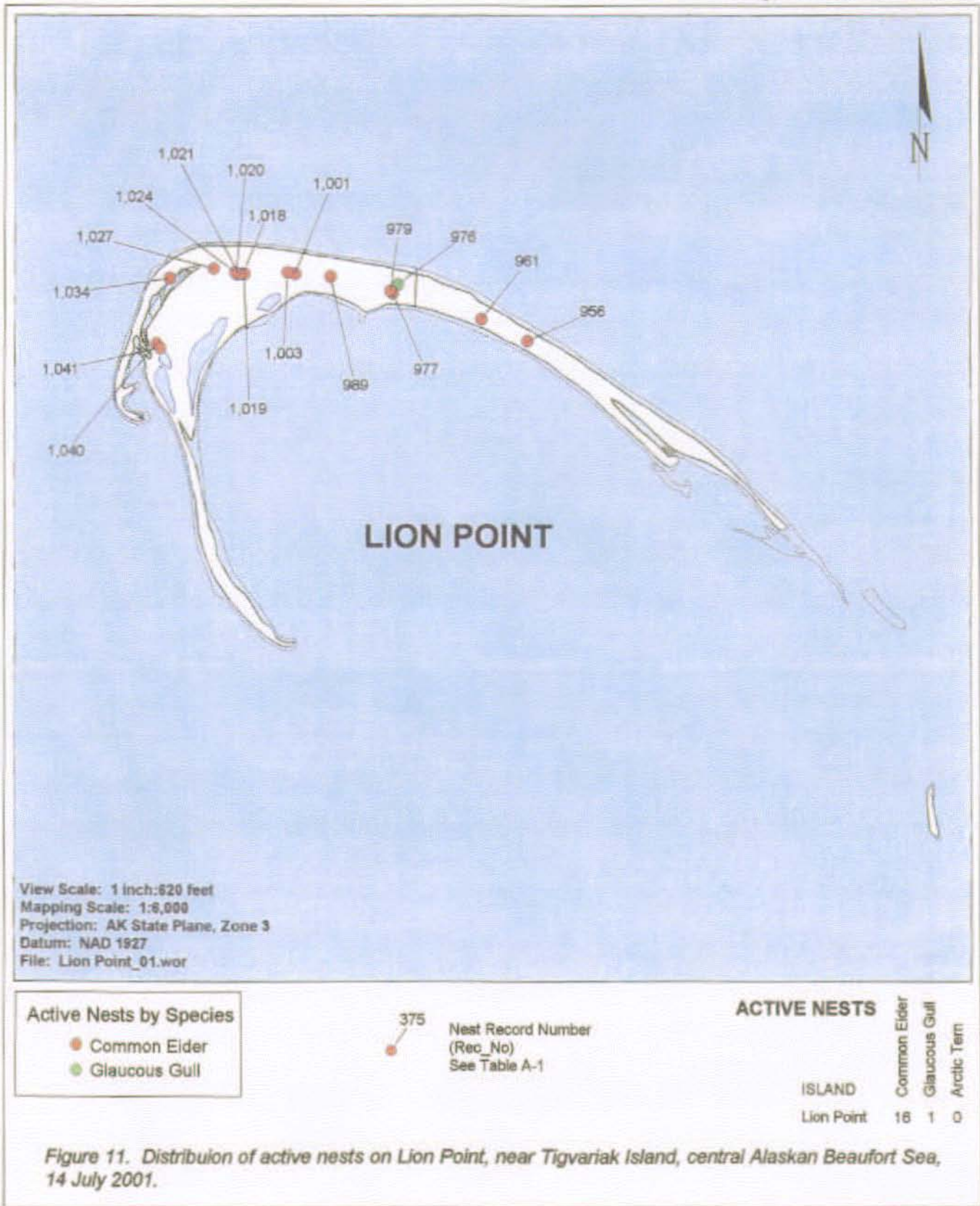
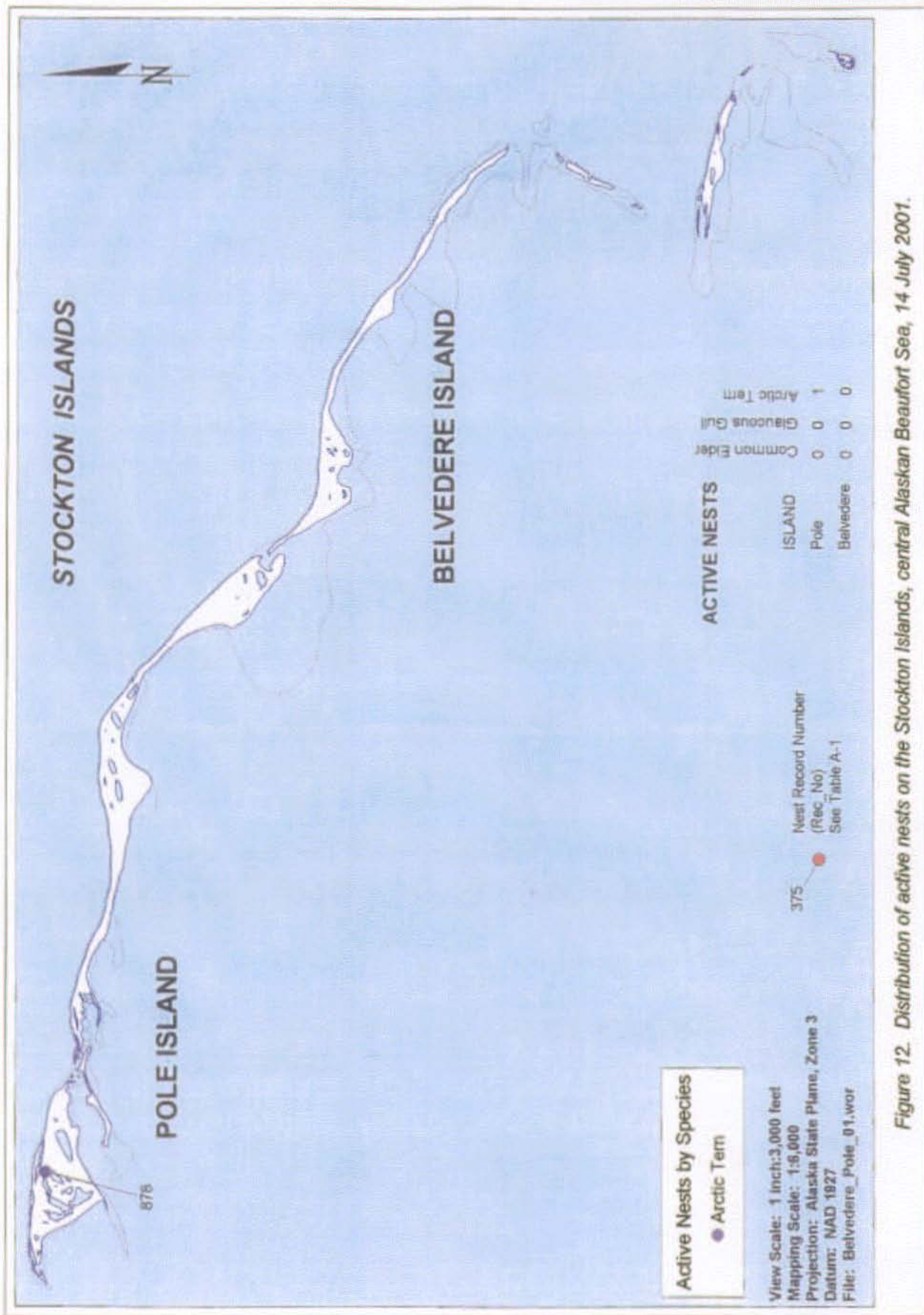


Figure 11. Distribution of active nests on Lion Point, near Tigvariak Island, central Alaskan Beaufort Sea, 14 July 2001.



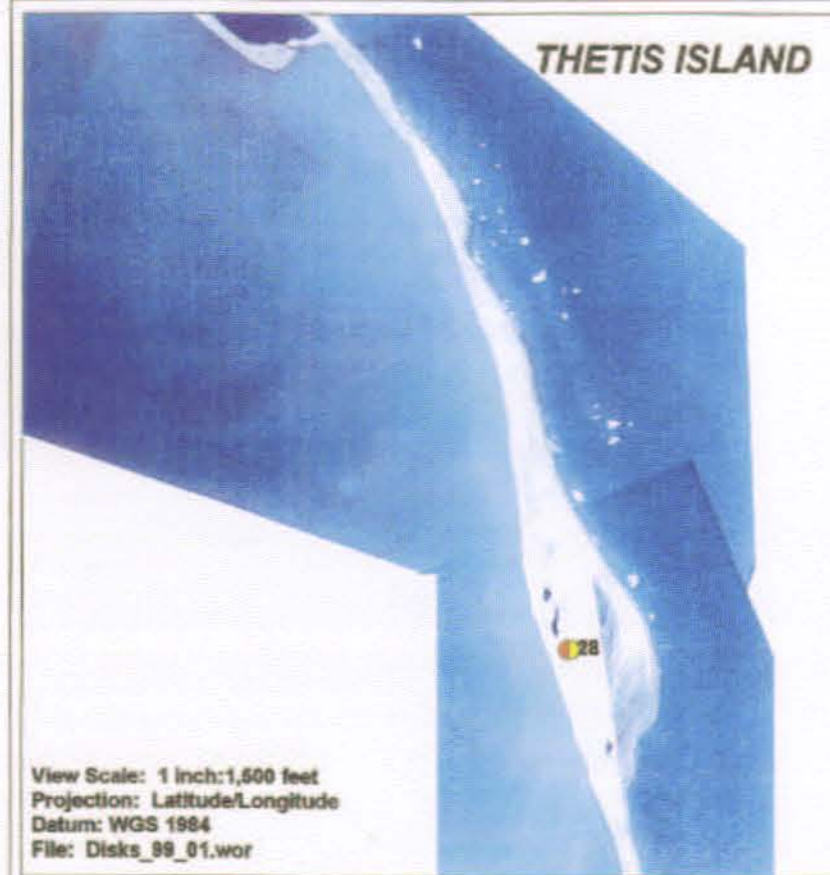
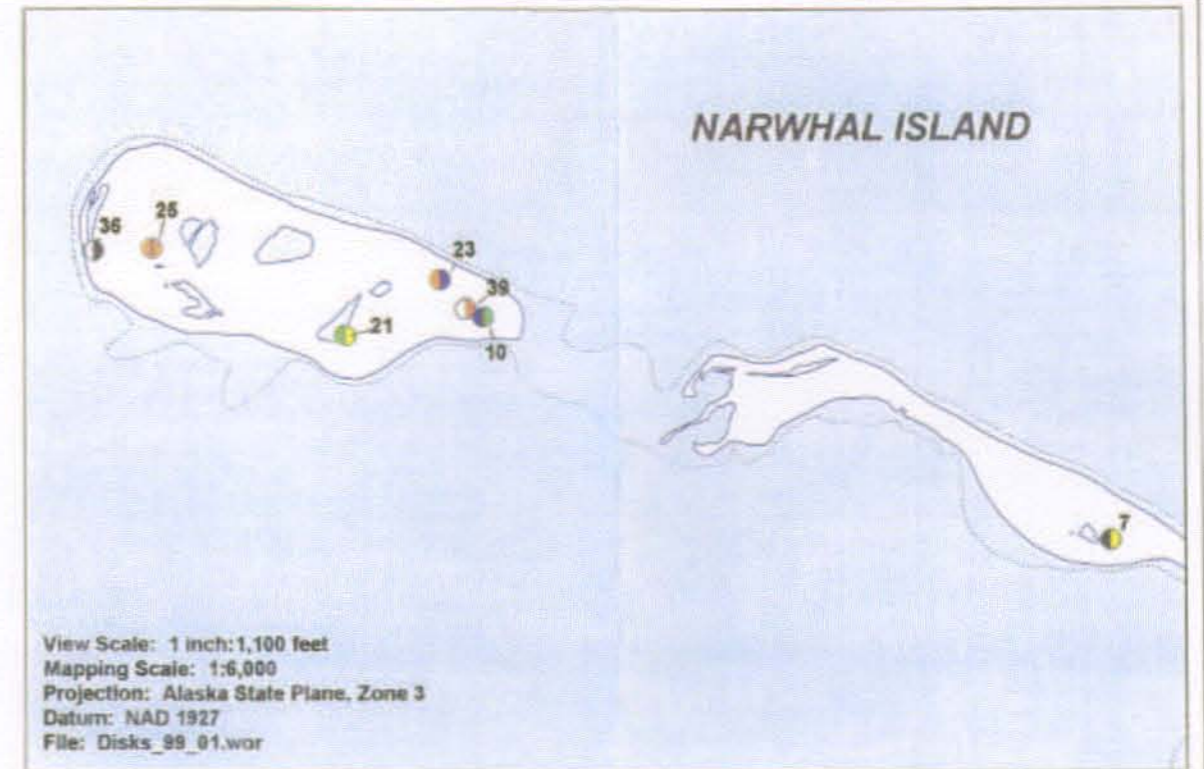
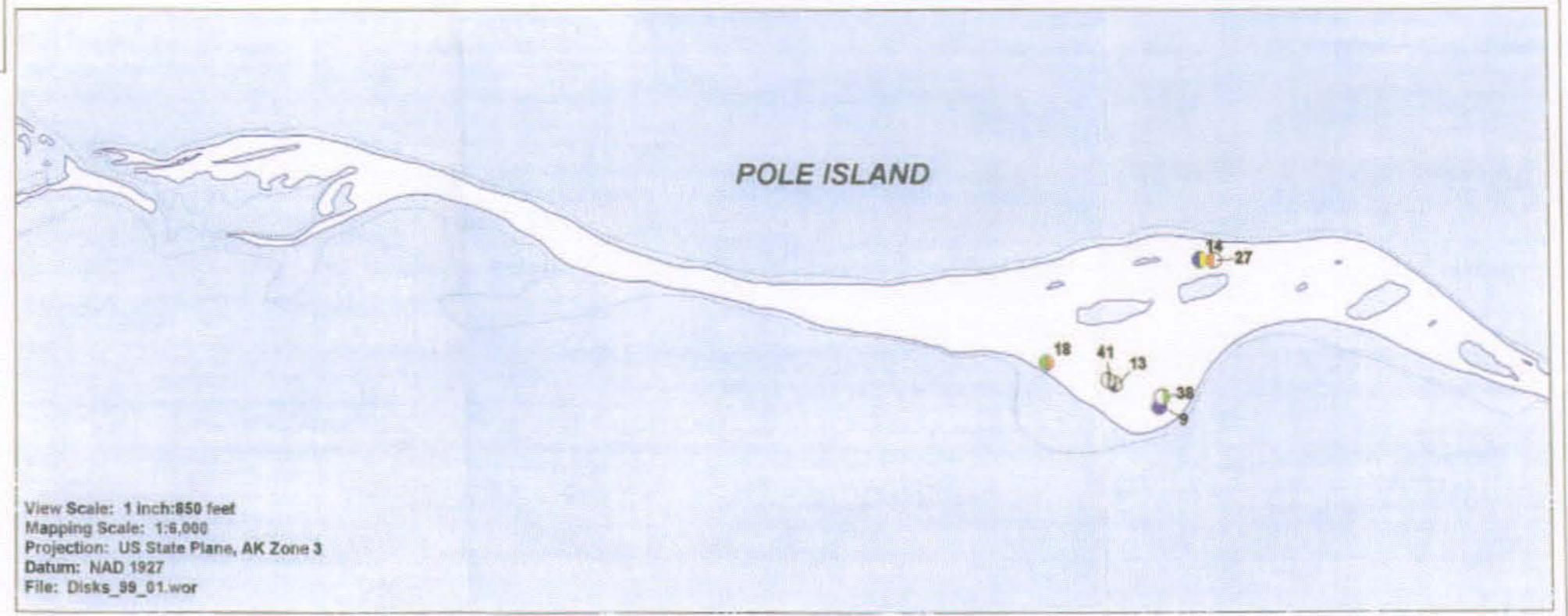


Figure 13. Initial capture locations with color combinations for female common eiders marked with nasal disks, central Alaskan Beaufort Sea, July 1999-2001.



See Table 9 for additional information on individual marked common eiders, referenced by Number (column 1, Table 9).



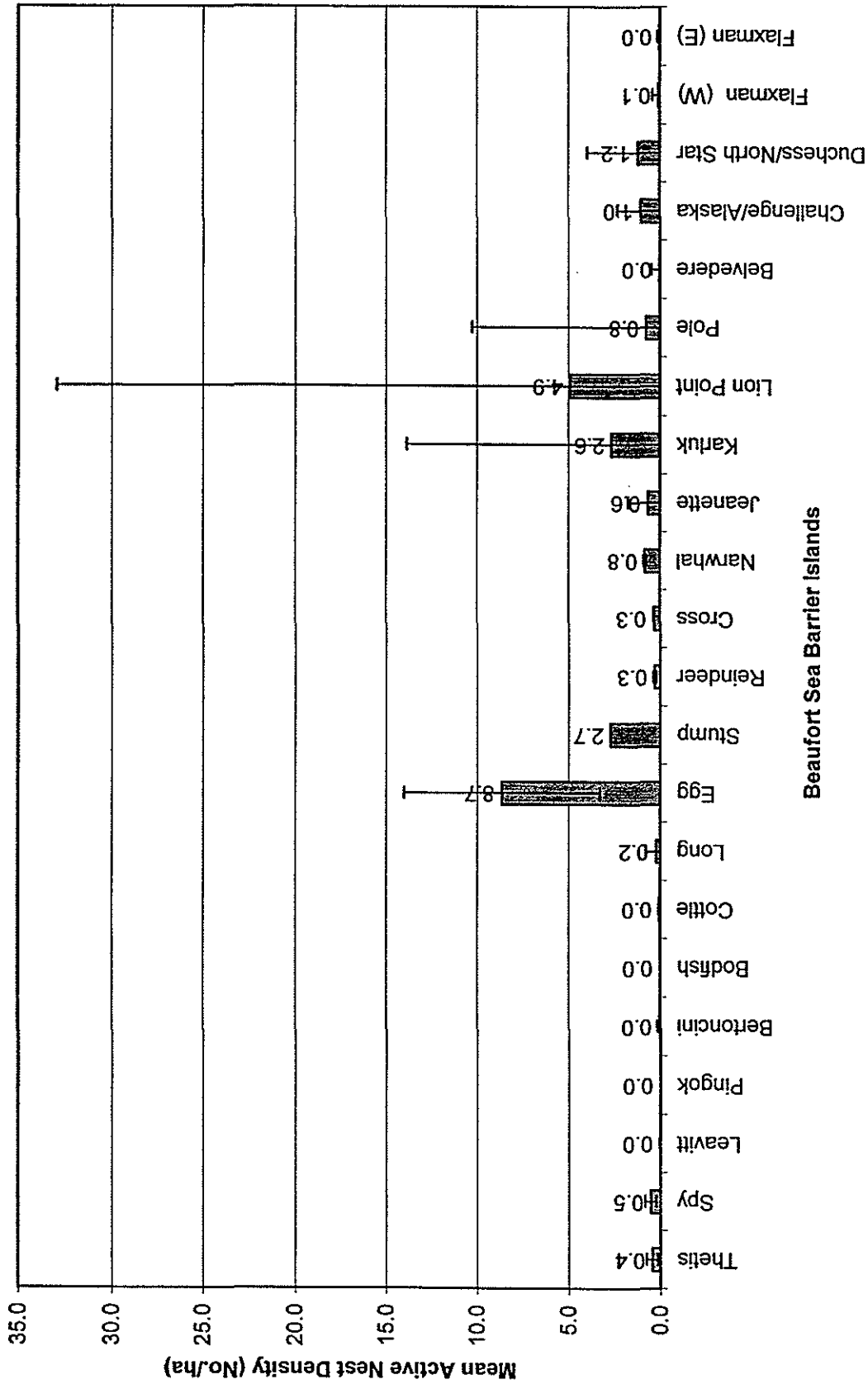


Figure 14. Mean and 95% confidence limit for active common eider nest density on central Alaskan Beaufort Sea barrier islands, 1998-2001. Most islands have data for at least 2 years; Cross Island and Stump Island have data for only 1 year (Table 11). Island areas updated from digital mapping based on 2000 aerial photography when available. See Table 11 for citation of data sources.

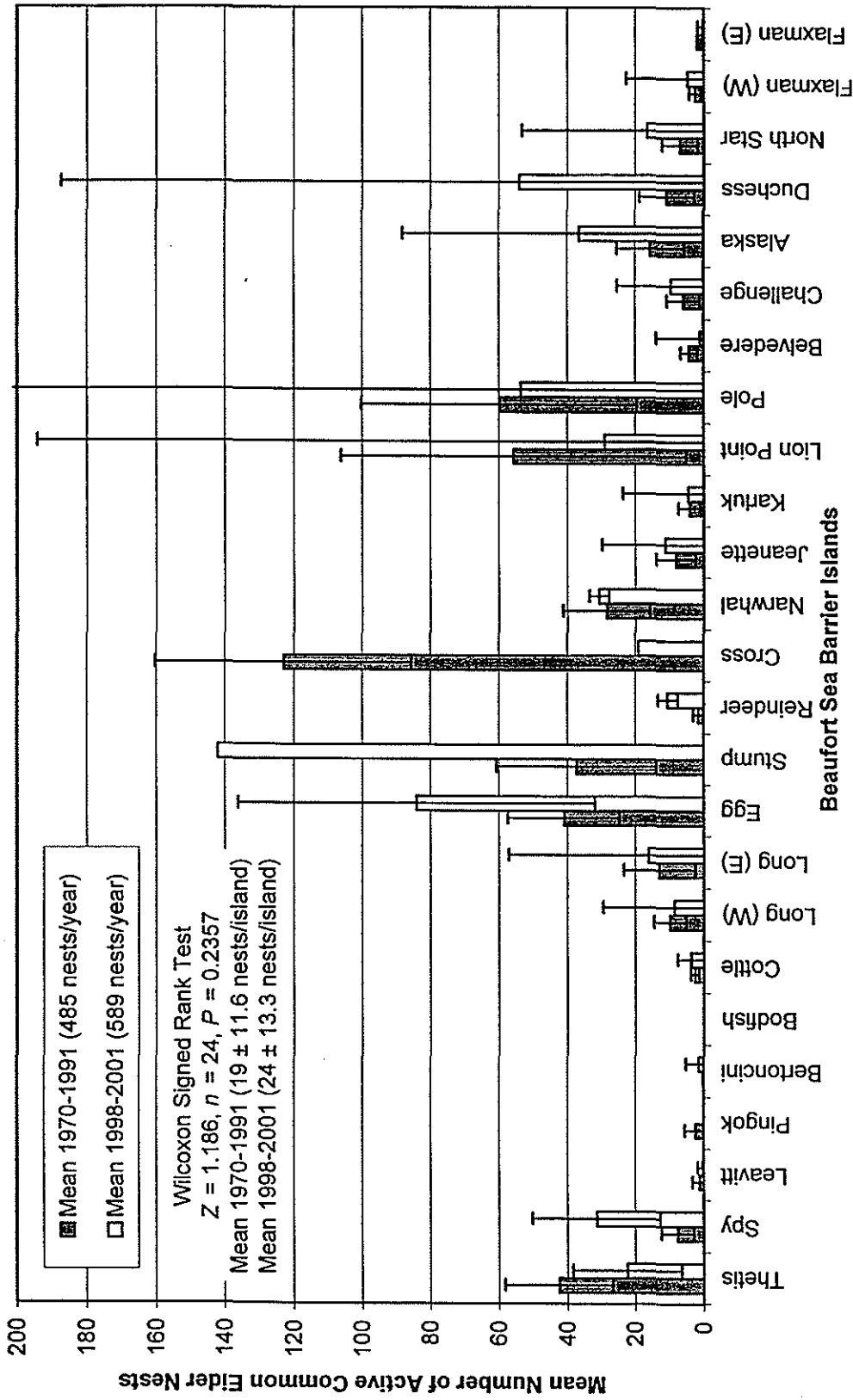


Figure 15. Mean number (with 95% confidence intervals) of active common eider nests by island during a 22 year period (1970-1991) compared to the current mean over the last 4 years (1998-2002) for the central Alaskan Beaufort Sea barrier islands (Table 11). Most islands have at least 2 years of data during the period from 1998-2001; Cross Island and Stump Island have only 1 year of data. See Table 11 for citation of data sources.

Table 1. Nest search effort on barrier islands along the central Alaskan Beaufort Sea coast from Thetis Island to the Stockton Islands, 12–16 July 2001.

Island (West to East)	Approximate		Date	Start Time	End Time	Duration (hours)	Number of Observers	People Hours	Search Effort (people h/ha)	Predator Signs
	Island Area ¹ (ha)									
Thetis Island	51.5		12 Jul 01 12 Jul 01	12:58 12:29	18:12 18:12	5:23 5:72	2 2	10.46 11.44	0.43	Human, Glaucous Gulls
Midway Islands										
Reindeer Island	35.0		15 Jul 01 15 Jul 01 16 Jul 01 16 Jul 01	11:34 11:27 11:02 11:13	12:19 12:19 12:19 11:53	0.75 0.87 1.28 0.67	2 2 2 2	1.50 1.74 2.56 1.34	0.20	Glaucous Gull, Polar Bear tracks
Cross Island	57.9		16 Jul 01 16 Jul 01 16 Jul 01	14:28 14:27 16:22	16:02 16:07 17:35	1.57 1.67 1.22	2 2 4	3.14 3.34 4.88	0.20	Glaucous Gulls, Polar Bear tracks
Duck Island #1&2	2.3		14 Jul 01	9:50	10:40	0.83	2	1.66	0.72	Glaucous Gulls
McClure Islands										
Narwhal Island	37.7		13 Jul 01 13 Jul 01	10:14 10:15	14:43 16:07	4.48 5.87	2 2	8.96 11.74	0.55	Glaucous Gull, Polar Bear bed & tracks, dead Arctic Fox (winter coat)
Jeanette Island	17.2		13 Jul 01 13 Jul 01	16:36 16:43	17:22 17:20	0.77 0.62	2 2	1.54 1.24	0.16	Glaucous Gulls
Lion Point	5.9		14 Jul 01	17:35	19:00	1.42	5	7.10	1.20	Glaucous Gulls, Fox tracks
Stockton Islands										
Pole Island	71.3		14 Jul 01 14 Jul 01	13:25 13:24	16:51 16:59	3.43 3.58	3 2	10.29 7.16	0.24	Arctic Fox, Glaucous Gulls
Belvedere Island	29.3		14 Jul 01 14 Jul 01	12:00 11:58	13:25 13:20	1.42 1.37	2 3	2.84 4.11	0.24	Arctic Fox tracks and bed, Long-tailed Jaeger, Glaucous Gulls, Polar Bear bed
Total	308.1					42.8		97.0	0.31	

¹ Areas of gravel habitat based on 1:63,360 or 1:6000 digital base mapping for river gravel and coastline layers. Mapping based on 1998 aerial photography, actual island area is variable annually.

Table 2. Nesting effort expressed as the number of active nests, failed nests, and nest scrapes on barrier islands along the central Alaskan Beaufort Sea coast from Thetis Island to the Stockton Islands, 12–16 July 2001.

Species and Nest Information ¹	Midway Islands		Duck Island		McClure Islands		Stockton Islands		Total Nests
	Thetis	Reindeer	Cross	#1&2	Narwhal	Jeanette	Lion Point	Pole Belvedere and Scrapes	
Common Eider									
Active Nests	15	9	19	18	30	3	16	0	110
Failed Nests	12	21	51	4	51	6	59	279	510
Nest Scrapes	33	18	69	2	62	13	37	68	335
Total Effort	60	48	139	24	143	22	112	347	955
% Effort by Island	6	5	15	3	15	2	12	36	100
Glaucous Gull									
Active Nests	4	5	4	6	0	1	1	0	21
Failed Nests	0	0	2	0	1	0	0	2	7
Status Unknown	0	1	2	0	0	2	1	0	7
Nest Scrapes	1	0	0	0	0	0	0	0	2
Total Effort	5	6	8	6	1	3	2	2	37
% Effort by Island	14	16	22	16	3	8	5	5	100
Arctic Tern									
Active Nests	0	0	1	0	1	0	0	1	3
Failed Nests	0	0	0	0	0	0	0	0	0
Nest Scrapes	0	0	6	0	0	0	0	4	11
Total Effort	0	0	7	0	1	0	0	5	14
% Effort by Island	0	0	50	0	7	0	0	36	100
All Species²									
Active Nests	19	14	24	24	31	4	17	1	134
Failed Nests	12	21	53	4	52	6	59	281	517
Status Unknown	0	0	0	0	0	0	0	0	0
Nest Scrapes	34	18	75	2	62	13	37	72	348
Total Effort for All Species	65	53	152	30	145	23	113	354	999
% Effort by Island for All Species	7	5	15	3	15	2	11	35	100

¹ See text for definition of active and failed nests, and scrapes. Total effort is equal to the number of active and failed nests, and nest scrapes. Percent effort by island is equal to the total effort for an island divided by the total effort over all reported islands for that species.

² All species includes the 3 species listed above, no additional species were recorded during 2001.

Table 3. Productivity and fate of nests on barrier islands along the central Alaskan Beaufort Sea coast from Thetis Island to the Stockton Islands, 12-16 July 2001.

Island and Species	Nests ¹	Active Nests ²	Density (No./ha)	Mean Clutch Size ³	Failed Nests			Predator ⁵				
					Depredated	Unknown	% of Nests Depredated ⁴	Arcic Fox	Glaucous Gull	Avian		
Thetis Island (51.5 ha)												
Common Eider	27	15	0.29	4.2 ± 2.77 (n=6)	12	0	44.4	0	0	0	2	
Glaucous Gull	4	4	0.08	2.3 ± 0.80 (n=4)	0	0	0.0	---	---	---	---	
Reindeer Island (35.0 ha)												
Common Eider	30	9	0.26	3 ± 0.80 (n=4)	21	0	70.0	0	0	0	4	
Glaucous Gull	6	5	0.14	2 ± 2.48 (n=3)	0	1	0.0	---	---	---	---	
Cross Island (57.9 ha)												
Common Eider	70	19	0.33	1.9 ± 0.83 (n=8)	51	0	72.9	0	0	0	1	
Glaucous Gull	8	3	0.05	3 (n=2)	2	2	25.0	---	---	---	---	
Arctic Tern	1	1	0.02	1 (n=1)	0	0	0.0	---	---	---	---	
Duck Island #1&2 (2.3 ha)												
Common Eider	22	18	7.83	3 (n=1)	4	0	18.2	0	0	0	0	
Glaucous Gull	6	6	2.61	2.5 ± .88 (n=6)	0	0	0.0	---	---	---	---	
Narwhal Island (37.7 ha)												
Common Eider	81	30	0.80	2.4 ± 0.40 (n=17)	51	0	63.0	0	2	0	0	
Glaucous Gull	1	0	0.00		1	0	100.0	---	---	---	---	
Arctic Tern	1	1	0.03	2 (n=1)	0	0	0.0	---	---	---	---	
Jeanette Island (17.2 ha)												
Common Eider	9	3	0.17		6	0	66.7	0	0	0	0	
Glaucous Gull	3	0	0.00		0	2	0.0	---	---	---	---	
Lion Point (5.9 ha)												
Common Eider	75	16	2.71	2.9 ± 1.12 (n=7)	59	0	78.7	0	0	0	0	
Glaucous Gull	2	1	0.17	3 (n=1)	0	1	0.0	---	---	---	---	
Pole Island (71.3 ha)												
Common Eider	279	0	0.00		279	0	100.0	13	0	0	0	
Glaucous Gull	2	0	0.00		2	0	100.0	---	---	---	---	
Belvedere Island (29.3 ha)												
Common Eider	27	0	0.00		27	0	100.0	11	0	0	0	
Glaucous Gull	3	0	0.00		2	1	66.7	---	---	---	---	

¹ Total active and failed nests.

² Active nests include nests with live eggs, incubating hens, or hatched eggs.

³ Mean with 95% confidence interval for clutch size includes those nests where the adult left the nest and eggs could be counted.

⁴ Percentage of all nests that were depredated.

⁵ Type of nest predation was determined by direct observation of predators, evidence that predators had been on an island (animal hair, feathers, scat, or tracks), and morphology of predated eggs.

Table 4. Observed and expected numbers of active common eider nests by barrier island or island group based on island surface area, central Alaskan Beaufort Sea, July 2001.

Island or Island Group	Island Surface Area (ha)	Proportion of Total Area	Observed			Expected		Proportion Observed on Each Island	Confidence Interval on Proportion of Occurrence (95% Confidence Interval)		Comparison of Proportion of Total Area with Confidence Interval
			Active Common Eider Nests ¹	Active Common Eider Nests ²	Number of Active Common Eider Nests ²	Number of Active Common Eider Nests ²	Lower		Upper		
										Active Common Eider Nests ¹	
Thetis	52	0.169	15	16	16	0.163	0.061	0.265	Within		
Reindeer	35	0.114	9	10	10	0.098	0.016	0.180	Within		
Cross	58	0.189	19	17	17	0.207	0.095	0.318	Within		
McClure	55	0.179	33	16	16	0.359	0.227	0.491	>Expected		
Lion Point	6	0.020	16	2	2	0.174	0.070	0.278	>Expected		
Stockton	101	0.329	0	30	30	0.000	0.000	0.000	<Expected		
Island Area Total	307	1.000	92	92	92	1.000					

¹ χ^2 for observed versus expected number of common eiders per island ($\chi^2 = 159.38$, $df = 5$, $P < 0.001$).

²Expected number based on available island surface area.

Table 5. Observed and expected numbers of active common eider nests by barrier island or island group based on area of driftwood habitat, central Alaskan Beaufort Sea, July 2001.

Island or Island Group	Habitat Area (ha)	Proportion of Total Area	Observed Number of Active Common Eider Nests ¹	Expected Number of Active Common Eider Nests ²	Proportion Observed on Each Island	Confidence Interval on Proportion of Occurrence (95% Confidence Interval)		Comparison of Proportion of Total Area with Confidence Interval
						Lower	Upper	
Thetis	5.2	0.107	15	10	0.163	0.061	0.265	Within
Reindeer	3.5	0.072	9	7	0.098	0.016	0.180	Within
Cross	11.6	0.238	19	22	0.207	0.095	0.318	Within
McClure	3.9	0.080	33	7	0.359	0.227	0.491	>Expected
Lion Point	0.3	0.006	16	1	0.174	0.070	0.278	>Expected
Stockton	24.2	0.497	0	46	0.000	0.000	0.000	<Expected
Island Area Total	48.7	1.000	92	92	1.000			

¹ χ^2 for observed versus expected number of common eiders per island ($\chi^2 = 559.15$, $df = 5$, $P < 0.001$).

²Expected number based on available island surface area with driftwood or vegetation cover.

Table 6. Observed and expected numbers of active and depredated common eider nests by barrier island or island group based on island surface area, central Alaskan Beaufort Sea, July 2001.

Island or Island Group	Island Surface Area (ha)	Proportion of Total Area	Observed		Expected Number of Active and Predated Common Eider Nests ¹	Proportion Observed on Each Island	Confidence Interval on Proportion of Occurrence (95% Confidence Interval)		Comparison of Proportion of Total Area with Confidence Interval
			Number of Active and Predated Common Eider Nests ¹	Number of Active and Predated Common Eider Nests ²			Lower	Upper	
Thetis	52	0.169	27	101	0.045	0.023	0.068	<Expected	
Reindeer	35	0.114	30	68	0.050	0.027	0.074	<Expected	
Cross	58	0.189	70	113	0.117	0.082	0.152	<Expected	
McClure	55	0.179	90	107	0.151	0.112	0.189	Within	
Lion Point	6	0.020	75	12	0.125	0.090	0.161	>Expected	
Stockton	101	0.329	306	197	0.512	0.458	0.566	>Expected	
Island Area Total	307	1.000	598	598	1.000				

¹ χ^2 for observed versus expected number of common eiders per island ($\chi^2 = 498.62$, $df = 5$, $P < 0.001$).

²Expected number based on available island surface area.

Table 7. Observed and expected numbers of active and depredated common eider nests by barrier island or island group, based on area of driftwood habitat, central Alaskan Beaufort Sea, July 2001.

Island or Island Group	Habitat Area (ha)	Proportion of Total Area	Observed		Expected		Proportion Observed on Each Island	Confidence Interval		Comparison of Proportion of Total Area with Confidence Interval
			Number of Active and Predated Common Eider Nests ¹	Number of Active and Predated Common Eider Nests ²	Proportion of Occurrence (95% Confidence Interval)	Lower		Upper		
Thetis	5.2	0.107	27	64	0.045	0.023	0.068	<Expected		
Reindeer	3.5	0.072	30	43	0.050	0.027	0.074	Within		
Cross	11.6	0.238	70	142	0.117	0.082	0.152	<Expected		
McClure	3.9	0.080	90	48	0.151	0.112	0.189	>Expected		
Lion Point	0.3	0.006	75	4	0.125	0.090	0.161	>Expected		
Stockton	24.2	0.497	306	297	0.512	0.458	0.566	Within		
Island Area Total	48.7	1.000	598	598	1.000					

¹ χ^2 for observed versus expected number of common eiders per island ($\chi^2 = 1479.97$, $df = 5$, $P < 0.001$).

²Expected number based on available island surface area with driftwood or vegetation cover.

Table 8. Summary of driftwood density at nest sites on barrier islands along the central Alaskan Beaufort Sea coast from Thetis Island to Belvedere Island, 12-16 July 2001.

Island and Species	Driftwood Density ¹												Total Nests & Scrapes
	High Density		Medium Density		Low Density		No Driftwood		Buildings		Total Nests & Scrapes		
	Nests	Scrapes	Nests	Scrapes	Nests	Scrapes	Nests	Scrapes	Nests	Scrapes			
Thetis Island													
Common Eider	2	0	7	5	15	28	3	0	0	0	0	0	60
Glaucous Gull	0	0	0	0	0	1	2	0	0	0	0	0	3
Reindeer Island													
Common Eider	1	0	2	1	27	16	0	1	0	0	0	0	48
Glaucous Gull	0	0	1	0	5	0	0	0	0	0	0	0	6
Cross Island													
Common Eider	7	2	31	17	20	46	12	4	0	0	0	0	139
Glaucous Gull	1	0	1	0	3	0	3	0	0	0	0	0	8
Arctic Tern	0	0	0	1	1	4	0	1	0	0	0	0	7
Duck Island #1&2													
Common Eider	7	0	6	0	8	2	1	0	0	0	0	0	24
Glaucous Gull	0	0	2	0	3	0	1	0	0	0	0	0	6
Narwhal Island													
Common Eider	10	0	23	10	45	51	0	1	3	0	0	0	143
Glaucous Gull	0	0	1	0	0	0	0	0	0	0	0	0	1
Arctic Tern	0	0	0	0	1	0	0	0	0	0	0	0	1
Jeanette Island													
Common Eider	0	0	4	2	5	11	0	0	0	0	0	0	22
Glaucous Gull	0	0	1	0	0	0	0	0	0	0	0	0	1
Lion Point													
Common Eider	15	0	31	8	24	29	5	0	0	0	0	0	112
Glaucous Gull	2	0	0	0	0	0	0	0	0	0	0	0	2
Pole Island													
Common Eider	21	1	108	11	148	55	2	1	0	0	0	0	347
Glaucous Gull	0	0	1	0	1	0	0	0	0	0	0	0	2
Arctic Tern	1	4	0	0	0	0	0	0	0	0	0	0	5
Belvedere Island													
Common Eider	6	3	6	6	15	22	0	0	0	0	0	0	58
Glaucous Gull	0	0	0	1	3	0	0	0	0	0	0	0	4
Arctic Tern	0	0	0	0	0	1	0	0	0	0	0	0	1
Totals													
Common Eider Total	69	6	218	60	307	260	23	7	3	0	0	0	953
Glaucous Gull Total	3	0	7	1	15	1	6	0	0	0	0	0	33
Arctic Tern	1	4	0	1	2	5	0	1	0	0	0	0	14

¹ Estimated driftwood cover within 1-m diameter area centered on the nest bowl. High = 67-100%, Medium = 34-66%, Low = 1-33%.

Table 9. Female common eiders captured and marked with round colored nasal disks on barrier islands in the central Alaskan Beaufort Sea, July 1999-2001. Resightings of marked birds are also included in this table.

No.	Right Disk		Left Disk	USFWS Number	Status	Weight with bag (kg)		Culmen (mm)		Ant. Nares Width (mm)		Bill Width at feather line (mm)		Rt. Tarsus (mm)	Location
	Black	Yellow				Leg	Rt	Short	Long	Width	mm)	mm)	mm)		
7			Yellow	134739003	New	1.9	69.2	14.5		51.2					Narwhal I., AK, Nest 37
9	Blue	Blue	Blue	103740029	New	1.7	48.4	63.5	15.3	50.7					Pole I., AK, Driftwood along beach S of <i>Elymus</i> /Peat "hills"
10	Blue	Blue	Green	103740021	New	1.7	49.3		23.5	52.5					Narwhal I., AK, Nest 11
13	Blue	Blue	White	103740030	New	1.7	47.1	59.9	13.5	52.4					Pole I., AK, ~100 m W of capture locations for 103740028 and 103740029 (Could be White and Blue, not Blue and White)
14	Blue	Blue	Yellow	103740027	New	1.7	48.7	59.6		51.3					Pole I., AK, Northernmost <i>Elymus</i> /Peat "hill"
18	Green	Green	Orange	103740032	New	2.0	48.8	68.0	14.0	52.8					Pole I., AK, ~200 m W of capture locations for 103740028 and 103740029
21	Green	Green	Yellow	103740023	New	2.0	42.0			51.5	22.1				Narwhal I., AK, Nest 28
23	Orange	Orange	Blue	103740020	New	1.7	48.6			52.6					Narwhal I., AK, Inside doorway of NW bldg along N beach
23	Orange	Orange	Blue	103740020	Resight										Narwhal I., AK, Inside vestibule of NE bldg (largest bldg). No apparent wear on bill, no apparent fading of nasal disks, and female appears in good shape. Tarsus band visible on right leg.
25	Orange	Orange	Orange	103740024	New	2.2	46.9	63.9		51.5					Narwhal I., AK, 75 m NE of big orange Mooring Buoy
25	Orange	Orange	Orange	103740024	Resight										Narwhal I., hen on nest (NE25)
27	Orange	Orange	White	103740026	New	1.5	40.3	57.5		49.6					Pole I., AK, Northernmost <i>Elymus</i> /Peat "hill"
28	Orange	Orange	Yellow	103740025	New	1.9	45.6	64.0		51.9					Thetis I., AK
36	White	White	Black	103740033	New	2.0	44.0	60.4	15.4	50.9					Narwhal I., AK, Nest 142
38	White	White	Green	103740028	New	1.6	50.3	64.7		52.7					Pole I., AK, Driftwood along beach S of <i>Elymus</i> /Peat "hills"
39	White	White	Orange	103740022	New	2.2	52.7		24.0	51.1					Narwhal I., AK, Nest 39
41	White	White	White	103740031	New	1.9	44.4	63.1	13.5	50.6					Pole I., AK, ~100 m W of capture locations for 103740028 and 103740029

Table 10. Glaucous gull chicks banded on barrier islands in the central Alaskan Beaufort Sea, July 2001.

No.	USFWS Number	Status	Leg	Tarsus (mm)	Date	Time ADST	Location
1	134739001	New	Left	32.0	13-Jul-01	16:50	Jeanette Island, AK, Nest 2, long 147.41084°W, lat 70.35903°N
2	134739002	New	Left	33.0	13-Jul-01	16:50	Jeanette Island, AK, Nest 2, long 147.41084°W, lat 70.35903°N
3	134739004	New	Left	28.6	15-Jul-01	12:47	Reindeer Island, AK, Nest 2, long 148.35852°W, lat 70.48408°N
4	134739005	New	Left	35.7	15-Jul-01	13:25	Reindeer Island, AK, Nest 2, long 148.35852°W, lat 70.48408°N

Table 12. Active common eider nests counted on man-made structures along the central Alaskan Beaufort Sea coast, 1982-2001 (Table adopted from Johnson 2000).

Location	Year of Census																	Mean	SD
	1982	1984	1985	1987	1988	1989	1990	1991	1992	1995	1998	2000	2001	N	Max	Total			
Endicott Causeway	-	-	-	-	2	4	20	19	3	2	0	2	3	8	20	55	6.1	7.67	
Resolution Island	-	0	1	0	-	-	-	-	-	-	-	-	-	3	1	1	0.3	0.58	
Endeavor Island	1	-	0	0	-	-	-	-	-	-	-	-	-	3	1	1	0.3	0.58	
Duck Island #1&2	-	-	-	-	-	15	14	7	16	16	-	-	22	4	22	74	14.8	5.36	
Duck Island #3	1	2	4	2	-	-	-	-	-	-	-	-	-	4	4	9	2.3	1.26	
BF-37	-	1	1	4	3	6	-	-	-	-	-	-	-	5	6	15	3.0	2.12	
Seal Island	-	-	-	-	0	-	-	-	-	-	-	-	-	1	0	0	0.0		
West Dock Causeway	-	-	-	-	-	-	4	4	6	-	-	-	-	3	6	14	4.7	1.15	
All Locations	2	3	6	6	5	10	39	37	16	18	0	2	25	12	39	169	31.5	18.72	

Censuses were conducted on various dates from 25 June to 31 July. Timing may influence census results because of the possibilities of missing late-initiated nests and early failed nests, or censusing after the peak of hatch and not recognizing some empty nests. Sources: Noel (unpublished data); Johnson (1984, 1990); Wiggins and Johnson (1991, 1992); Johnson et al. (1993); U.S. Fish and Wildlife Service, Office of Ecological Services, Fairbanks, Alaska (unpublished data); dashes indicate no data.

Table A-1. Nest census data for common elders and other barrier island nesting birds along the central Alaskan Beaufort Sea coast from Thetis Island to the Stockton Islands, 12-16 July 2001.

Island	Sighting ID	Species	Latitude	Longitude	GPS	Date	Time	Recorder	Nest ID	Sight_Type	Eggs	Live	Drift	Veg	Pred	Egg	Pred_Type	Rec No	Comments	Bk No
Endicott	1				5	6-Jul-01		SPH										1	START	2-28
Endicott	2	COEI			5	6-Jul-01	20:11:26	SPH	NE1	NE	Y	H						2	Hen on nest in thin part of apt about 100m to west	2-28
Endicott	3	GLGU			5	6-Jul-01	20:11:26	SPH	NE3	NE	Y	M						3	On nest about 200m to west	2-28
Endicott	4	COEI	N70.32113	W147.86328	5	6-Jul-01	20:15:30	SPH	NE5	NE	Y	M						4	Hen on nest on sw end of SOI	2-28
Endicott	5	COEI	N70.35241	W147.96585	5	6-Jul-01	21:27:30	SPH	NE7	NE	Y	H						5	Hen on nest E side of MPI, no fox sign	2-28
Thetis	1		N70.53354	W150.12722	30	12-Jul-01	12:58:00	RR/CR										6	END SEARCH	2-28
Thetis	2	GLGU	N70.53351	W150.12720	30	12-Jul-01	12:58:40	RR/CR										7	START	2-29
Thetis	3	COEI	N70.53355	W150.12709	30	12-Jul-01	13:01:49	RR/CR	SC1	SC		L						9	Last years ? Old egg bits	2-29
Thetis	4	COEI	N70.53624	W150.12462	30	12-Jul-01	13:08:43	RR/CR	SC3	SC		L						10		2-29
Thetis	5	COEI	N70.53866	W150.12761	30	12-Jul-01	13:15:25	RR/CR	SC5	SC		L						11		2-29
Thetis	6	COEI	N70.53898	W150.12840	30	12-Jul-01	13:19:20	RR/CR	SC7	SC		L						12		2-29
Thetis	7	COEI	N70.53911	W150.12865	30	12-Jul-01	13:20:52	RR/CR	SC9	SC		L						13		2-29
Thetis	8	COEI	N70.54107	W150.13131	30	12-Jul-01	13:27:16	RR/CR										14	Scattered down, no nest bowl	2-29
Thetis	9	COEI	N70.54127	W150.13164	30	12-Jul-01	13:29:36	RR/CR	NE11	NE	0	L			P		U	15	Down bits, egg bits	2-29
Thetis	10	COEI	N70.54263	W150.13347	30	12-Jul-01	13:34:59	RR/CR	NE13	NE	0	L			P		U	16	Down bits, egg bits	2-29
Thetis	11	COEI	N70.54269	W150.13311	30	12-Jul-01	13:36:07	RR/CR	NE15	NE	0	L			P		U	17	Down, apparent ATV tracks nest to nest	2-29
Thetis	12	COEI	N70.54322	W150.13378	30	12-Jul-01	13:39:50	RR/CR	SC17	SC		L						18	Down	2-29
Thetis	13	COEI	N70.54380	W150.13399	30	12-Jul-01	13:46:50	RR/CR	NE19	NE	Y	M						19	40m West	2-29
Thetis	14	COEI	N70.54386	W150.13412	30	12-Jul-01	13:48:14	RR/CR	NE21	NE	Y	H						20	40m West	2-29
Thetis	15	COEI	N70.54390	W150.13410	30	12-Jul-01	13:49:39	RR/CR	NE23	NE	Y	M						21	30m West	2-29
Thetis	16	GLGU	N70.54439	W150.13484	30	12-Jul-01	13:52:19	RR/CR										22	3 circle	2-29
Thetis	17	COEI	N70.54439	W150.13484	30	12-Jul-01	14:39:30	RR/CR	EE									23		2-29
Thetis	18	COEI	N70.55408	W150.15846	30	12-Jul-01	14:43:25	RR/CR	SC25	SC		L						24		2-29
Thetis	19	COEI	N70.55486	W150.16098	30	12-Jul-01	14:50:04	RR/CR	NE27	NE	Y	L						25	30m West	2-29
Thetis	20	COEI	N70.55562	W150.19203	30	12-Jul-01	16:30:58	RR/CR	SC29	SC		L			V			26	clump sandwort	2-29
Thetis	21	COEI	N70.55615	W150.19957	30	12-Jul-01	16:34:03	RR/CR	SC31	SC		L						27		2-29
Thetis	22	COEI	N70.55579	W150.19544	30	12-Jul-01	17:07:25	RR/CR	NE33	NE	0	M			P		U	28	Down bits	2-29
Thetis	23	HUMAN	N70.55567	W150.20177	30	12-Jul-01	17:15:45	RR/CR										29	Human tracks	2-29
Thetis	24	COEI	N70.55492	W150.20852	30	12-Jul-01	17:24:34	RR/CR	SC35	SC		L						30		2-29
Thetis	25	COEI	N70.55306	W150.21414	30	12-Jul-01	17:30:40	RR/CR	NE37	NE	0	L			P		U	31	Down bits	2-29
Thetis	26	LTDU	N70.55192	W150.21562	30	12-Jul-01	17:34:21	RR/CR										32	Resting on shoreline	2-29
Thetis	27	HUMAN	N70.55252	W150.20690	30	12-Jul-01	17:45:25	RR/CR										33	Snow machine tracks ?	2-29
Thetis	28	COEI	N70.55424	W150.20333	30	12-Jul-01	17:52:06	RR/CR	NE39	NE	0	L			P		U	34		2-29
Thetis	29	GLGU	N70.55446	W150.19738	30	12-Jul-01	17:59:41	RR/CR										35	2 circling tracks	2-29
Thetis	30	POBE	N70.55418	W150.19173	30	12-Jul-01	18:11:05	RR/CR										36	tracks	2-29
Thetis	31		N70.55422	W150.19180	30	12-Jul-01	18:12:00	RR/CR										37	END	2-29
Nanwhal	1		N70.38071	W147.47524	30	13-Jul-01	10:14:00	CR										38	START	2-30
Nanwhal	2	COEI	N70.38071	W147.47458	30	13-Jul-01	10:17:44	CR	NE1	NE	0	L			P		U	39	Bits of down, tracks, predator unknown	2-30
Nanwhal	3	COEI	N70.38081	W147.47451	30	13-Jul-01	10:19:23	CR	NE3	NE	3	L						40		2-30
Nanwhal	4	GLGU	N70.38096	W147.47400	30	13-Jul-01	10:20:30	CR										41	1 CIRCLES	2-30
Nanwhal	5	COEI	N70.38357	W147.47216	30	13-Jul-01	10:27:52	CR	NE5	NE	0	L			P		U	42	Unknown predator, tracks, kelp	2-30
Nanwhal	6	COEI	N70.38494	W147.47266	30	13-Jul-01	10:33:00	CR	NE7	NE	3	L						43	Female not marked	2-30
Nanwhal	7	COEI	N70.38509	W147.47229	30	13-Jul-01	10:33:58	CR	NE9	NE	0	M			P		U	44	Unknown predator, down, tracks	2-30

Table A-1. Continued

Island	Sighting ID	Species	Latitude	Longitude	GPS	Date	Time	Recorder	Nest ID	Sight. Type	Eggs	Live	Drift	Veg	Prnd	Pred	Egg	Pred Type	Rec. No	Comments	Bk No
Narwhal	8	COEI	N70.38504	W147.47217	30	13-Jul-01	10:35:50	CR	SC11	SC			M						45		2-30
Narwhal	9	COEI	N70.38617	W147.47336	30	13-Jul-01	10:41:45	CR	SC13	SC			M						46		2-30
Narwhal	10	COEI	N70.38630	W147.47316	30	13-Jul-01	10:42:15	CR	SC15	SC			L						47		2-30
Narwhal	11	GLGU	N70.38642	W147.47346	30	13-Jul-01	10:44:43	CR	NE17	NE	0	0	M		P				48	Unknown predator, bite of shell brown with dark spots	2-30
Narwhal	12	COEI	N70.38693	W147.47390	30	13-Jul-01	10:55:43	CR	NE19	NE	0	0	L		P				49	Unknown predator, egg bits	2-30
Narwhal	13	COEI	N70.38697	W147.47476	30	13-Jul-01	10:57:51	CR	SC21	SC			M						50		2-30
Narwhal	14	GLGU	N70.38730	W147.47469	30	13-Jul-01	11:00:18	CR	SC23	SC			L						51	2 circling	2-30
Narwhal	15	COEI	N70.38786	W147.47545	30	13-Jul-01	11:02:54	CR	SC23	SC			L						52	Marked orange/orange, bill in good condition, 35 m sw	2-30
Narwhal	16	COEI	N70.38841	W147.47587	30	13-Jul-01	11:05:50	CR	NE25	NE	Y	Y	M						53		2-30
Narwhal	17	COEI	N70.38880	W147.47663	30	13-Jul-01	11:09:50	CR	NE27	NE	3	3	L						54		2-30
Narwhal	18	ARTE	N70.38882	W147.47663	30	13-Jul-01	11:10:17	CR	NE29	NE	2	2	L						55	So far no fox tracks	2-30
Narwhal	19	COEI	N70.38912	W147.47668	30	13-Jul-01	11:13:40	CR	NE31	NE	Y	Y	M						56	20 m sw	2-30
Narwhal	20				30	13-Jul-01	11:23:15	CR											57	Turn GPS off temporarily	2-30
Narwhal	21				30	13-Jul-01	11:31:00	CR											58	Turn on GPS	2-30
Narwhal	22	COEI	N70.39244	W147.48823	30	13-Jul-01	11:31:46	CR	NE33	NE	0	0	M		P				59	Unknown predator, no shells	2-30
Narwhal	23	GLGU	N70.39249	W147.48842	30	13-Jul-01	11:32:30	CR											60	3 circling	2-30
Narwhal	24	COEI	N70.39265	W147.48946	30	13-Jul-01	11:38:30	CR	NE35	NE	0	0	L	V	P				61	Sandwort, one half shell with GLGU around	2-30
Narwhal	25	COEI	N70.39283	W147.48968	30	13-Jul-01	11:41:44	CR	NE37	NE	2	2	M						62	Tagged--Black right/Yellow left	2-30
Narwhal	26	COEI	N70.39327	W147.49199	30	13-Jul-01	12:25:08	CR	NE39	NE	Y	Y	L						63	15m ne	2-30
Narwhal	27	COEI	N70.39340	W147.49288	30	13-Jul-01	12:26:42	CR	NE41	NE	0	0	L		P				64	Predator unknown, down	2-30
Narwhal	28	COEI	N70.39331	W147.49357	30	13-Jul-01	12:27:50	CR	NE43	NE	0	0	L		P				65	Predator unknown, down	2-30
Narwhal	29	COEI	N70.39341	W147.49398	30	13-Jul-01	12:29:07	CR	NE45	NE	0	0	L		P				66	Predator unknown	2-30
Narwhal	30	COEI	N70.39347	W147.49399	30	13-Jul-01	12:29:35	CR	SC47	SC			L						67	tracks	2-30
Narwhal	31	COEI	N70.39461	W147.50524	30	13-Jul-01	12:41:50	CR	NE49	NE	2	2	L						68		2-30
Narwhal	32	COEI	N70.39484	W147.50574	30	13-Jul-01	12:42:58	CR	NE51	NE	0	0	L		P				69	Predator unknown, down	2-31
Narwhal	33	POBE	N70.39537	W147.51083	30	13-Jul-01	12:46:30	CR											70	PBT	2-31
Narwhal	34	COEI	N70.39561	W147.51166	30	13-Jul-01	12:48:00	CR	NE53	NE	0	0	M		P				71	Predator unknown	2-31
Narwhal	35	COEI	N70.39575	W147.51284	30	13-Jul-01	12:50:30	CR	NE55	NE	0	0	L		P				72	tracks	2-31
Narwhal	36	COEI	N70.39550	W147.51286	30	13-Jul-01	12:51:25	CR	SC57	SC			L						73		2-31
Narwhal	37	COEI	N70.39585	W147.51362	30	13-Jul-01	12:53:15	CR	NE59	NE	0	0	L		P				74	Unknown predator, tracks	2-31
Narwhal	38	COEI	N70.39593	W147.51378	30	13-Jul-01	12:54:33	CR	NE61	NE	Y	Y	M						75	60m west	2-31
Narwhal	39	COEI	N70.39591	W147.51440	30	13-Jul-01	12:55:55	CR	NE63	NE	0	0	M		P				76	Unknown predator, tracks	2-31
Narwhal	40	COEI	N70.39595	W147.51427	30	13-Jul-01	12:56:20	CR	SC65	SC			M						77		2-31
Narwhal	41	COEI	N70.39589	W147.51512	30	13-Jul-01	12:59:20	CR	NE67	NE	0	0	H		P				78	Predator unknown	2-31
Narwhal	42	COEI	N70.39589	W147.51512	30	13-Jul-01	12:59:20	CR	NE69	NE	0	0	M		P				79	Predator unknown	2-31
Narwhal	43	COEI	N70.39612	W147.51660	30	13-Jul-01	13:03:20	CR	SC71	SC			L						80		2-31
Narwhal	44	GLGU	N70.39576	W147.51918	30	13-Jul-01	13:10:16	CR											81	1 Circling	2-31
Narwhal	45	COEI	N70.39561	W147.51996	30	13-Jul-01	13:14:40	CR	EE										82		2-31
Narwhal	46	COEI	N70.39637	W147.52072	30	13-Jul-01	13:49:50	CR	NE73	NE	0	0	L		P				83	Unknown predator, tracks	2-31
Narwhal	47	COEI	N70.39643	W147.52103	30	13-Jul-01	13:52:00	CR	SC75	SC			L						84		2-31
Narwhal	48	COEI	N70.39649	W147.52137	30	13-Jul-01	13:53:00	CR	NE77	NE	0	0	L		P				85	Unknown predator	2-31
Narwhal	49	COEI	N70.39662	W147.52142	30	13-Jul-01	13:53:45	CR	SC79	SC			L						86		2-31

Table A-1. Continued

Island	Sighting ID	Species	Latitude	Longitude	GPS	Date	Time	Recorder	Nest ID	Sight_Type	Eggs	Live	Drift	Veg	Pred	Prad	Egg	Pred_Type	Rec.No	Comments	Bk.No
Narwhal	50	COEI	N70.39662	W147.52142	30	13-Jul-01	13:53:45	CR	SC81	SC									87		
Narwhal	51	COEI	N70.39652	W147.52200	30	13-Jul-01	13:55:00	CR	NE83	NE	0	0	L					U	88	Unknown predator, nest in drum	2-31
Narwhal	52	COEI	N70.39651	W147.52202	30	13-Jul-01	13:56:20	CR	NE85	NE	Y	Y	L					U	89	25 m south	2-31
Narwhal	53	COEI	N70.39650	W147.52214	30	13-Jul-01	13:57:25	CR	NE87	NE	0	0	L					U	90	Predator unknown	2-31
Narwhal	54	POBE	N70.39642	W147.52264	30	13-Jul-01	13:57:55	CR											91	PBY	2-31
Narwhal	55	COEI	N70.39633	W147.52290	30	13-Jul-01	13:58:18	CR	NE89	NE	0	0	L					U	92	Unknown predator, plywood	2-31
Narwhal	56	COEI	N70.39652	W147.52378	30	13-Jul-01	13:59:37	CR	SC91	SC			L					U	93		2-31
Narwhal	57	COEI	N70.39657	W147.52405	30	13-Jul-01	14:00:00	CR	SC93	SC			L						94	15m east	2-31
Narwhal	58	COEI	N70.39683	W147.52810	30	13-Jul-01	14:05:00	CR	SC95	SC			L						95		2-31
Narwhal	59	COEI	N70.39703	W147.52832	30	13-Jul-01	14:07:15	CR	NE97	NE	Y	Y	M						96	30m ne	2-31
Narwhal	60	COEI	N70.39703	W147.52832	30	13-Jul-01	14:07:15	CR	NE99	NE	Y	Y	L						97	30m ne	2-31
Narwhal	61	COEI	N70.39685	W147.52791	30	13-Jul-01	14:07:45	CR	SC101	SC			L						98		2-31
Narwhal	62	COEI	N70.39721	W147.52962	30	13-Jul-01	14:11:10	CR	NE103	NE	Y	Y	M						99	50m west	2-32
Narwhal	63	COEI	N70.39748	W147.53110	30	13-Jul-01	14:13:38	CR	NE105	NE	0	0	L					U	100	Unknown predator, 50m west	2-32
Narwhal	64	COEI	N70.39749	W147.53103	30	13-Jul-01	14:14:30	CR	NE107	NE	1	1	H						101	No down	2-32
Narwhal	65	COEI	N70.39754	W147.53183	30	13-Jul-01	14:16:40	CR	NE109	NE	1	1	L						102	100m sw, no down	2-32
Narwhal	66	COEI	N70.39749	W147.53240	30	13-Jul-01	14:17:30	CR	SC111	SC			L						103	100m sw, no down	2-32
Narwhal	67	COEI	N70.39750	W147.53247	30	13-Jul-01	14:18:10	CR	NE113	NE	2	2	M						104		2-32
Narwhal	68	COEI	N70.39769	W147.53312	30	13-Jul-01	14:20:30	CR	NE115	NE	0	0	M					U	105	100m sw, unknown predator	2-32
Narwhal	69	COEI	N70.39786	W147.53405	30	13-Jul-01	14:22:18	CR	NE117	NE	0	0	H						106	Unknown predator	2-32
Narwhal	70	COEI	N70.39809	W147.53567	30	13-Jul-01	14:30:20	CR	SC119	SC			L						107	20 m east	2-32
Narwhal	71	COEI	N70.39808	W147.53593	30	13-Jul-01	14:30:45	CR	SC121	SC			L						108		2-32
Narwhal	72	COEI	N70.39813	W147.53662	30	13-Jul-01	14:31:33	CR	SC123	SC			L						109		2-32
Narwhal	73	COEI	N70.39819	W147.53705	30	13-Jul-01	14:32:06	CR	SC125	SC			L						110	30m sw	2-32
Narwhal	74	COEI	N70.39820	W147.53737	30	13-Jul-01	14:32:30	CR	SC127	SC			L						111		2-32
Narwhal	75	COEI	N70.39827	W147.53848	30	13-Jul-01	14:33:53	CR	SC129	SC			L						112		2-32
Narwhal	76	COEI	N70.39827	W147.53903	30	13-Jul-01	14:34:30	CR	NE131	NE	0	0	L					U	113	Unknown predator, 40m sw	2-32
Narwhal	77	COEI	N70.39823	W147.53958	30	13-Jul-01	14:35:21	CR	NE133	NE	0	0	L					U	114	Unknown predator, 40m sw	2-32
Narwhal	78	COEI	N70.39823	W147.53957	30	13-Jul-01	14:35:38	CR	SC135	SC			L						115	Kelp	2-32
Narwhal	79	COEI	N70.39814	W147.53990	30	13-Jul-01	14:36:30	CR	NE137	NE	2	2	L						116	No down	2-32
Narwhal	80	COEI	N70.39845	W147.54089	30	13-Jul-01	14:39:50	CR	SC139	SC			L						117	On gravel	2-32
Narwhal	81	COEI	N70.39841	W147.54126	30	13-Jul-01	14:40:26	CR											118	10 females, 2 males flush off beach	2-32
Narwhal	82	COEI	N70.39833	W147.54189	30	13-Jul-01	14:41:20	CR	SC141	SC			L						119	50m south	2-32
Narwhal	83	COEI	N70.39800	W147.54235	30	13-Jul-01	14:43:00	CR											120	END	2-32
Jeanette	1	COEI	N70.36397	W147.43707	438	13-Jul-01	16:36:00	CR											121	START	2-33
Jeanette	2	COEI	N70.36421	W147.43775	438	13-Jul-01	16:39:10	CR	SC1	SC			L						122	Tracts	2-33
Jeanette	3	COEI	N70.36445	W147.43879	438	13-Jul-01	16:40:30	CR	SC3	SC			L						123		2-33
Jeanette	4	GLGU	N70.36455	W147.43904	438	13-Jul-01	16:41:00	CR											124	1 fly by	2-33
Jeanette	5	COEI	N70.36463	W147.43950	438	13-Jul-01	16:42:00	CR	SC5	SC			L						125	tracks, 30 m south	2-33
Jeanette	6	COEI	N70.36463	W147.44082	438	13-Jul-01	16:43:20	CR	SC7	SC			L						126		2-33
Jeanette	7	COEI	N70.36460	W147.44112	438	13-Jul-01	16:43:53	CR	SC9	SC			L						127		2-33
Jeanette	8	COEI	N70.36460	W147.44112	438	13-Jul-01	16:44:10	CR	NE11	NE	0	0	L					U	128	Unknown predator, crushed egg	2-33
Jeanette	9	COEI	N70.36461	W147.44143	438	13-Jul-01	16:46:20	CR	NE13	NE	0	0	M					U	129	Unknown predator, down	2-33
Jeanette	10	COEI	N70.36461	W147.44218	438	13-Jul-01	16:47:00	CR	SC15	SC			M						130		2-33
Jeanette	11	GLGU	N70.36447	W147.44250	438	13-Jul-01	16:48:00	CR	NE17	NE	0	0	U						131	Active? No eggs, gull circling	2-33
Jeanette	12	COEI	N70.36456	W147.44294	438	13-Jul-01	16:49:30	CR	SC19	SC			L						132	Kelp	2-33
Jeanette	13	COEI	N70.36453	W147.44316	438	13-Jul-01	16:50:40	CR	SC21	SC			L						133		2-33
Jeanette	14	COEI	N70.36452	W147.44382	438	13-Jul-01	16:51:35	CR	NE23	NE	0	0	L					U	134	Unknown predator	2-33
Jeanette	15	COEI	N70.36447	W147.44550	438	13-Jul-01	16:53:30	CR	SC25	SC			L						135	30m south	2-33

Table A-1. Continued

Island	Sighting ID	Species	Latitude	Longitude	GPS	Date	Time	Recorder	Nest ID	Sight Type	Eggs	Live	Drift	Veg	Pred	Pred	Egg	Pred Type	Rec No	Comments	Bk No
Jeanette	16	GLGU	N70.36445	W147.44554	438	13-Jul-01	16:54:00	CR	NE27	NE	0	0	M		U				136	No eggs, gull present	2-33
Jeanette	17	COEI	N70.36445	W147.44605	438	13-Jul-01	16:54:50	CR	NE29	NE	0	0	L		P				137	Down bite	2-33
Jeanette	18	COEI	N70.36443	W147.44702	438	13-Jul-01	16:56:45	CR	SC31	SC			L						138		2-33
Jeanette	19	COEI	N70.36457	W147.44747	438	13-Jul-01	16:57:35	CR	NE33	NE	0	0	L		P				139		2-33
Jeanette	20	COEI	N70.36458	W147.44750	438	13-Jul-01	16:58:14	CR	NE35	NE	0	0	L		P				140		2-33
Jeanette	21	COEI	N70.36445	W147.44629	438	13-Jul-01	16:59:42	CR	SC37	SC			M						141		2-33
Jeanette	22	LTDU	N70.36464	W147.44945	438	13-Jul-01	17:01:30	CR											142	5 fly by	2-33
Jeanette	23	COEI	N70.36468	W147.45078	438	13-Jul-01	17:03:20	CR	NE39	NE	Y	Y	M						143	20 m north	2-33
Jeanette	24	COEI	N70.36467	W147.45098	438	13-Jul-01	17:07:30	CR	NE41	NE	Y	Y	M						144	25m ne	2-33
Jeanette	25	POBE	N70.36572	W147.45500	438	13-Jul-01	17:12:40	CR											145	PBT	2-33
Jeanette	26	HUMAN	N70.36633	W147.45894	438	13-Jul-01	17:17:17	CR											146	cigarette butt	2-33
Jeanette	27		N70.36646	W147.46133	438	13-Jul-01	17:22:00	CR											147	END	2-33
Belvedere	1		N70.29104	W146.96087	30	14-Jul-01	12:00:00	CR											148	START	2-34
Belvedere	2	SAGU	N70.29200	W146.96486	30	14-Jul-01	12:10:45	CR											149	2 fly by	2-34
Belvedere	3	COEI	N70.29175	W146.96553	30	14-Jul-01	12:12:50	CR	SC1	SC			L						150		2-34
Belvedere	4	COEI	N70.29175	W146.96552	30	14-Jul-01	12:13:45	CR	SC3	SC			L						151	50m ne	2-34
Belvedere	5	COEI	N70.29151	W146.96641	30	14-Jul-01	12:15:53	CR	SC5	SC			L						152	50m north	2-34
Belvedere	6	MUSK	N70.29268	W147.48907	30	14-Jul-01	12:16:45	CR											153	Muak ox tracks	2-34
Belvedere	7	COEI	N70.29227	W146.96776	30	14-Jul-01	12:19:30	CR	SC7	SC			L						154		2-34
Belvedere	8	COEI	N70.29227	W146.96776	30	14-Jul-01	12:19:30	CR	SC9	SC			L						155		2-34
Belvedere	9	COEI	N70.29235	W146.96757	30	14-Jul-01	12:20:22	CR	NE11	NE	0	0	L		P				156	Down bits, tracks, predator unknown	2-34
Belvedere	10	COEI	N70.29189	W146.97166	30	14-Jul-01	12:26:00	CR	SC13	SC			L						157	50m nw	2-34
Belvedere	11	COEI	N70.29163	W146.97333	30	14-Jul-01	12:27:50	CR											158	4 female, 1 male fly by	2-34
Belvedere	12	LTDU	N70.29172	W146.97471	30	14-Jul-01	12:29:42	CR											159	1 male fly by	2-34
Belvedere	13	COEI	N70.29218	W146.97444	30	14-Jul-01	12:31:15	CR	NE15	NE	0	0	L	20%	P				160	Puccinella, sandwort, fox sign	2-34
Belvedere	14	COEI	N70.29220	W146.97451	30	14-Jul-01	12:32:50	CR	SC17	SC			M						161	30m nw	2-34
Belvedere	15	GLGU	N70.29414	W146.98004	30	14-Jul-01	12:37:55	CR											162	4 fly by, vocal	2-34
Belvedere	16	COEI	N70.29536	W146.98277	30	14-Jul-01	12:41:05	CR	NE19	NE			L		P				163	Down bits, predator	2-34
Belvedere	17	ARTE	N70.29527	W146.98435	30	14-Jul-01	12:43:15	CR											164	3 fly by	2-34
Belvedere	18	COEI	N70.29569	W146.98835	30	14-Jul-01	12:48:08	CR											165	5 females swim offshore	2-34
Belvedere	19	COEI	N70.29618	W146.99003	30	14-Jul-01	12:51:33	CR	SC21	SC			L						166	75m north	2-34
Belvedere	20	HEGU	N70.29619	W146.99001	30	14-Jul-01	12:51:45	CR											167	1 fly by	2-34
Belvedere	21	COEI	N70.29617	W146.99000	30	14-Jul-01	12:53:00	CR	SC23	SC			M						168		2-34
Belvedere	22	COEI	N70.29617	W146.99000	30	14-Jul-01	12:53:00	CR	SC25	SC			L						169	75m nw, fox tracks	2-34
Belvedere	23	COEI	N70.29617	W146.99000	30	14-Jul-01	12:53:00	CR	SC27	SC			L						170	75m nw, fox tracks	2-34
Belvedere	24	COEI	N70.29615	W146.99006	30	14-Jul-01	12:53:33	CR	NE29	NE	0	0	L		P				171	75m nw, fox tracks	2-34
Belvedere	25	COEI	N70.29615	W146.99008	30	14-Jul-01	12:54:00	CR	NE31	NE	0	0	L		P				172	75m nw, fox tracks	2-34
Belvedere	26	COEI	N70.29613	W146.99011	30	14-Jul-01	12:54:35	CR	SC33	SC			L						173	75m nw, fox tracks	2-34
Belvedere	27	COEI	N70.29617	W146.99011	30	14-Jul-01	12:55:43	CR	NE35	NE	0	0	L		P				174	75m nw, fox tracks	2-34
Belvedere	28	COEI	N70.29684	W146.99067	30	14-Jul-01	12:57:45	CR	SC37	SC			L	30%					175	Elymus	2-34
Belvedere	29	COEI	N70.29708	W146.99097	30	14-Jul-01	13:01:30	CR	SC39	SC			L						176	Near cross hairs of survey marker	2-34
Belvedere	30	COEI	N70.29708	W146.99097	30	14-Jul-01	13:01:30	CR	SC41	SC			L						177		2-34
Belvedere	31	COEI	N70.29708	W146.99097	30	14-Jul-01	13:01:30	CR	SC43	SC			L						178		2-35
Belvedere	32	COEI	N70.29708	W146.99097	30	14-Jul-01	13:01:30	CR	SC45	SC			L						179		2-35
Belvedere	33	COEI	N70.29720	W146.99144	30	14-Jul-01	13:03:44	CR	NE47	NE	0	0	L		P				180	Predator Unknown	2-35
Belvedere	34	COEI	N70.29704	W146.99227	30	14-Jul-01	13:06:20	CR	NE49	NE	0	0	L	20%	P				181	Predator Unknown	2-35
Belvedere	35	COEI	N70.29709	W146.99225	30	14-Jul-01	13:06:53	CR	NE51	NE	0	0	L		P				182	Predator Unknown	2-35
Belvedere	36	COEI	N70.29710	W146.99242	30	14-Jul-01	13:07:20	CR	SC53	SC			M						183		2-35
Belvedere	37	COEI	N70.29720	W146.99218	30	14-Jul-01	13:07:53	CR	NE55	NE	0	0	L		P				184	Predator Unknown	2-35
Belvedere	38	COEI	N70.29713	W146.99268	30	14-Jul-01	13:09:00	CR	NE57	NE	0	0	M		P				185	Predator Unknown	2-35
Belvedere	39	COEI	N70.29713	W146.99287	30	14-Jul-01	13:09:30	CR	NE61	NE	0	0	M		P				186	Predator Unknown	2-35
Belvedere	40	ARTE	N70.29735	W146.99339	30	14-Jul-01	13:10:55	CR											187	4 Fly-by	2-35
Belvedere	41	COEI	N70.29752	W146.99418	30	14-Jul-01	13:11:42	CR	SC63	SC			L						188		2-35
Belvedere	42	COEI	N70.29761	W146.99441	30	14-Jul-01	13:12:07	CR	SC65	SC			L						189		2-35

Table A-1. Continued

Island	Sighting_ID	Species	Latitude	Longitude	GPS	Date	Time	Recorder	Nest_ID	Sight_Type	Eggs_Live	Drift	Veg	Pred	Egg	Prod_Type	Rec_No	Comments	Bk_No
Belvedere	43	COEI	N70.29776	W146.99577	30	14-Jul-01	13:13:20	CR	NE67	NE	0	L				U	190	Predator Unknown	2-35
Belvedere	44	COEI	N70.29781	W146.99590	30	14-Jul-01	13:14:10	CR	SC69	SC		L					191		2-35
Belvedere	45	COEI	N70.29789	W146.99810	30	14-Jul-01	13:14:43	CR	SC71	SC		L					192		2-35
Belvedere	46	COEI	N70.29958	W146.99884	30	14-Jul-01	13:18:30	CR	SC73	SC		L					193		2-35
Belvedere	47	COEI	N70.30025	W146.99759	30	14-Jul-01	13:20:50	CR	NE75	NE	0	L		P		ARFO	194	Fox Tracks	2-35
Belvedere	48	COEI	N70.30052	W146.99784	30	14-Jul-01	13:21:55	CR	SC77	SC		L					195		2-35
Belvedere	49		N70.30128	W147.00131	30	14-Jul-01	13:24:30	CR									198	END	2-35
Pole	1		N70.30132	W147.00165	30	14-Jul-01	13:25:30	CR									197	START	2-35
Pole	2	ARFO	N70.30218	W147.00418	30	14-Jul-01	13:30:55	CR									198	AFT	2-35
Pole	3	LTDU	N70.30274	W147.00579	30	14-Jul-01	13:33:33	CR									199	1 Male Fly-by	2-35
Pole	4	SAGU	N70.30338	W147.00882	30	14-Jul-01	13:35:00	CR									200	1 Fly-by	2-35
Pole	5	COEI	N70.30250	W147.00507	30	14-Jul-01	13:32:05	CR	SC1	SC		L					201		2-35
Pole	6	LTDU	N70.30420	W147.01334	30	14-Jul-01	13:41:08	CR									202	3 Fly-by	2-35
Pole	7	COEI	N70.30428	W147.01336	30	14-Jul-01	13:41:41	CR	NE3	NE	0	L		P		ARFO	203	Fox and Avian	2-35
Pole	8	COEI	N70.30420	W147.01371	30	14-Jul-01	13:45:15	CR	NE5	NE	0	L		P		ARFO	204	Fox and Avian	2-35
Pole	9	COEI	N70.30420	W147.01371	30	14-Jul-01	13:50:50	CR	NE7	NE	0	L		P		ARFO	205	Fox and Avian	2-35
Pole	10	COEI	N70.30461	W147.01759	30	14-Jul-01	13:52:20	CR	SC9	SC		L					208		2-35
Pole	11	COEI	N70.30475	W147.01773	30	14-Jul-01	13:52:52	CR	NE11	NE	0	L		P		AF/AV	207	Fox or Avian	2-36
Pole	12	COEI	N70.30444	W147.01814	30	14-Jul-01	13:54:28	CR	NE13	NE	0	M		P		AF/AV	208	Fox or Avian	2-36
Pole	13	COEI	N70.30436	W147.01815	30	14-Jul-01	13:55:07	CR	SC15	SC		L					209		2-36
Pole	14	COEI	N70.30439	W147.01842	30	14-Jul-01	13:55:34	CR	NE17	NE	0	L	10%	P		AF/AV	210	Elymus, Tracks, Fox or Avian	2-36
Pole	15	COEI	N70.30431	W147.01792	30	14-Jul-01	13:57:57	CR	NE19	NE	0	L		P		AF/AV	211	Fox or Avian	2-36
Pole	16	COEI	N70.30419	W147.01909	30	14-Jul-01	14:01:15	CR	SC21	SC		L					212		2-36
Pole	17	COEI	N70.30415	W147.01955	30	14-Jul-01	14:02:00	CR	NE23	NE	0	M		P		AF/AV	213	Fox or Avian, 50m North	2-36
Pole	18	COEI	N70.30419	W147.01980	30	14-Jul-01	14:03:15	CR	SC25	SC		L	10%				214	Sandwort	2-36
Pole	19	COEI	N70.30419	W147.01984	30	14-Jul-01	14:04:50	CR	NE27	NE	0	L		P		AF/AV	215	Fox or Avian	2-36
Pole	20	COEI	N70.30419	W147.01984	30	14-Jul-01	14:04:50	CR	NE29	NE	0	L		P		AF/AV	216	Fox or Avian	2-36
Pole	21	COEI	N70.30398	W147.02005	30	14-Jul-01	14:06:30	CR	NE31	NE	0	L		P		AF/AV	217	Fox or Avian	2-36
Pole	22	COEI	N70.30382	W147.02078	30	14-Jul-01	14:08:30	CR	NE33	NE	0	L		P		AF/AV	218	Fox or Avian, down bits, 50m North	2-36
Pole	23	COEI	N70.30379	W147.02140	30	14-Jul-01	14:09:40	CR	NE35	NE	0	L	100%	P		AF/AV	219	Elymus, Fox or Avian	2-36
Pole	24	COEI	N70.30379	W147.02140	30	14-Jul-01	14:09:40	CR	NE37	NE	0	L	100%	P		AF/AV	220	Elymus, Fox or Avian	2-36
Pole	25	COEI	N70.30397	W147.02224	30	14-Jul-01	14:11:11	CR	NE39	NE	0	L	100%	P		AF/AV	221	Elymus, Fox or Avian	2-36
Pole	26	COEI	N70.30391	W147.02237	30	14-Jul-01	14:11:43	CR	NE41	NE	0	M		P		AF/AV	222	Elymus, Fox or Avian	2-36
Pole	27	COEI	N70.30387	W147.02255	30	14-Jul-01	14:12:35	CR	NE43	NE	0	L	100%	P		AF/AV	223	Elymus, Fox or Avian	2-36
Pole	28	COEI	N70.30378	W147.02286	30	14-Jul-01	14:13:30	CR	NE45	NE	0	L	100%	P		AF/AV	224	Elymus, Fox or Avian	2-36
Pole	29	COEI	N70.30377	W147.02286	30	14-Jul-01	14:14:20	CR	NE47	NE	0	L	V	P		AF/AV	225	Lungwort, Fox or Avian	2-36
Pole	30	COEI	N70.30380	W147.02293	30	14-Jul-01	14:15:15	CR	NE49	NE	0	L	V	P		AF/AV	226	Lungwort, Fox or Avian	2-36
Pole	31	COEI	N70.30379	W147.02301	30	14-Jul-01	14:15:50	CR	NE51	NE	0	L	100%	P		AF/AV	227	Elymus, Fox or Avian	2-36
Pole	32	COEI	N70.30379	W147.02301	30	14-Jul-01	14:15:50	CR	NE53	NE	0	L	100%	P		AF/AV	228	Elymus, Fox or Avian	2-36
Pole	33	COEI	N70.30379	W147.02301	30	14-Jul-01	14:15:50	CR	NE55	NE	0	L	100%	P		AF/AV	229	Elymus, Fox or Avian	2-36
Pole	34	COEI	N70.30370	W147.02310	30	14-Jul-01	14:16:55	CR	SC57	SC		L					230		2-36
Pole	35	COEI	N70.30370	W147.02310	30	14-Jul-01	14:16:55	CR	SC59	SC		L					231		2-36
Pole	36	COEI	N70.30370	W147.02310	30	14-Jul-01	14:16:55	CR	NE61	NE	0	L	100%	P		AF/AV	232	Elymus, Fox or Avian	2-36
Pole	37	COEI	N70.30369	W147.02311	30	14-Jul-01	14:17:50	CR	NE63	NE	0	L		P		AF/AV	233	Fox or Avian	2-36
Pole	38	COEI	N70.30383	W147.02321	30	14-Jul-01	14:18:55	CR	NE65	NE	0	L	100%	P		AF/AV	234	Elymus	2-36
Pole	39	COEI	N70.30383	W147.02321	30	14-Jul-01	14:18:55	CR	NE67	NE	0	L	100%	P		AF/AV	235	Elymus	2-36
Pole	40	COEI	N70.30383	W147.02321	30	14-Jul-01	14:18:55	CR	NE69	NE	0	L	100%	P		AF/AV	236	Elymus	2-36
Pole	41	COEI	N70.30383	W147.02321	30	14-Jul-01	14:18:55	CR	NE71	NE	0	L	100%	P		AF/AV	237	Fox or Avian, Elymus	2-37
Pole	42	COEI	N70.30383	W147.02321	30	14-Jul-01	14:18:55	CR	NE73	NE	0	L	100%	P		AF/AV	238	Fox or Avian, Elymus	2-37
Pole	43	COEI	N70.30358	W147.02339	30	14-Jul-01	14:20:47	CR	NE75	NE	0	L	100%	P		AF/AV	239	Fox or Avian, Elymus	2-37
Pole	44	ARFO	N70.30371	W147.02365	30	14-Jul-01	14:24:45	CR									240	Arctic fox digging	2-37
Pole	45	COEI	N70.30365	W147.02357	30	14-Jul-01	14:25:30	CR	SC77	SC		L					241		2-37
Pole	46	ARFO	N70.30403	W147.02501	30	14-Jul-01	14:28:10	CR									242	Arctic fox digging	2-37
Pole	47	MUSK	N70.30403	W147.02502	30	14-Jul-01	14:30:00	CR									243	Musk ox droppings, tracks, beds	2-37

Table A-1. Continued

Island	Sighting ID	Species	Latitude	Longitude	GPS	Date	Time	Recorder	Nest ID	Sight Type	Eggs	Live	Drift	Veg	Pred	Egg	Pred	Type	Rec No	Comments	Bk No
Pole	48	COEI	N70.30374	W147.02456	30	14-Jul-01	14:33:33	CR	NE79	NE	0	0	L	100%	P			U	244	Elymus, old Eskimo dwelling	2-37
Pole	49	COEI	N70.30374	W147.02456	30	14-Jul-01	14:33:33	CR	NE81	NE	0	0	L	100%	P			U	245	Elymus, old Eskimo dwelling	2-37
Pole	50	COEI	N70.30374	W147.02456	30	14-Jul-01	14:33:33	CR	NE83	NE	0	0	L	100%	P			U	246	Elymus, old Eskimo dwelling	2-37
Pole	51	COEI	N70.30374	W147.02456	30	14-Jul-01	14:33:33	CR	NE85	NE	0	0	L	100%	P			U	247	Elymus, old Eskimo dwelling	2-37
Pole	52	COEI	N70.30374	W147.02456	30	14-Jul-01	14:33:33	CR	NE87	NE	0	0	L	100%	P			U	248	Elymus, old Eskimo dwelling	2-37
Pole	53	COEI	N70.30374	W147.02456	30	14-Jul-01	14:33:33	CR	NE89	NE	0	0	L	100%	P			U	249	Elymus, old Eskimo dwelling	2-37
Pole	54	COEI	N70.30374	W147.02456	30	14-Jul-01	14:33:33	CR	NE91	NE	0	0	L	100%	P			U	250	Elymus, old Eskimo dwelling	2-37
Pole	55	COEI	N70.30374	W147.02456	30	14-Jul-01	14:33:33	CR	NE93	NE	0	0	L	100%	P			U	251	Elymus, old Eskimo dwelling	2-37
Pole	56	COEI	N70.30374	W147.02456	30	14-Jul-01	14:33:33	CR	NE95	NE	0	0	L	100%	P			U	252	Elymus, old Eskimo dwelling	2-37
Pole	57	COEI	N70.30374	W147.02456	30	14-Jul-01	14:33:33	CR	NE97	NE	0	0	L	100%	P			U	253	Elymus, old Eskimo dwelling	2-37
Pole	58	COEI	N70.30374	W147.02456	30	14-Jul-01	14:33:33	CR	NE99	NE	0	0	L	100%	P			U	254	Elymus, old Eskimo dwelling	2-37
Pole	59	COEI	N70.30374	W147.02456	30	14-Jul-01	14:33:33	CR	NE101	NE	0	0	L	100%	P			U	255	Elymus, old Eskimo dwelling	2-37
Pole	60	COEI	N70.30374	W147.02456	30	14-Jul-01	14:33:33	CR	NE103	NE	0	0	L	100%	P			U	256	Elymus, old Eskimo dwelling	2-37
Pole	61	COEI	N70.30374	W147.02456	30	14-Jul-01	14:33:33	CR	NE105	NE	0	0	L	100%	P			U	257	Elymus, old Eskimo dwelling	2-37
Pole	62	COEI	N70.30374	W147.02456	30	14-Jul-01	14:33:33	CR	NE107	NE	0	0	L	100%	P			U	258	Elymus, old Eskimo dwelling	2-37
Pole	63	COEI	N70.30374	W147.02456	30	14-Jul-01	14:33:33	CR	NE109	NE	0	0	L	100%	P			U	259	Elymus, old Eskimo dwelling	2-37
Pole	64	COEI	N70.30374	W147.02456	30	14-Jul-01	14:33:33	CR	NE111	NE	0	0	L	100%	P			U	260	Elymus, old Eskimo dwelling	2-37
Pole	65	COEI	N70.30374	W147.02456	30	14-Jul-01	14:33:33	CR	NE113	NE	0	0	L	100%	P			U	261	Elymus, old Eskimo dwelling	2-37
Pole	66	COEI	N70.30374	W147.02456	30	14-Jul-01	14:33:33	CR	NE115	NE	0	0	L	100%	P			U	262	Elymus, old Eskimo dwelling	2-37
Pole	67	COEI	N70.30374	W147.02456	30	14-Jul-01	14:33:33	CR	NE117	NE	0	0	L	100%	P			U	263	Elymus, old Eskimo dwelling	2-37
Pole	68	COEI	N70.30374	W147.02456	30	14-Jul-01	14:33:33	CR	NE119	NE	0	0	L	100%	P			U	264	Elymus, old Eskimo dwelling	2-37
Pole	69	COEI	N70.30374	W147.02456	30	14-Jul-01	14:33:33	CR	NE121	NE	0	0	L	100%	P			U	265	Elymus, old Eskimo dwelling	2-37
Pole	70	COEI	N70.30374	W147.02456	30	14-Jul-01	14:33:33	CR	NE123	NE	0	0	L	100%	P			U	266	Elymus, old Eskimo dwelling	2-37
Pole	71	COEI	N70.30374	W147.02456	30	14-Jul-01	14:33:33	CR	NE125	NE	0	0	L	100%	P			U	267	Elymus, old Eskimo dwelling	2-38
Pole	72	COEI	N70.30399	W147.02407	30	14-Jul-01	14:41:00	CR	SC127	SC			L					U	268		2-38
Pole	73	COEI	N70.30399	W147.02407	30	14-Jul-01	14:41:00	CR	SC129	SC			L					U	269		2-38
Pole	74	COEI	N70.30399	W147.02407	30	14-Jul-01	14:41:00	CR	SC131	SC			L					U	270		2-38
Pole	75	COEI	N70.30399	W147.02407	30	14-Jul-01	14:41:00	CR	SC133	SC			L					U	271		2-38
Pole	76	COEI	N70.30399	W147.02407	30	14-Jul-01	14:41:00	CR	SC135	SC			L					U	272		2-38
Pole	77	COEI	N70.30399	W147.02407	30	14-Jul-01	14:41:00	CR	SC137	SC			L					U	273		2-38
Pole	78	COEI	N70.30395	W147.02410	30	14-Jul-01	14:42:20	CR	NE139	NE	0	0	L	75%	P			AF/AV	274	Elymus, fox or avian	2-38
Pole	79	COEI	N70.30395	W147.02410	30	14-Jul-01	14:42:20	CR	NE141	NE	0	0	L	75%	P			AF/AV	275	Elymus, fox or avian	2-38
Pole	80	COEI	N70.30395	W147.02410	30	14-Jul-01	14:42:20	CR	NE143	NE	0	0	L	75%	P			AF/AV	276	Elymus, fox or avian	2-38
Pole	81	COEI	N70.30395	W147.02410	30	14-Jul-01	14:42:20	CR	NE145	NE	0	0	L	75%	P			AF/AV	277	Elymus, fox or avian	2-38
Pole	82	COEI	N70.30395	W147.02410	30	14-Jul-01	14:42:20	CR	NE147	NE	0	0	L	75%	P			AF/AV	278	Elymus, fox or avian	2-38

Table A-1. Continued

Island	Sighting ID	Species	Latitude	Longitude	GPS	Date	Time	Recorder	Nest ID	Sight Type	Eggs	Live	Drift	Veg	Pred	Pred Egg	Pred Type	Rec No	Comments	Bt No
Pole	83	COEI	N70.30395	W147.02410	30	14-Jul-01	14:42:20	CR	NE149	NE	0	0	L	75%	P		AF/AV	278	Elymus, fox or avian	2-38
Pole	84	COEI	N70.30395	W147.02410	30	14-Jul-01	14:42:20	CR	NE151	NE	0	0	L	75%	P		AF/AV	280	Elymus, fox or avian	2-38
Pole	85	COEI	N70.30395	W147.02410	30	14-Jul-01	14:42:20	CR	NE153	NE	0	0	L	75%	P		AF/AV	281	Elymus, fox or avian	2-38
Pole	86	COEI	N70.30408	W147.02482	30	14-Jul-01	14:44:30	CR	NE155	NE	0	0	L	75%	P		AF/AV	282	Elymus, fox or avian	2-38
Pole	87	COEI	N70.30408	W147.02482	30	14-Jul-01	14:44:30	CR	NE157	NE	0	0	L	75%	P		AF/AV	283	Elymus, fox or avian	2-38
Pole	88	COEI	N70.30408	W147.02482	30	14-Jul-01	14:44:30	CR	NE159	NE	0	0	L	75%	P		AF/AV	284	Elymus, fox or avian	2-38
Pole	89	COEI	N70.30408	W147.02482	30	14-Jul-01	14:44:30	CR	NE161	NE	0	0	L	75%	P		AF/AV	285	Elymus, fox or avian	2-38
Pole	90	COEI	N70.30408	W147.02482	30	14-Jul-01	14:44:30	CR	NE163	NE	0	0	L	75%	P		AF/AV	286	Elymus, fox or avian	2-38
Pole	91	COEI	N70.30408	W147.02482	30	14-Jul-01	14:44:30	CR	NE165	NE	0	0	L	75%	P		AF/AV	287	Elymus, fox or avian	2-38
Pole	92	COEI	N70.30408	W147.02482	30	14-Jul-01	14:44:30	CR	NE167	NE	0	0	L	75%	P		AF/AV	288	Elymus, fox or avian	2-38
Pole	93	COEI	N70.30408	W147.02482	30	14-Jul-01	14:44:30	CR	NE169	NE	0	0	L	75%	P		AF/AV	289	Elymus, fox or avian	2-38
Pole	94	COEI	N70.30405	W147.02511	30	14-Jul-01	14:45:45	CR	NE171	NE	0	0	L	50%	P		AF/AV	290	Log, Elymus, fox or avian	2-38
Pole	95	COEI	N70.30405	W147.02511	30	14-Jul-01	14:45:45	CR	NE173	NE	0	0	L	50%	P		AF/AV	291	Log, Elymus, fox or avian	2-38
Pole	96	COEI	N70.30405	W147.02511	30	14-Jul-01	14:45:45	CR	NE175	NE	0	0	L	50%	P		AF/AV	292	Log, Elymus, fox or avian	2-38
Pole	97	COEI	N70.30405	W147.02511	30	14-Jul-01	14:45:45	CR	NE177	NE	0	0	L	50%	P		AF/AV	293	Log, Elymus, fox or avian	2-38
Pole	98	COEI	N70.30405	W147.02511	30	14-Jul-01	14:45:45	CR	NE179	NE	0	0	L	50%	P		AF/AV	294	Log, Elymus, fox or avian	2-38
Pole	99	COEI	N70.30405	W147.02511	30	14-Jul-01	14:45:45	CR	NE181	NE	0	0	L	50%	P		AF/AV	295	Log, Elymus, fox or avian	2-38
Pole	100	COEI	N70.30395	W147.02448	30	14-Jul-01	14:48:20	CR	NE183	NE	0	0	L	20%	P		AF/AV	296	Scattered Elymus, fox or avian	2-39
Pole	101	COEI	N70.30395	W147.02448	30	14-Jul-01	14:48:20	CR	NE185	NE	0	0	L	20%	P		AF/AV	297	Scattered Elymus, fox or avian	2-39
Pole	102	COEI	N70.30395	W147.02448	30	14-Jul-01	14:48:20	CR	NE187	NE	0	0	L	20%	P		AF/AV	298	Scattered Elymus, fox or avian	2-39
Pole	103	COEI	N70.30395	W147.02448	30	14-Jul-01	14:48:20	CR	NE189	NE	0	0	L	20%	P		AF/AV	299	Scattered Elymus, fox or avian	2-39
Pole	104	COEI	N70.30395	W147.02448	30	14-Jul-01	14:48:20	CR	NE191	NE	0	0	L	20%	P		AF/AV	300	Scattered Elymus, fox or avian	2-39
Pole	105	COEI	N70.30395	W147.02448	30	14-Jul-01	14:48:20	CR	NE193	NE	0	0	L	20%	P		AF/AV	301	Scattered Elymus, fox or avian	2-39
Pole	106	COEI	N70.30395	W147.02448	30	14-Jul-01	14:48:20	CR	NE195	NE	0	0	L	20%	P		AF/AV	302	Scattered Elymus, fox or avian	2-39
Pole	107	COEI	N70.30352	W147.02385	30	14-Jul-01	14:51:04	CR	NE197	NE	0	0	L	50%	P		AF/AV	303	Elymus, Fox or Avian	2-38
Pole	108	COEI	N70.30352	W147.02385	30	14-Jul-01	14:51:04	CR	NE199	NE	0	0	L	50%	P		AF/AV	304	Elymus, Fox or Avian	2-38
Pole	109	COEI	N70.30352	W147.02385	30	14-Jul-01	14:51:04	CR	NE201	NE	0	0	L	50%	P		AF/AV	305	Elymus, Fox or Avian	2-38
Pole	110	COEI	N70.30352	W147.02385	30	14-Jul-01	14:51:04	CR	NE203	NE	0	0	L	50%	P		AF/AV	306	Elymus, Fox or Avian	2-38
Pole	111	COEI	N70.30350	W147.02428	30	14-Jul-01	14:52:41	CR	NE205	NE	0	0	M		P		AF/AV	307	Fox or avian	2-39
Pole	112	COEI	N70.30349	W147.02442	30	14-Jul-01	14:53:18	CR	NE207	NE	0	0	H		P		AF/AV	308	Fox or avian	2-39
Pole	113	COEI	N70.30352	W147.02462	30	14-Jul-01	14:54:07	CR	NE209	NE	0	0	M		P		AF/AV	309	Fox or avian	2-39
Pole	114	COEI	N70.30355	W147.02476	30	14-Jul-01	14:54:34	CR	NE211	NE	0	0	M		P		AF/AV	310	Fox or avian	2-39
Pole	115	COEI	N70.30368	W147.02482	30	14-Jul-01	14:55:27	CR	NE213	NE	0	0	L		P		ARFO	311	Fox	2-39
Pole	116	COEI	N70.30363	W147.02556	30	14-Jul-01	15:25:08	CR	NE215	NE	0	0	M		P		ARFO	312	Fox	2-39
Pole	117	COEI	N70.30363	W147.02556	30	14-Jul-01	15:25:08	CR	NE217	NE	0	0	M		P		ARFO	313	Fox	2-39
Pole	118	COEI	N70.30363	W147.02556	30	14-Jul-01	15:25:08	CR	NE219	NE	0	0	M		P		ARFO	314	Fox	2-39
Pole	119	COEI	N70.30363	W147.02556	30	14-Jul-01	15:25:08	CR	NE221	NE	0	0	M		P		ARFO	315	Fox	2-39
Pole	120	COEI	N70.30363	W147.02556	30	14-Jul-01	15:25:08	CR	NE223	NE	0	0	M		P		ARFO	316	Fox	2-39
Pole	121	COEI	N70.30378	W147.02617	30	14-Jul-01	15:27:27	CR	NE225	NE	0	0	M		P		AF/AV	317	Fox or avian	2-39
Pole	122	COEI	N70.30378	W147.02617	30	14-Jul-01	15:27:27	CR	NE227	NE	0	0	M		P		AF/AV	318	Fox or avian	2-39
Pole	123	COEI	N70.30378	W147.02617	30	14-Jul-01	15:27:27	CR	NE229	NE	0	0	M		P		AF/AV	319	Fox or avian	2-39
Pole	124	COEI	N70.30378	W147.02617	30	14-Jul-01	15:27:27	CR	NE231	NE	0	0	M		P		AF/AV	320	Fox or avian	2-39
Pole	125	COEI	N70.30378	W147.02617	30	14-Jul-01	15:27:27	CR	NE233	NE	0	0	M		P		AF/AV	321	Fox or avian	2-39
Pole	126	COEI	N70.30378	W147.02617	30	14-Jul-01	15:27:27	CR	NE235	NE	0	0	M		P		AF/AV	322	Fox or avian	2-39
Pole	127	COEI	N70.30378	W147.02617	30	14-Jul-01	15:27:27	CR	NE237	NE	0	0	M		P		AF/AV	323	Fox or avian	2-39
Pole	128	COEI	N70.30378	W147.02617	30	14-Jul-01	15:27:27	CR	NE239	NE	0	0	M		P		AF/AV	324	Fox or avian	2-39

Table A-1. Continued

Island	Sighting ID	Species	Latitude	Longitude	GPS	Date	Time	Recorder	Nest ID	Sight Type	Eggs	Live	Drift	Vegetation	Pred	Pred Egg	Pred Type	Rec No	Comments	Bk No
Pole	129	COEI	N70.30378	W147.02617	30	14-Jul-01	15:27:27	CR	NE241	NE	0	0	M		P		AF/AV	325	Fox or avian	2-39
Pole	130	COEI	N70.30378	W147.02617	30	14-Jul-01	15:27:27	CR	NE243	NE	0	0	M		P		AF/AV	328	Fox or avian	2-40
Pole	131	COEI	N70.30378	W147.02617	30	14-Jul-01	15:27:27	CR	NE245	NE	0	0	M		P		AF/AV	327	Fox or avian	2-40
Pole	132	COEI	N70.30378	W147.02617	30	14-Jul-01	15:27:27	CR	NE247	NE	0	0	M		P		AF/AV	328	Fox or avian	2-40
Pole	133	COEI	N70.30378	W147.02617	30	14-Jul-01	15:27:27	CR	NE249	NE	0	0	M		P		AF/AV	329	Fox or avian	2-40
Pole	134	COEI	N70.30378	W147.02617	30	14-Jul-01	15:27:27	CR	NE251	NE	0	0	M		P		AF/AV	330	Fox or avian	2-40
Pole	135	COEI	N70.30378	W147.02617	30	14-Jul-01	15:27:27	CR	NE253	NE	0	0	M		P		AF/AV	331	Fox or avian	2-40
Pole	136	COEI	N70.30378	W147.02617	30	14-Jul-01	15:27:27	CR	NE255	NE	0	0	M		P		AF/AV	332	Fox or avian	2-40
Pole	137	COEI	N70.30378	W147.02617	30	14-Jul-01	15:27:27	CR	NE257	NE	0	0	M		P		AF/AV	333	Fox or avian	2-40
Pole	138	COEI	N70.30378	W147.02617	30	14-Jul-01	15:27:27	CR	NE259	NE	0	0	M		P		AF/AV	334	Fox or avian	2-40
Pole	139	COEI	N70.30378	W147.02617	30	14-Jul-01	15:27:27	CR	NE261	NE	0	0	M		P		AF/AV	335	Fox or avian	2-40
Pole	140	COEI	N70.30378	W147.02617	30	14-Jul-01	15:27:27	CR	NE263	NE	0	0	M		P		AF/AV	336	Fox or avian	2-40
Pole	141	COEI	N70.30347	W147.02629	30	14-Jul-01	15:31:40	CR	NE265	NE	0	0	L	50%	P		AF/AV	337	Elymus, fox or avian	2-40
Pole	142	COEI	N70.30347	W147.02629	30	14-Jul-01	15:31:40	CR	NE267	NE	0	0	L	50%	P		AF/AV	338	Elymus, fox or avian	2-40
Pole	143	COEI	N70.30347	W147.02629	30	14-Jul-01	15:31:40	CR	NE269	NE	0	0	L	50%	P		AF/AV	339	Elymus, fox or avian	2-40
Pole	144	COEI	N70.30347	W147.02629	30	14-Jul-01	15:31:40	CR	NE271	NE	0	0	L	50%	P		AF/AV	340	Elymus, fox or avian	2-40
Pole	145	COEI	N70.30347	W147.02629	30	14-Jul-01	15:31:40	CR	NE273	NE	0	0	L	50%	P		AF/AV	341	Elymus, fox or avian	2-40
Pole	146	COEI	N70.30353	W147.02652	30	14-Jul-01	15:33:33	CR	NE275	NE	0	0	L	100%	P		AF/AV	342	Elymus, fox or avian	2-40
Pole	147	COEI	N70.30353	W147.02652	30	14-Jul-01	15:33:33	CR	NE277	NE	0	0	L	100%	P		AF/AV	343	Elymus, fox or avian	2-40
Pole	148	COEI	N70.30353	W147.02652	30	14-Jul-01	15:33:33	CR	NE279	NE	0	0	L	100%	P		AF/AV	344	Elymus, fox or avian	2-40
Pole	149	COEI	N70.30353	W147.02652	30	14-Jul-01	15:33:33	CR	NE281	NE	0	0	L	100%	P		AF/AV	345	Elymus, fox or avian	2-40
Pole	150	COEI	N70.30353	W147.02652	30	14-Jul-01	15:33:33	CR	NE283	NE	0	0	L	100%	P		AF/AV	346	Elymus, fox or avian	2-40
Pole	151	COEI	N70.30371	W147.02650	30	14-Jul-01	15:34:50	CR	S285	SC			L						Log	2-40
Pole	152	COEI	N70.30356	W147.02765	30	14-Jul-01	15:37:20	CR	NE287	NE	0	0	M		P		AF/AV	348	Fox or avian	2-40
Pole	153	COEI	N70.30356	W147.02765	30	14-Jul-01	15:37:20	CR	NE289	NE	0	0	M		P		AF/AV	349	Fox or avian	2-40
Pole	154	COEI	N70.30356	W147.02765	30	14-Jul-01	15:37:20	CR	NE291	NE	0	0	M		P		AF/AV	350	Fox or avian	2-40
Pole	155	COEI	N70.30356	W147.02765	30	14-Jul-01	15:37:20	CR	NE293	NE	0	0	M		P		AF/AV	351	Fox or avian	2-40
Pole	156	COEI	N70.30356	W147.02765	30	14-Jul-01	15:37:20	CR	NE295	NE	0	0	M		P		AF/AV	352	Fox or avian	2-40
Pole	157	COEI	N70.30356	W147.02765	30	14-Jul-01	15:37:20	CR	NE297	NE	0	0	M		P		AF/AV	353	Fox or avian	2-40
Pole	158	COEI	N70.30356	W147.02765	30	14-Jul-01	15:37:20	CR	NE299	NE	0	0	M		P		AF/AV	354	Fox or avian	2-40
Pole	159	COEI	N70.30356	W147.02765	30	14-Jul-01	15:37:20	CR	NE301	NE	0	0	M		P		AF/AV	355	Fox or avian	2-40
Pole	160	COEI	N70.30382	W147.02752	30	14-Jul-01	15:40:20	CR	NE303	NE	0	0	M		P		AF/AV	356	Fox or avian	2-41
Pole	161	COEI	N70.30382	W147.02752	30	14-Jul-01	15:40:20	CR	NE305	NE	0	0	M		P		AF/AV	357	Fox or avian	2-41
Pole	162	COEI	N70.30382	W147.02752	30	14-Jul-01	15:40:20	CR	NE307	NE	0	0	M		P		AF/AV	358	Fox or avian	2-41
Pole	163	COEI	N70.30382	W147.02752	30	14-Jul-01	15:40:20	CR	NE309	NE	0	0	M		P		AF/AV	359	Fox or avian	2-41
Pole	164	COEI	N70.30382	W147.02752	30	14-Jul-01	15:40:20	CR	NE311	NE	0	0	M		P		AF/AV	360	Fox or avian	2-41
Pole	165	COEI	N70.30382	W147.02752	30	14-Jul-01	15:40:20	CR	NE313	NE	0	0	M		P		AF/AV	361	Fox or avian	2-41
Pole	166	COEI	N70.30382	W147.02752	30	14-Jul-01	15:40:20	CR	NE315	NE	0	0	M		P		AF/AV	362	Fox or avian	2-41
Pole	167	COEI	N70.30382	W147.02752	30	14-Jul-01	15:40:20	CR	NE317	NE	0	0	M		P		AF/AV	363	Fox or avian	2-41
Pole	168	COEI	N70.30382	W147.02752	30	14-Jul-01	15:40:20	CR	NE319	NE	0	0	M		P		AF/AV	364	Fox or avian	2-41
Pole	169	COEI	N70.30382	W147.02752	30	14-Jul-01	15:40:20	CR	NE321	NE	0	0	M		P		AF/AV	365	Fox or avian	2-41
Pole	170	COEI	N70.30382	W147.02752	30	14-Jul-01	15:40:20	CR	NE323	NE	0	0	M		P		AF/AV	366	Fox or avian	2-41
Pole	171	COEI	N70.30382	W147.02752	30	14-Jul-01	15:40:20	CR	NE325	NE	0	0	M		P		AF/AV	367	Fox or avian	2-41
Pole	172	COEI	N70.30382	W147.02752	30	14-Jul-01	15:40:20	CR	NE327	NE	0	0	M		P		AF/AV	368	Fox or avian	2-41
Pole	173	COEI	N70.30382	W147.02752	30	14-Jul-01	15:40:20	CR	NE329	NE	0	0	M		P		AF/AV	369	Fox or avian	2-41
Pole	174	COEI	N70.30382	W147.02752	30	14-Jul-01	15:40:20	CR	NE331	NE	0	0	M		P		AF/AV	370	Fox or avian	2-41
Pole	175	COEI	N70.30382	W147.02752	30	14-Jul-01	15:40:20	CR	NE333	NE	0	0	M		P		AF/AV	371	Fox or avian	2-41
Pole	176	COEI	N70.30382	W147.02752	30	14-Jul-01	15:40:20	CR	NE335	NE	0	0	M		P		AF/AV	372	Fox or avian	2-41
Pole	177	COEI	N70.30382	W147.02752	30	14-Jul-01	15:40:20	CR	NE337	NE	0	0	M		P		AF/AV	373	Fox or avian	2-41
Pole	178	COEI	N70.30393	W147.02789	30	14-Jul-01	15:42:42	CR	NE339	NE	0	0	M		P		AF/AV	374	Fox or avian	2-41
Pole	179	COEI	N70.30393	W147.02789	30	14-Jul-01	15:42:42	CR	NE341	NE	0	0	M		P		AF/AV	375	Fox or avian	2-41
Pole	180	COEI	N70.30393	W147.02789	30	14-Jul-01	15:42:42	CR	NE343	NE	0	0	M		P		AF/AV	376	Fox or avian	2-41
Pole	181	COEI	N70.30393	W147.02789	30	14-Jul-01	15:42:42	CR	NE345	NE	0	0	M		P		AF/AV	377	Fox or avian	2-41
Pole	182	COEI	N70.30393	W147.02789	30	14-Jul-01	15:42:42	CR	NE347	NE	0	0	M		P		AF/AV	378	Fox or avian	2-41
Pole	183	COEI	N70.30393	W147.02789	30	14-Jul-01	15:42:42	CR	NE349	NE	0	0	M		P		AF/AV	379	Fox or avian	2-41
Pole	184	COEI	N70.30393	W147.02789	30	14-Jul-01	15:42:42	CR	NE351	NE	0	0	M		P		AF/AV	380	Fox or avian	2-41
Pole	185	COEI	N70.30393	W147.02789	30	14-Jul-01	15:42:42	CR	NE353	NE	0	0	M		P		AF/AV	381	Fox or avian	2-41
Pole	186	COEI	N70.30393	W147.02789	30	14-Jul-01	15:42:42	CR	NE355	NE	0	0	M		P		AF/AV	382	Fox or avian	2-41
Pole	187	COEI	N70.30384	W147.02803	30	14-Jul-01	15:45:00	CR	NE357	NE	0	0	L	100%	P		AF/AV	383	Elymus, Fox or Avian	2-41

Table A-1. Continued

Island	Sighting ID	Species	Latitude	Longitude	GPS	Date	Time	Recorder	Nest ID	Sight Type	Eggs	Live	Drift	Veg	Pred	Pred Egg	Pred Type	Rec No	Comments	Bk No
Pole	188	COEI	N70.30384	W147.02803	30	14-Jul-01	15:45:00	CR	NE359	NE	0	0	L	100%	P		AF/AV	384	Elymus, Fox or Avian	2-41
Pole	189	COEI	N70.30384	W147.02803	30	14-Jul-01	15:45:00	CR	NE361	NE	0	0	L	100%	P		AF/AV	385	Elymus, Fox or Avian	2-41
Pole	190	COEI	N70.30384	W147.02803	30	14-Jul-01	15:45:00	CR	NE363	NE	0	0	L	100%	P		AF/AV	386	Elymus, Fox or Avian	2-42
Pole	191	COEI	N70.30384	W147.02803	30	14-Jul-01	15:45:00	CR	NE365	NE	0	0	L	100%	P		AF/AV	387	Elymus, Fox or Avian	2-42
Pole	192	COEI	N70.30384	W147.02803	30	14-Jul-01	15:45:00	CR	NE367	NE	0	0	L	100%	P		AF/AV	388	Elymus, Fox or Avian	2-42
Pole	193	COEI	N70.30384	W147.02803	30	14-Jul-01	15:45:00	CR	NE369	NE	0	0	L	100%	P		AF/AV	389	Elymus, Fox or Avian	2-42
Pole	194	COEI	N70.30384	W147.02803	30	14-Jul-01	15:45:00	CR	NE371	NE	0	0	L	100%	P		AF/AV	390	Elymus, Fox or Avian	2-42
Pole	195	COEI	N70.30384	W147.02803	30	14-Jul-01	15:45:00	CR	NE373	NE	0	0	L	100%	P		AF/AV	391	Elymus, Fox or Avian	2-42
Pole	196	COEI	N70.30401	W147.02844	30	14-Jul-01	15:48:06	CR	NE375	NE	0	0	H		P		AF/AV	392	Fox or avian	2-42
Pole	197	COEI	N70.30401	W147.02844	30	14-Jul-01	15:48:06	CR	NE377	NE	0	0	H		P		AF/AV	393	Fox or avian	2-42
Pole	198	COEI	N70.30401	W147.02844	30	14-Jul-01	15:48:06	CR	NE379	NE	0	0	H		P		AF/AV	394	Fox or avian	2-42
Pole	199	COEI	N70.30401	W147.02844	30	14-Jul-01	15:48:06	CR	NE381	NE	0	0	M		P		AF/AV	395	Fox or avian	2-42
Pole	200	COEI	N70.30401	W147.02844	30	14-Jul-01	15:48:06	CR	NE383	NE	0	0	M		P		AF/AV	396	Fox or avian	2-42
Pole	201	COEI	N70.30401	W147.02844	30	14-Jul-01	15:48:06	CR	NE385	NE	0	0	M		P		AF/AV	397	Fox or avian	2-42
Pole	202	COEI	N70.30401	W147.02844	30	14-Jul-01	15:48:06	CR	NE387	NE	0	0	M		P		AF/AV	398	Fox or avian	2-42
Pole	203	COEI	N70.30401	W147.02844	30	14-Jul-01	15:48:06	CR	NE389	NE	0	0	M		P		AF/AV	399	Fox or avian	2-42
Pole	204	COEI	N70.30401	W147.02844	30	14-Jul-01	15:48:06	CR	NE391	NE	0	0	M		P		AF/AV	400	Fox or avian	2-42
Pole	205	COEI	N70.30401	W147.02844	30	14-Jul-01	15:48:06	CR	NE393	NE	0	0	M		P		AF/AV	401	Fox or avian	2-42
Pole	206	COEI	N70.30401	W147.02844	30	14-Jul-01	15:48:06	CR	NE395	NE	0	0	M		P		AF/AV	402	Fox or avian	2-42
Pole	207	COEI	N70.30401	W147.02844	30	14-Jul-01	15:48:06	CR	NE397	NE	0	0	M		P		AF/AV	403	Fox or avian	2-42
Pole	208	COEI	N70.30362	W147.02800	30	14-Jul-01	15:51:30	CR	NE399	NE	0	0	M	100%	P		AF/AV	404	Elymus, Fox or Avian	2-42
Pole	209	COEI	N70.30369	W147.02836	30	14-Jul-01	15:52:52	CR	NE401	NE	0	0	H		P		AF/AV	405	Fox or avian	2-42
Pole	210	COEI	N70.30413	W147.02994	30	14-Jul-01	15:54:55	CR	NE403	NE	0	0	H		P		AF/AV	406	Fox or avian	2-42
Pole	211	COEI	N70.30413	W147.02994	30	14-Jul-01	15:54:55	CR	NE405	NE	0	0	H		P		AF/AV	407	Fox or avian	2-42
Pole	212	COEI	N70.30413	W147.02994	30	14-Jul-01	15:54:55	CR	NE407	NE	0	0	M		P		AF/AV	408	Fox or avian	2-42
Pole	213	COEI	N70.30413	W147.02994	30	14-Jul-01	15:54:55	CR	NE409	NE	0	0	M		P		AF/AV	409	Fox or avian	2-42
Pole	214	COEI	N70.30413	W147.02994	30	14-Jul-01	15:54:55	CR	NE411	NE	0	0	M		P		AF/AV	410	Fox or avian	2-42
Pole	215	COEI	N70.30413	W147.02994	30	14-Jul-01	15:54:55	CR	NE413	NE	0	0	M		P		AF/AV	411	Fox or avian	2-42
Pole	216	COEI	N70.30413	W147.02994	30	14-Jul-01	15:54:55	CR	NE415	NE	0	0	M		P		AF/AV	412	Fox or avian	2-42
Pole	217	COEI	N70.30413	W147.02994	30	14-Jul-01	15:54:55	CR	NE417	NE	0	0	M		P		AF/AV	413	Fox or avian	2-42
Pole	218	COEI	N70.30413	W147.02994	30	14-Jul-01	15:54:55	CR	NE419	NE	0	0	L		P		AF/AV	414	Fox or avian	2-42
Pole	219	COEI	N70.30436	W147.03045	30	14-Jul-01	15:57:20	CR	NE421	NE	0	0	L		P		AF/AV	415	Fox or avian	2-42
Pole	220	COEI	N70.30415	W147.03100	30	14-Jul-01	15:58:45	CR	SC423	SC			L					416		2-43
Pole	221	COEI	N70.30415	W147.03100	30	14-Jul-01	15:58:45	CR	NE425	NE	0	0	M		P		AF/AV	417	Fox or avian	2-43
Pole	222	COEI	N70.30415	W147.03100	30	14-Jul-01	15:58:45	CR	NE427	NE	0	0	H		P		AF/AV	418	Fox or avian	2-43
Pole	223	COEI	N70.30422	W147.03140	30	14-Jul-01	16:00:33	CR	NE429	NE	0	0	L		P		AF/AV	419	Fox or avian	2-43
Pole	224	COEI	N70.30417	W147.03221	30	14-Jul-01	16:01:10	CR	NE431	NE	0	0	H		P		AF/AV	420	Fox or avian	2-43
Pole	225	COEI	N70.30417	W147.03221	30	14-Jul-01	16:01:10	CR	NE433	NE	0	0	H		P		AF/AV	421	Fox or avian	2-43
Pole	226	COEI	N70.30417	W147.03221	30	14-Jul-01	16:01:10	CR	NE435	NE	0	0	H		P		AF/AV	422	Fox or avian	2-43
Pole	227	COEI	N70.30417	W147.03221	30	14-Jul-01	16:01:10	CR	SC437	SC			L					423		2-43
Pole	228	COEI	N70.30421	W147.03300	30	14-Jul-01	16:02:43	CR	NE439	NE	0	0	L		P		AF/AV	424	Fox or avian	2-43
Pole	229	COEI	N70.30415	W147.03856	30	14-Jul-01	16:08:25	CR	NE441	NE	0	0	L		P		AF/AV	425	Fox or avian	2-43
Pole	230	COEI	N70.30422	W147.03944	30	14-Jul-01	16:09:13	CR	NE443	NE	0	0	L		P		AF/AV	426	Fox or avian	2-43
Pole	231	COEI	N70.30608	W147.07088	30	14-Jul-01	16:36:36	CR	NE445	NE	0	0	L		P		AF/AV	427	Fox or avian	2-43
Pole	232	COEI	N70.30615	W147.07112	30	14-Jul-01	16:37:22	CR	SC447	SC			L					428		2-43
Pole	233	COEI	N70.30621	W147.07235	30	14-Jul-01	16:38:14	CR	NE449	NE	0	0	L		P		AF/AV	429	Fox or avian	2-43
Pole	234	COEI	N70.30622	W147.07288	30	14-Jul-01	16:38:49	CR	SC451	SC			L					430		2-43
Pole	235	COEI	N70.30626	W147.07428	30	14-Jul-01	16:39:52	CR	NE453	NE	0	0	M		P		AF/AV	431	Fox or avian	2-43
Pole	236	COEI	N70.30614	W147.07474	30	14-Jul-01	16:40:35	CR	SC455	SC			L					432		2-43
Pole	237	ARTE	N70.30614	W147.07474	30	14-Jul-01	16:40:35	CR					L					433	2 Alarming	2-43
Pole	238	COEI	N70.30550	W147.07890	30	14-Jul-01	16:44:30	CR	SC457	SC			L					434		2-43
Pole	239	COEI	N70.30545	W147.07909	30	14-Jul-01	16:45:03	CR	NE459	NE	0	0	L	50%	P		AF/AV	435	Fox or avian, Elymus	2-43
Pole	240	LTDU	N70.30544	W147.07910	30	14-Jul-01	16:45:40	CR					L					436		2-43
Pole	241	COEI	N70.30537	W147.07929	30	14-Jul-01	16:46:30	CR	NE461	NE	0	0	L		P		AF/AV	437	Fox or avian	2-43
Pole	242	COEI	N70.30537	W147.07988	30	14-Jul-01	16:47:20	CR	NE463	NE	0	0	N	10%	P		AF/AV	438	Sandwort, Fox or avian	2-43
Pole	243	COEI	N70.30534	W147.08028	30	14-Jul-01	16:48:03	CR	SC465	SC			L					439		2-43
Pole	244	COEI	N70.30534	W147.08028	30	14-Jul-01	16:48:03	CR	SC467	SC			L					440		2-43
Pole	245	COEI	N70.30487	W147.08184	30	14-Jul-01	16:48:49	CR	NE469	NE	0	0	L		P		AF/AV	441	Fox or avian	2-43
Pole	246	COEI	N70.30487	W147.08184	30	14-Jul-01	16:49:49	CR	NE471	NE	0	0	L		P		AF/AV	442	Fox or avian	2-43

Table A-1. Continued

Island	Sighting ID	Species	Latitude	Longitude	GPS	Date	Time	Recorder	Nest ID	Sight Type	Eggs	Live	Drift	Veg	Pred	Pred Egg	Pred Type	Rec No	Comments	Bk No
Reindeer	247		N70.30489	W147.08186	30	14-Jul-01	18:51:00	CR										443	END	2-43
Reindeer	1		N70.47477	W148.31209	5	15-Jul-01	11:27:00	RR										444	START	2-44
Reindeer	2	GLGU	N70.47479	W148.31216	5	15-Jul-01	11:28:20	RR										445	1 Call, Circle	2-44
Reindeer	3	COEI	N70.47475	W148.31208	5	15-Jul-01	11:31:28	RR	SC1	SC								446	Neon Bulb	2-44
Reindeer	4	COEI	N70.47481	W148.31105	5	15-Jul-01	11:32:44	RR	NE3	NE	0		L		P			447	Avian, egg near nest	2-44
Reindeer	5	HUMAN	N70.47469	W148.30799	5	15-Jul-01	11:36:58	RR										448	Human tracks	2-44
Reindeer	6	COEI	N70.47518	W148.30765	5	15-Jul-01	11:38:20	RR	NE5	NE	0		H		P			449	Avian, egg shell	2-44
Reindeer	7	COEI	N70.47517	W148.30765	5	15-Jul-01	11:39:09	RR	SC7	SC			L					450	Egg bits, down bits	2-44
Reindeer	8	COEI	N70.47566	W148.30716	5	15-Jul-01	11:40:37	RR	NE9	NE	0		L		P			451	Egg bits, down bits	2-44
Reindeer	9	GLGU	N70.47588	W148.30716	5	15-Jul-01	11:40:37	RR										452	Wing	2-44
Reindeer	10	PAJA	N70.47609	W148.30613	5	15-Jul-01	11:42:46	RR										453	Fly-by, North to South 2 snow drifts lie across island	2-44
Reindeer	11		N70.47643	W148.30567	5	15-Jul-01	11:44:30	RR										454		2-44
Reindeer	12	COEI	N70.47761	W148.30549	5	15-Jul-01	11:48:16	RR	NE11	NE	0		L		P			455	Avian, egg shell, down bits	2-44
Reindeer	13	GLGU	N70.47848	W148.30815	5	15-Jul-01	11:52:11	RR	NE13	NE	2		L					456	Chick near-by, 9 adults circling	2-44
Reindeer	14	COEI	N70.47918	W148.31081	5	15-Jul-01	11:58:13	RR	NE15	NE	0		L		P			457	Down bits, tracks	2-44
Reindeer	15	COEI	N70.47948	W148.31225	5	15-Jul-01	12:03:07	RR	NE17	NE	0		L		U			458	Down bits, tracks	2-44
Reindeer	16	COEI	N70.47953	W148.31262	5	15-Jul-01	12:04:03	RR	NE19	NE	0		L		P			459	Down bits, tracks	2-44
Reindeer	17	COEI	N70.47946	W148.31280	5	15-Jul-01	12:04:53	RR	SC21	SC			L					460		2-44
Reindeer	18	COEI	N70.47966	W148.31312	5	15-Jul-01	12:06:07	RR										461	4 females fly-by	2-44
Reindeer	19	GLGU	N70.47947	W148.31382	5	15-Jul-01	12:07:48	RR	NE23	NE	H		L					462	Hatched egg, chick near	2-44
Reindeer	20	COEI	N70.47947	W148.31379	5	15-Jul-01	12:08:37	RR	NE25	NE	2		L					463	Little down	2-44
Reindeer	21		N70.47937	W148.31325	5	15-Jul-01	12:10:00											464	END SEARCH	2-44
Reindeer	22		N70.47947	W148.31291	5	16-Jul-01	11:02:00	RR										465	START	2-45
Reindeer	23	COEI	N70.47960	W148.31390	5	16-Jul-01	11:04:58	RR	SC1	SC			L					466		2-45
Reindeer	24	GLGU	N70.47980	W148.31390	5	16-Jul-01	11:04:48	RR										467	2 call, circle	2-45
Reindeer	25	YBLO	N70.48035	W148.31578	5	16-Jul-01	11:07:25	RR							P			468	1 fly-by to the East	2-45
Reindeer	26	COEI	N70.48050	W148.31977	5	16-Jul-01	11:08:51	RR	NE3	NE	0		L					469	Down bits	2-45
Reindeer	27	GLGU	N70.48116	W148.31977	5	16-Jul-01	11:12:22	RR										470	1 walks	2-45
Reindeer	28	COEI	N70.48118	W148.32016	5	16-Jul-01	11:13:12	RR	NE5	NE	3		L					471	Down	2-45
Reindeer	29	COEI	N70.48123	W148.32051	5	16-Jul-01	11:14:04	RR	SC7	SC			L					472		2-45
Reindeer	30	COEI	N70.48216	W148.32815	5	16-Jul-01	11:21:11	RR	NE9	NE	Y		L					473	Other side of island	2-45
Reindeer	31	COEI	N70.48170	W148.32874	5	16-Jul-01	11:27:38	RR	NE11	NE	0		L		P			474	Near nest 9 (above)	2-45
Reindeer	32	COEI	N70.48143	W148.32651	5	16-Jul-01	11:30:13	RR	SC13	SC			L					475		2-45
Reindeer	33	COEI	N70.48113	W148.32476	5	16-Jul-01	11:32:24	RR	SC15	SC			L					476		2-45
Reindeer	34	GLGU	N70.48096	W148.32372	5	16-Jul-01	11:34:00	RR	NE17	NE	3		L					477	Almost no driftwood, a few twigs	2-45
Reindeer	35	COEI	N70.48055	W148.32058	5	16-Jul-01	11:39:20	RR										478	1 female swims in pond	2-45
Reindeer	36	GLGU	N70.48029	W148.31946	5	16-Jul-01	11:41:50	RR	NE18	NE	0		L		U			479	Questionably active nest? Feathers, no eggs or shells, gulls alarm	2-45
Reindeer	37	COEI	N70.47986	W148.31936	5	16-Jul-01	11:44:11	RR	SC19	SC			L					480		2-45
Reindeer	38	COEI	N70.47981	W148.31936	5	16-Jul-01	11:44:46	RR	NE21	NE	0		L		P			481	Tracks, lots of down	2-45
Reindeer	39	COEI	N70.47981	W148.31936	5	16-Jul-01	11:44:46	RR	SC23	SC			L					482	1 m from NE21	2-45
Reindeer	40	COEI	N70.47988	W148.31960	5	16-Jul-01	11:46:10	RR	NE25	NE	0		L		P			483	Down bits	2-45
Reindeer	41	HUMAN	N70.47935	W148.31984	5	16-Jul-01	11:48:59	RR										484	Tracks that look like small tractor with caterpillar treads	2-45
Reindeer	42	COEI	N70.47948	W148.31767	5	16-Jul-01	11:54:47	RR	NE27	NE	0		L		P			485	Down	2-45
Reindeer	43	COEI	N70.47956	W148.31780	5	16-Jul-01	11:55:50	RR	NE29	NE	4		M					486		2-45
Reindeer	44	COEI	N70.47958	W148.31777	5	16-Jul-01	11:56:34	RR	SC31	SC			M					487		2-45
Reindeer	45	GLGU	N70.47960	W148.31771	5	16-Jul-01	11:57:10	RR	NE33	NE	H		M					488	1 dead chick	2-45
Reindeer	46	COEI	N70.47963	W148.31772	5	16-Jul-01	11:58:32	RR	NE35	NE	0		L		P			489		2-45
Reindeer	47	COEI	N70.47954	W148.31720	5	16-Jul-01	11:59:12	RR	SC37	SC			L					490		2-45

Table A-1. Continued

Island	Sighting ID	Species	Latitude	Longitude	GPS	Date	Time	Recorder	Nest ID	Sight Type	Eggs	Live	Drift	Veg	Pred	Egg	Pred Type	Rec No	Comments	Bk No	
Reindeer	48	COEI	N70.47888	W148.31620	5	16-Jul-01	12:01:13	RR	SC39	SC			L					491		2-45	
Reindeer	49	COEI	N70.47889	W148.31573	5	16-Jul-01	12:01:56	RR	SC41	SC			L					492		2-45	
Reindeer	50	COEI	N70.47931	W148.31480	5	16-Jul-01	12:04:32	RR	NE43	NE	0		L		P			493	Down bits	2-45	
Reindeer	51	COEI	N70.47931	W148.31480	5	16-Jul-01	12:04:32	RR	NE45	NE	0		L		P			494	Down bits	2-45	
Reindeer	52	COEI	N70.47908	W148.31380	5	16-Jul-01	12:07:32	RR	NE47	NE	3		L					495		2-48	
Reindeer	53	ARTE	N70.47907	W148.31348	5	16-Jul-01	12:08:45	RR					L					486	3 fly-by	2-48	
Reindeer	54	COEI	N70.47909	W148.31378	5	16-Jul-01	12:10:58	RR	NE49	NE	0		L		P			497	Down bits	2-48	
Reindeer	55	COEI	N70.47887	W148.31259	5	16-Jul-01	12:12:38	RR	NE51	NE	0		L		P		AVIAN	498	Avian, 2 egg shells	2-48	
Reindeer	56	COEI	N70.47743	W148.31210	5	16-Jul-01	12:17:14	RR	NE53	NE	0		L		P			499	Down bits	2-48	
Reindeer	57		N70.47792	W148.31098	5	16-Jul-01	12:19:00	RR					L					500	END	2-48	
Cross	1		N70.48845	W147.94752	5	16-Jul-01	14:28:00	RR					L					501	START	2-47	
Cross	2	GLGU	N70.48842	W147.94825	5	16-Jul-01	14:29:54	RR					L					502	1 calling, circling	2-47	
Cross	3	COEI	N70.48836	W147.94926	5	16-Jul-01	14:30:46	RR	NE1	NE	0		L		P			503	Down bits	2-47	
Cross	4	COEI	N70.48833	W147.94930	5	16-Jul-01	14:31:26	RR	NE3	NE	0		L		P			504	Egg shell, down bits	2-47	
Cross	5	COEI	N70.48842	W147.94938	5	16-Jul-01	14:32:18	RR	SC5	SC			L	V				505	Lungwort	2-47	
Cross	6	COEI	N70.48842	W147.94938	5	16-Jul-01	14:32:18	RR	SC7	SC			L					506		2-47	
Cross	7	COEI	N70.48912	W147.95109	5	16-Jul-01	14:35:16	RR	NE9	NE	Y		N					507		2-47	
Cross	8	COEI	N70.48912	W147.95109	5	16-Jul-01	14:35:16	RR	NE11	NE	Y		N					508		2-47	
Cross	9	POBE	N70.48912	W147.95109	5	16-Jul-01	14:35:16	RR					L					509	PBT	2-47	
Cross	10	COEI	N70.48966	W147.95171	5	16-Jul-01	14:36:46	RR	NE13	NE	0		L		P			510		2-47	
Cross	11	COEI	N70.48966	W147.95171	5	16-Jul-01	14:36:46	RR	NE15	NE	0		L		P			511		2-47	
Cross	12	ARTE	N70.48981	W147.95177	5	16-Jul-01	14:38:02	RR					L					512	3 fly-by	2-47	
Cross	13	GLGU	N70.48981	W147.95177	5	16-Jul-01	14:38:02	RR					L					513	4 call, fly-by	2-47	
Cross	14	COEI	N70.49019	W147.95131	5	16-Jul-01	14:39:31	RR	NE17	NE	0		L		P			514	Few twigs	2-47	
Cross	15	COEI	N70.49019	W147.95131	5	16-Jul-01	14:39:31	RR	NE19	NE	0		L		P			515		2-47	
Cross	16	COEI	N70.49053	W147.95121	5	16-Jul-01	14:41:44	RR	SC21	SC			L					516		2-47	
Cross	17	COEI	N70.49053	W147.95121	5	16-Jul-01	14:41:44	RR	SC23	SC			L					517	1 male fly-by	2-47	
Cross	18	COEI	N70.49106	W147.95184	5	16-Jul-01	14:44:26	RR	SC25	SC			L					518		2-47	
Cross	19	COEI	N70.49118	W147.95200	5	16-Jul-01	14:45:23	RR	SC25	SC			L					519		2-47	
Cross	20	COEI	N70.49163	W147.95288	5	16-Jul-01	14:46:47	RR	NE27	NE	0		L		P			520	Down bits	2-47	
Cross	21	COEI	N70.49163	W147.95318	5	16-Jul-01	14:47:37	RR	EE				L					521	Avian	2-47	
Cross	22	COEI	N70.49224	W147.95546	5	16-Jul-01	14:50:55	RR					L					522	3 females fly-by	2-47	
Cross	23	COEI	N70.49264	W147.95631	5	16-Jul-01	14:52:30	RR	SC29	SC			L					523		2-47	
Cross	24	POBE	N70.49264	W147.95631	5	16-Jul-01	14:52:30	RR					L					524	PBT	2-47	
Cross	25	COEI	N70.49307	W147.95751	5	16-Jul-01	14:56:20	RR	SC31	SC			L					525		2-47	
Cross	26	POBE	N70.49321	W147.95800	5	16-Jul-01	14:57:15	RR					L					526	PBT	2-47	
Cross	27	GLGU	N70.49277	W147.95872	5	16-Jul-01	15:02:03	RR	NE33	NE	H		L						527	Hatched (1 shell), no eggs, OLDS head in bowl, 4 adults alarm / circle	2-47
Cross	28	GLGU	N70.49283	W147.96007	5	16-Jul-01	15:04:49	RR	NE35	NE	3		N					528		2-47	
Cross	29	COEI	N70.49336	W147.96209	5	16-Jul-01	15:08:08	RR	SC37	SC			L					529		2-47	
Cross	30	COEI	N70.49348	W147.96266	5	16-Jul-01	15:09:02	RR	SC39	SC			L					530		2-47	
Cross	31	COEI	N70.49361	W147.96312	5	16-Jul-01	15:10:15	RR					L					531	5 females rest in pond	2-47	
Cross	32	COEI	N70.49361	W147.96316	5	16-Jul-01	15:11:34	RR	SC41	SC			N					532		2-48	
Cross	33	COEI	N70.49372	W147.96367	5	16-Jul-01	15:13:01	RR	SC43	SC			L					533		2-48	
Cross	34	COEI	N70.49387	W147.96455	5	16-Jul-01	15:14:10	RR	NE45	NE	0		M	V	P			534	Lungwort, down bits	2-48	
Cross	35	COEI	N70.49390	W147.96474	5	16-Jul-01	15:15:19	RR	SC47	SC			L					535		2-48	
Cross	36	COEI	N70.49394	W147.96492	5	16-Jul-01	15:15:51	RR	NE49	NE	0		L	V	P			536	Lungwort, down bits	2-48	
Cross	37	COEI	N70.49403	W147.96565	5	16-Jul-01	15:17:37	RR	SC51	SC			L					537		2-48	
Cross	38	COEI	N70.49413	W147.96633	5	16-Jul-01	15:18:39	RR	NE53	NE	0		M	V	P			538	Lungwort, down bits	2-48	
Cross	39	COEI	N70.49417	W147.96710	5	16-Jul-01	15:21:54	RR	SC55	SC			L					539	50 m North	2-48	
Cross	40	COEI	N70.49417	W147.96710	5	16-Jul-01	15:21:54	RR	SC57	SC			M					540	50 m North	2-48	
Cross	41	COEI	N70.49417	W147.96710	5	16-Jul-01	15:21:54	RR	SC59	SC			M					541	50 m North	2-48	
Cross	42	KIEI	N70.49381	W147.97650	5	16-Jul-01	15:36:24	RR					L					542	5 males fly-by	2-48	
Cross	43	RUTU	N70.49397	W147.97672	5	16-Jul-01	15:37:53	RR					L					543	4 fly-by	2-48	
Cross	44	GLGU	N70.49397	W147.97672	5	16-Jul-01	15:37:53	RR					L					544	39 at this location earlier (whale bone)	2-48	
Cross	45	COEI	N70.49449	W147.97843	5	16-Jul-01	15:40:29	RR	SC61	SC			L					545		2-48	

Table A-1. Continued

Island	Sighting ID	Species	Latitude	Longitude	GPS	Date	Time	Recorder	Nest ID	Sight Type	Eggs	Live	Drift	Veg	Pred	Prod	Egg	Pred Type	Rec No	Comments	Bk No
Cross	46	COEI	N70.49464	W147.97658	5	16-Jul-01	15:41:08	RR	SC63	SC			L	V					546	Lungwort, sandwort	2-48
Cross	47	COEI	N70.49417	W147.97771	5	16-Jul-01	15:44:14	RR	NE65	NE	2		M						547		2-48
Cross	48	GLGU	N70.49352	W147.97959	5	16-Jul-01	15:49:34	RR											548	Old nest? Does not look used this year	2-48
Cross	49	COEI	N70.49348	W147.97963	5	16-Jul-01	15:50:00	RR											549	15 females fly-by, rest in pond	2-48
Cross	50	COEI	N70.49316	W147.98084	5	16-Jul-01	15:53:11	RR	SC67	SC			L						550		2-48
Cross	51	SESA	N70.49212	W147.98273	5	16-Jul-01	15:58:00	RR											551	6 bath, fly	2-48
Cross	52	PAJA	N70.49110	W147.98435	5	16-Jul-01	16:01:20	RR											552	1 fly-by	2-48
Cross	53	LTDU	N70.48521	W147.94084	5	16-Jul-01	17:17:37	RR											553	44 rest on shoreline, move to water	2-48
Cross	54	COEI	N70.48521	W147.94084	5	16-Jul-01	17:17:37	RR											554	1 male, 2 females rest on shoreline, move to water	2-48
Cross	55	COEI	N70.48523	W147.94077	5	16-Jul-01	17:35:00	RR											555	END	2-48
Endicott	1		N70.32205	W147.87015	5	6-Jul-01	20:00:00	LN											556	START	1-43
Endicott	2		N70.32265	W147.86362	5	6-Jul-01	20:19:40	LN											557	Fyke net - East side of causeway	1-43
Endicott	3	SPPL	N70.32998	W147.91509	5	6-Jul-01	20:47:20	LN											558	2, no nest found	1-43
Endicott	4	BASA	N70.32998	W147.91509	5	6-Jul-01	20:47:20	LN											559	1, no nest found	1-43
Endicott	5	GLGU	N70.32998	W147.91509	5	6-Jul-01	20:47:20	LN											560	Everywhere	1-43
Endicott	6	COEI	N70.33251	W147.92120	5	6-Jul-01	20:51:51	LN	NE2	NE	0		H		P			561	Down, GLGU / ARFO, photo 18	1-43	
Endicott	7	COEI	N70.33762	W147.93298	5	6-Jul-01	21:00:00	LN											562	END	1-43
Endicott	8		N70.33114	W147.92023	5	6-Jul-01	22:13:00	LN											563	to MPI from intersection	1-43
Endicott	9		N70.32511	W147.90425	5	6-Jul-01	22:24:00	LN											564	END	1-43
Endicott	10				5	6-Jul-01	22:43:00	LN											565	12.7 mph 92 degrees, 32.1 F @ Endicott	1-43
Endicott	11				5	6-Jul-01		LN											566	Fox scat on bridge along causeway - SW	1-43
Duck, 1 & 2	1					7-Jul-01	9:45:00	LN											567	START	1-44
Duck, 1 & 2	2	COEI	N70.313368	W147.868422		7-Jul-01	9:50:00	LN	NE2	NE	0		M		P			568	GLGU, bits of down	1-44	
Duck, 1 & 2	3	COEI	N70.313389	W147.868288		7-Jul-01	9:51:00	LN	NE4	NE	0		L		P			569	GLGU	1-44	
Duck, 1 & 2	4	COEI	N70.313493	W147.868288		7-Jul-01	9:53:28	LN	SC6	SC			L					570	Slicke	1-44	
Duck, 1 & 2	5	COEI	N70.313516	W147.867944		7-Jul-01	9:56:25	LN	NE8	NE	3		N					571	Photo 16	1-44	
Duck, 1 & 2	6	GLGU	N70.313634	W147.867669		7-Jul-01	10:00:33	LN	NE10	NE	3		L					572	Photo 15	1-44	
Duck, 1 & 2	7	COEI	N70.313782	W147.867266		7-Jul-01	10:01:43	LN	NE12	NE	0		L		P			573	GLGU, down, nest on GLGU mound, photo 14	1-44	
Duck, 1 & 2	8	COEI	N70.314351	W147.866602		7-Jul-01	10:04:30	LN	NE14	NE	Y		H					574		1-44	
Duck, 1 & 2	9	COEI	N70.315077	W147.866581		7-Jul-01	10:06:26	LN	SC16	SC			L					575		1-44	
Duck, 1 & 2	10	COEI	N70.315484	W147.865366		7-Jul-01	10:07:30	LN	NE18	NE	Y		L					576		1-44	
Duck, 1 & 2	11	COEI	N70.31596	W147.866974		7-Jul-01	10:10:56	LN	NE20	NE	Y		L					577	To South, 15 m	1-44	
Duck, 1 & 2	12	COEI	N70.316236	W147.867953		7-Jul-01	10:12:47	LN	NE22	NE	Y		L					578		1-44	
Duck, 1 & 2	13	COEI	N70.316673	W147.868017		7-Jul-01	10:17:33	LN	NE24	NE	0		L		P			579	Down	1-44	
Duck, 1 & 2	14	COEI	N70.316889	W147.868255		7-Jul-01	10:17:33	LN	NE26	NE	Y		M					580		1-44	
Duck, 1 & 2	15	GLGU	N70.316984	W147.86853		7-Jul-01	10:20:06	LN	NE28	NE	1		M					581		1-44	
Duck, 1 & 2	16	COEI	N70.317058	W147.868842		7-Jul-01	10:20:06	LN	NE30	NE	Y		H					582		1-44	
Duck, 1 & 2	17	COEI	N70.317498	W147.870802		7-Jul-01	10:23:12	LN	NE32	NE	Y		H					583		1-44	
Duck, 1 & 2	18	COEI	N70.317549	W147.871131		7-Jul-01	10:24:00	LN	NE34	NE	Y		H					584	Flushed	1-44	
Duck, 1 & 2	19	COEI	N70.317595	W147.871443		7-Jul-01	10:25:00	LN	NE36	NE	Y		H					585		1-44	
Duck, 1 & 2	20	COEI	N70.31765	W147.871663		7-Jul-01	10:25:11	LN	NE38	NE	Y		H					586		1-44	
Duck, 1 & 2	21	GLGU	N70.31773	W147.872157		7-Jul-01	10:26:01	LN	NE40	NE	3		L					587	Photo 13	1-44	
Duck, 1 & 2	22	GLGU	N70.317811	W147.872524		7-Jul-01	10:26:34	LN	NE42	NE	2		N					588		1-44	
Duck, 1 & 2	23	GLGU	N70.317866	W147.873		7-Jul-01	10:29:26	LN	NE44	NE	3		M					589		1-44	
Duck, 1 & 2	24	COEI	N70.317897	W147.87322		7-Jul-01	10:31:00	LN	NE46	NE	Y		M					590	25 m to NW	1-44	
Duck, 1 & 2	25	COEI	N70.317792	W147.873494		7-Jul-01	10:31:00	LN	NE48	NE	Y		M					591		1-44	

Table A-1. Continued

Island	Sighting ID	Species	Latitude	Longitude	GPS	Date	Time	Recorder	Nest ID	Sight. Type	Eggs	Live	Drift	Veg.	Pred	Pred Egg	Rec. No	Comments	Bk No
Duck, 1 & 2	26	GLGU	N70.317695	W147.872688		7-Jul-01	10:31:00	LN	NE50	NE		3	L				592		1-44
Duck, 1 & 2	27	COEI	N70.317169	W147.870765		7-Jul-01	10:36:51	LN	NE52	NE	Y		M				593	10 m to NW	1-44
Duck, 1 & 2	28	COEI	N70.317052	W147.870472		7-Jul-01	10:36:51	LN	NE54	NE	Y		H				594	10 m to NW	1-44
Duck, 1 & 2	29	COEI	N70.317015	W147.869794		7-Jul-01	10:36:51	LN	NE56	NE	Y		M				595	10 m to NW, 1 hen flushed far	1-44
Duck, 1 & 2	30	COEI	N70.316509	W147.868348		7-Jul-01	10:38:00	LN	NE58	NE	Y		L				596		1-44
Duck, 1 & 2	31	COEI	N70.316418	W147.868329		7-Jul-01	10:38:00	LN	NE60	NE	Y		L				597		1-44
Duck, 1 & 2	32					7-Jul-01	10:40:00	LN									598	END	1-44
Thetis	1		N70.52552	W150.12664	2	12-Jul-01	12:29:00	KT									599	START	1-45
Thetis	2	COEI	N70.52552	W150.12664	2	12-Jul-01	12:29:00	KT	SC2	SC			L				600		1-45
Thetis	3	COEI	N70.52749	W150.12698	2	12-Jul-01	12:38:08	KT	SC4	SC			L				601		1-45
Thetis	4	COEI	N70.52803	W150.12698	2	12-Jul-01	12:42:30	KT	SC6	SC			L				602	Tracks	1-45
Thetis	5	HUMAN	N70.52815	W150.12673	2	12-Jul-01	12:43:24	KT									603	Human tracks	1-45
Thetis	6	COEI	N70.52838	W150.12676	2	12-Jul-01	12:44:26	KT	NE8	NE	2		L				604	Piece of boat	1-45
Thetis	7	HUMAN	N70.52853	W150.12643	2	12-Jul-01	12:45:15	KT									605	Boat	1-45
Thetis	8	COEI	N70.53045	W150.12634	2	12-Jul-01	12:50:54	KT	NE10	NE	Y		L				606	Slayed on	1-45
Thetis	9	COEI	N70.53045	W150.12634	2	12-Jul-01	12:50:54	KT	SC12	SC			L				607		1-45
Thetis	10	COEI	N70.53514	W150.12812	2	12-Jul-01	13:02:35	KT	NE14	NE	0		L		P		608	Avian, down and sticks	1-45
Thetis	11	COEI	N70.53561	W150.12809	2	12-Jul-01	13:04:30	KT	SC16	SC			L				609		1-45
Thetis	12	COEI	N70.53583	W150.12911	2	12-Jul-01	13:06:08	KT	SC18	SC			L				610		1-45
Thetis	13	COEI	N70.53592	W150.12921	2	12-Jul-01	13:06:58	KT	SC20	SC			L				611		1-45
Thetis	14	COEI	N70.53646	W150.13023	2	12-Jul-01	13:08:50	KT	SC22	SC			L				612		1-45
Thetis	15	COEI	N70.53713	W150.13099	2	12-Jul-01	13:12:15	KT	NE24	NE	0		L		P		613	Avian tracks, down	1-45
Thetis	16	COEI	N70.53832	W150.13083	2	12-Jul-01	13:17:00	KT	SC26	SC			L				614		1-45
Thetis	17	COEI	N70.53864	W150.13097	2	12-Jul-01	13:18:58	KT	SC28	SC			L				615		1-45
Thetis	18	COEI	N70.53962	W150.13352	2	12-Jul-01	13:22:59	KT	SC30	SC			L				616		1-45
Thetis	19	COEI	N70.53959	W150.13367	2	12-Jul-01	13:23:19	KT	SC32	SC			L				617		1-45
Thetis	20	COEI	N70.54021	W150.13438	2	12-Jul-01	13:25:01	KT	NE34	NE	3		N				618	Flushed off	1-45
Thetis	21	LTDU	N70.54138	W150.13455	2	12-Jul-01	13:28:48	KT									619	9 still flying	1-45
Thetis	22	COEI	N70.54198	W150.13519	2	12-Jul-01	13:33:20	KT	NE36	NE	Y		L				620	Slayed on	1-45
Thetis	23	COEI	N70.54242	W150.13530	2	12-Jul-01	13:34:25	KT	SC38	SC			L				621		1-45
Thetis	24	COEI	N70.54282	W150.13535	2	12-Jul-01	13:36:26	KT	NE40	NE	0		N		P		622	Sticks	1-45
Thetis	25	GLGU	N70.54360	W150.13545	2	12-Jul-01	13:45:05	KT	NE42	NE	2		N	30%			623	Sandwort	1-45
Thetis	26	COEI	N70.54409	W150.13558	2	12-Jul-01	13:47:27	KT	NE44	NE	7		N				624	On large black bag	1-45
Thetis	27	GLGU	N70.54422	W150.13533	2	12-Jul-01	13:48:17	KT	NE46	NE	2		N				625	Roofs	1-45
Thetis	28		N70.54434	W150.13563	2	12-Jul-01	13:50:00	KT									626	LUNCH	1-45
Thetis	29		N70.54562	W150.13684	2	12-Jul-01	14:13:00	KT									627	START	1-45
Thetis	30	HUMAN	N70.54920	W150.14403	2	12-Jul-01	14:22:22	KT									628	Snowmobile tracks	1-45
Thetis	31	COEI	N70.55081	W150.14773	2	12-Jul-01	14:27:47	KT	SC48	SC			M				629		1-45
Thetis	32	COEI	N70.55106	W150.14825	2	12-Jul-01	14:28:22	KT	NE50	NE	8		M				630	Flushed	1-45
Thetis	33	COEI	N70.55107	W150.14838	2	12-Jul-01	14:28:42	KT	NE52	NE	3		M				631	Flushed far	1-45
Thetis	34	COEI	N70.55107	W150.14838	2	12-Jul-01	14:28:42	KT	SC54	SC			M				632		1-45
Thetis	35	COEI	N70.55104	W150.14846	2	12-Jul-01	14:29:16	KT	NE56	NE	0		M		P		633		1-45
Thetis	36	COEI	N70.55111	W150.14883	2	12-Jul-01	14:30:20	KT	NE58	NE	0		L		P		634		1-46
Thetis	37	HUMAN	N70.55108	W150.15078	2	12-Jul-01	14:32:37	KT									635	ATV tracks	1-46
Thetis	38	COEI	N70.55117	W150.15100	2	12-Jul-01	14:33:30	KT									636	6 females flush off shore	1-46
Thetis	39	COEI	N70.55229	W150.15395	2	12-Jul-01	14:36:27	KT	SC60	SC			L				637	Tracks, sticks	1-46
Thetis	40	COEI	N70.55282	W150.15537	2	12-Jul-01	14:38:53	KT	NE62	NE	Y		L				638		1-46
Thetis	41	SUSC	N70.55353	W150.15885	2	12-Jul-01	14:43:47	KT									639	8 resting in group on shore	1-46
Thetis	42	LTDU	N70.55353	W150.15885	2	12-Jul-01	14:43:47	KT									640	31 resting in group on shore	1-46
Thetis	43	GLGU	N70.55379	W150.15921	2	12-Jul-01	14:44:45	KT	NE64	NE	2		U				641	Eggs started, ready to hatch	1-46
Thetis	44	COEI	N70.55396	W150.15954	2	12-Jul-01	14:46:28	KT	SC66	SC			L				642		1-46
Thetis	45	COEI	N70.55410	W150.16008	2	12-Jul-01	14:47:28	KT	NE68	NE	0		L		P		643	Down	1-46
Thetis	46	COEI	N70.55462	W150.16196	2	12-Jul-01	14:51:06	KT	SC70	SC			L				644		1-46
Thetis	47	COEI	N70.55482	W150.16196	2	12-Jul-01	14:51:06	KT	SC72	SC			M				645	Sticks, tracks	1-46

Table A-1. Continued

Island	Sighting ID	Species	Latitude	Longitude	GPS	Date	Time	Recorder	Nest_ID	Sight_Type	Eggs_Live	Drift	Veg	Pred	Pred_Egg	Pred_Type	Rec_No	Comments	Bk No
Thetis	48	SUSC	N70.55447	W150.17015	2	12-Jul-01	14:59:20	KT									646	58 swimming	1-48
Thetis	49	LTDU	N70.55447	W150.17015	2	12-Jul-01	14:59:20	KT									647	28 swimming	1-48
Thetis	50	SCAUP	N70.55447	W150.17015	2	12-Jul-01	14:59:20	KT									648	3 swimming	1-48
Thetis	51	PALO	N70.55447	W150.17015	2	12-Jul-01	14:59:20	KT									649	1 swimming	1-48
Thetis	52		N70.55467	W150.19255	2	12-Jul-01	16:25:00	KT									650	START	1-48
Thetis	53	COEI	N70.55579	W150.18792	2	12-Jul-01	16:32:21	KT	NE74	NE	Y	L					651	Sandwort, sticks, elder down	1-48
Thetis	54	GLGU	N70.55591	W150.18290	2	12-Jul-01	16:36:39	KT	NE76	NE	3	U	20%				652	down	1-48
Thetis	55	GLGU	N70.55596	W150.18038	2	12-Jul-01	16:40:10	KT	SC78	SC		L					653	Elder down	1-48
Thetis	56	POBE	N70.55562	W150.17969	2	12-Jul-01	16:42:18	KT									654	PBT	1-48
Thetis	57	COEI	N70.55573	W150.19771	2	12-Jul-01	17:10:17	KT	NE80	NE	2	M					655	Flushed	1-48
Thetis	58	HUMAN	N70.55486	W150.20376	2	12-Jul-01	17:18:31	KT									656	Human tracks	1-48
Thetis	59	COEI	N70.55475	W150.20387	2	12-Jul-01	17:19:38	KT	NE82	NE	Y	H					657		1-48
Thetis	60	COEI	N70.55389	W150.20698	2	12-Jul-01	17:25:37	KT	SC84	SC		M					658		1-48
Thetis	61	POBE	N70.55296	W150.20969	2	12-Jul-01	17:33:56	KT									659	PBT	1-48
Thetis	62		N70.55203	W150.21242	2	12-Jul-01	17:38:00	KT									660	OFF GPS # 2	1-48
Thetis	63		N70.55256	W150.20597	2	12-Jul-01	17:46:00	KT									661	ON GPS # 2	1-48
Thetis	64	COEI	N70.55416	W150.20413	2	12-Jul-01	17:50:44	KT	SC86	SC		L					662		1-48
Thetis	65	COEI	N70.55433	W150.20302	2	12-Jul-01	17:52:39	KT	SC88	SC		L					663		1-48
Thetis	66	POBE	N70.55457	W150.20200	2	12-Jul-01	17:54:05	KT									664	PBT	1-48
Thetis	67	COEI	N70.55472	W150.20022	2	12-Jul-01	17:56:04	KT	SC90	SC		L					665		1-48
Thetis	68	LTDU	N70.55453	W150.19744	2	12-Jul-01	17:59:30	KT									666	13 birds	1-48
Thetis	69	COEI	N70.55442	W150.19280	2	12-Jul-01	18:09:29	KT	SC92	SC		M					667		1-48
Thetis	70		N70.55465	W150.19257	2	12-Jul-01	18:11:58	KT									668	END	1-48
Narwhal	1		N70.38072	W147.47529	2	13-Jul-01	10:15:19	KT									669		1-48
Narwhal	2	COEI	N70.38458	W147.47306	2	13-Jul-01	10:30:35	KT	SC2	SC		L					670	177777	1-48
Narwhal	3	COEI	N70.38486	W147.47318	2	13-Jul-01	10:31:09	KT	SC4	SC		L					671		1-48
Narwhal	4	COEI	N70.38504	W147.47338	2	13-Jul-01	10:32:56	KT	SC6	SC		L					672		1-48
Narwhal	5	COEI	N70.38604	W147.47420	2	13-Jul-01	10:38:10	KT	NE8	NE	0	L		P			673	Down, no tracks	1-48
Narwhal	6	COEI	N70.38646	W147.47473	2	13-Jul-01	10:41:51	KT	SC10	SC		L					674		1-48
Narwhal	7	POBE	N70.38646	W147.47473	2	13-Jul-01	10:42:00	KT									675	PBT	1-48
Narwhal	8	COEI	N70.38662	W147.47545	2	13-Jul-01	10:44:02	KT	NE12	NE	Y	M					676		1-48
Narwhal	9	COEI	N70.38688	W147.47586	2	13-Jul-01	10:46:50	KT	NE14	NE	3	H					677		1-48
Narwhal	10	COEI	N70.38777	W147.47673	2	13-Jul-01	10:59:26	KT	SC16	SC		L					678		1-48
Narwhal	11	COEI	N70.38791	W147.47686	2	13-Jul-01	11:00:48	KT	SC18	SC		M					679		1-48
Narwhal	12	COEI	N70.38814	W147.47724	2	13-Jul-01	11:01:48	KT	SC20	SC		M					680	So far, no sign of ARFO	1-48
Narwhal	13	COEI	N70.39263	W147.48949	2	13-Jul-01	11:32:44	KT	NE22	NE	0	L		P			681	Down, COEI egg shell	1-48
Narwhal	14	COEI	N70.39273	W147.48917	2	13-Jul-01	12:21:09	KT									682	Finished banding a bird, moved on	1-48
Narwhal	15	COEI	N70.39261	W147.49205	2	13-Jul-01	12:24:09	KT	SC24	SC		L					683		1-48
Narwhal	16	COEI	N70.39379	W147.49587	2	13-Jul-01	12:29:58	KT	SC26	SC		M					684		1-48
Narwhal	17	COEI	N70.39401	W147.49618	2	13-Jul-01	12:31:18	KT	NE28	NE	3	L					685	Flushed, sand bowl, low down	1-48
Narwhal	18	COEI	N70.39448	W147.50466	2	13-Jul-01	12:39:28	KT	NE30	NE	Y	L					686		1-48
Narwhal	19	COEI	N70.39534	W147.51136	2	13-Jul-01	12:48:29	KT	SC32	SC		M					687		1-48
Narwhal	20	COEI	N70.39536	W147.51549	2	13-Jul-01	12:52:46	KT	NE34	NE	0	H		P			688	Down	1-48
Narwhal	21	COEI	N70.39537	W147.51529	2	13-Jul-01	12:53:41	KT	NE36	NE	0	H		P			689	No down	1-48
Narwhal	22	COEI	N70.39541	W147.51585	2	13-Jul-01	12:55:12	KT	NE38	NE	Y	M					690	Had bird on	1-48
Narwhal	23	COEI	N70.39541	W147.51585	2	13-Jul-01	12:56:12	KT	NE40	NE	Y	M					691		1-48
Narwhal	24	COEI	N70.39534	W147.51750	2	13-Jul-01	13:00:24	KT	SC42	SC		L					692		1-48
Narwhal	25	COEI	N70.39568	W147.51768	2	13-Jul-01	13:01:28	KT	NE44	NE	0	L		P			693	Fresh GLGU predation, no down, hen laying	1-48
Narwhal	26	COEI	N70.39575	W147.51967	2	13-Jul-01	13:11:48	KT	NE46	NE	3	L					694		1-48
Narwhal	27	COEI	N70.39575	W147.51967	2	13-Jul-01	13:11:48	KT	NE48	NE	2	L					695		1-48
Narwhal	28	COEI	N70.39610	W147.51998	2	13-Jul-01	13:24:30	KT	NE50	NE	0	M		P			696	Lots of down	1-49
Narwhal	29	COEI	N70.39610	W147.51998	2	13-Jul-01	13:24:30	KT	NE52	NE	0	L		P			697	Lots of down	1-49
Narwhal	30	COEI	N70.39611	W147.51999	2	13-Jul-01	13:25:48	KT	NE54	NE	0	H		P			698		1-49
Narwhal	31	COEI	N70.39613	W147.52046	2	13-Jul-01	13:27:22	KT	SC56	SC		M					699		1-49

Table A-1. Continued

Island	Sighting ID	Species	Latitude	Longitude	GPS	Date	Time	Recorder	Nest ID	Sight Type	Eggs	Live	Drift	Veg	Pred Egg	Pred Type	Rec No	Comments	Blk No
Narwhal	32	COEI	N70.39620	W147.52017	2	13-Jul-01	13:28:34	KT	NE58	NE	0		L		P	U	700	In box, same as previous	1-49
Narwhal	33	COEI	N70.39615	W147.51939	2	13-Jul-01	13:32:39	KT	NE60	NE	0		L		P	U	701	In generator building	1-49
Narwhal	34	COEI	N70.39615	W147.51939	2	13-Jul-01	13:32:39	KT	NE62	NE	0		L		P	U	702	In generator building	1-49
Narwhal	35	COEI	N70.39616	W147.51941	2	13-Jul-01	13:33:00	KT	NE64	NE	0		L		P	U	703	Antenna building of generator building	1-49
Narwhal	36	COEI	N70.39615	W147.51845	2	13-Jul-01	13:35:20	KT	NE66	NE	0		L		P	U	704	Down	1-49
Narwhal	37	COEI	N70.39580	W147.52120	2	13-Jul-01	13:50:05	KT	NE68	NE	Y		H				705	Could not fully survey area due to the hen on this nest	1-49
Narwhal	38	COEI	N70.39588	W147.52227	2	13-Jul-01	13:51:46	KT	SC70	SC			L				706	Tiny bit of down	1-49
Narwhal	39	COEI	N70.39566	W147.52240	2	13-Jul-01	13:52:10	KT	NE72	NE	0		H		P	U	707		1-49
Narwhal	40	COEI	N70.39557	W147.52319	2	13-Jul-01	13:54:28	KT	SC74	SC			L				708		1-49
Narwhal	41	COEI	N70.39530	W147.52415	2	13-Jul-01	13:55:40	KT	SC76	SC			L				709		1-49
Narwhal	42	POBE	N70.39528	W147.52430	2	13-Jul-01	13:56:51	KT	SC78	SC			L				710	70 m North, fresh PBT, single animal heading south	1-49
Narwhal	43	COEI	N70.39525	W147.52528	2	13-Jul-01	13:58:14	KT	SC80	SC			N				711	Sticks	1-49
Narwhal	44	COEI	N70.39520	W147.52565	2	13-Jul-01	13:59:06	KT	SC82	SC			L				712		1-49
Narwhal	45	COEI	N70.39520	W147.52565	2	13-Jul-01	13:59:06	KT	SC82	SC			L				713		1-49
Narwhal	46	POBE	N70.39535	W147.52595	2	13-Jul-01	13:59:58	KT	SC84	SC			L				714	PB bed	1-49
Narwhal	47	COEI	N70.39534	W147.52624	2	13-Jul-01	14:00:18	KT	SC86	SC			L				715		1-49
Narwhal	48	COEI	N70.39546	W147.52707	2	13-Jul-01	14:01:55	KT	SC88	SC			L				716		1-49
Narwhal	49	COEI	N70.39552	W147.52722	2	13-Jul-01	14:02:14	KT	SC90	SC			L				717		1-49
Narwhal	50	COEI	N70.39561	W147.52749	2	13-Jul-01	14:02:50	KT	SC92	SC			L				718		1-49
Narwhal	51	COEI	N70.39575	W147.52824	2	13-Jul-01	14:03:59	KT	NE92	NE	0		M		P	U	719	Lots of down	1-49
Narwhal	52	COEI	N70.39573	W147.52909	2	13-Jul-01	14:05:33	KT	NE94	NE	2		M		P	U	720		1-49
Narwhal	53	COEI	N70.39573	W147.52909	2	13-Jul-01	14:05:33	KT	NE96	NE	0		H		P	U	721	20m from NE94	1-49
Narwhal	54	COEI	N70.39575	W147.52943	2	13-Jul-01	14:07:00	KT	SC98	SC			L				722		1-49
Narwhal	55	COEI	N70.39615	W147.53062	2	13-Jul-01	14:08:34	KT	NE100	NE	0		L		P	U	723		1-49
Narwhal	56	COEI	N70.39617	W147.53020	2	13-Jul-01	14:09:27	KT	SC102	SC			M				724		1-49
Narwhal	57	COEI	N70.39616	W147.53019	2	13-Jul-01	14:09:52	KT	NE104	NE	0		M		P	U	725		1-49
Narwhal	58	COEI	N70.39621	W147.53016	2	13-Jul-01	14:10:27	KT	NE106	NE	0		M		P	U	726		1-49
Narwhal	59	COEI	N70.39626	W147.53016	2	13-Jul-01	14:11:19	KT	NE108	NE	0		M		P	U	727		1-50
Narwhal	60	COEI	N70.39637	W147.53003	2	13-Jul-01	14:11:59	KT	SC110	SC			L				728	Winter plumaged, dead	1-50
Narwhal	61	ARFO	N70.39620	W147.53413	2	13-Jul-01	14:16:37	KT	SC112	SC			L				729	ARFO	1-50
Narwhal	62	COEI	N70.39643	W147.53543	2	13-Jul-01	14:19:10	KT	SC114	SC			L				730		1-50
Narwhal	63	COEI	N70.39665	W147.53716	2	13-Jul-01	14:21:56	KT	NE116	NE	0		L		P	U	731		1-50
Narwhal	64	COEI	N70.39689	W147.53761	2	13-Jul-01	14:22:55	KT	NE118	NE	0		L		P	U	732	70 m North	1-50
Narwhal	65	COEI	N70.39689	W147.53761	2	13-Jul-01	14:22:55	KT	NE118	NE	0		L		P	U	733		1-50
Narwhal	66	COEI	N70.39699	W147.53798	2	13-Jul-01	14:25:42	KT	SC120	SC			L				734	50 m North	1-50
Narwhal	67	COEI	N70.39699	W147.53798	2	13-Jul-01	14:25:42	KT	SC122	SC			L				735	50 m North	1-50
Narwhal	68	COEI	N70.39699	W147.53798	2	13-Jul-01	14:25:42	KT	SC124	SC			L				736	50 m North	1-50
Narwhal	69	COEI	N70.39699	W147.53798	2	13-Jul-01	14:25:42	KT	NE126	NE	2		M				737	Flushed	1-50
Narwhal	70	COEI	N70.39699	W147.53798	2	13-Jul-01	14:25:42	KT	SC128	SC			L				738		1-50
Narwhal	71	COEI	N70.39699	W147.53798	2	13-Jul-01	14:25:42	KT	SC130	SC			L				739		1-50
Narwhal	72	COEI	N70.39699	W147.53798	2	13-Jul-01	14:25:42	KT	SC132	SC			L				740		1-50
Narwhal	73	COEI	N70.39699	W147.53798	2	13-Jul-01	14:25:42	KT	SC134	SC			L				741		1-50
Narwhal	74	COEI	N70.39698	W147.53784	2	13-Jul-01	14:29:56	KT	SC136	SC			L				742		1-50
Narwhal	75	COEI	N70.39698	W147.53784	2	13-Jul-01	14:29:56	KT	NE138	NE	0		L		P	U	743		1-50
Narwhal	76	COEI	N70.39698	W147.53784	2	13-Jul-01	14:34:00	KT	NE140	NE	2		L				744		1-50
Narwhal	77	COEI	N70.39698	W147.53784	2	13-Jul-01	14:34:00	KT	NE142	NE	4		L				745	Caught, banded	1-50
Narwhal	78	COEI	N70.39725	W147.54160	5	13-Jul-01	14:35:00	KT	NE144	NE	0		L		P	U	746	Switched to GPS 5	1-50
Narwhal	79	COEI	N70.39779	W147.54242	5	13-Jul-01	14:42:01	KT	NE146	NE	0		L		P	U	747		1-50
Narwhal	80	COEI	N70.39779	W147.54242	5	13-Jul-01	14:42:01	KT	SC148	SC			L				748		1-50
Narwhal	81	COEI	N70.39800	W147.54234	5	13-Jul-01	14:43:15	KT	SC148	SC			L				749		1-50
Narwhal	82	COEI	N70.39773	W147.54204	5	13-Jul-01	14:48:33	KT									750	Stopped	1-50
Narwhal	83	N70.39770	W147.54261		5	13-Jul-01	16:07:00	KT									751	END	1-50

Table A-1. Continued

Island	Sighting ID	Species	Latitude	Longitude	GPS	Date	Time	Recorder	Nest ID	Sight Type	Eggs	Live	Diff	Veg	Pred	Pred Egg	Pred Type	Rec No	Comments	Bk No
Jeanette	1		N70.35933	W147.41392	5	13-Jul-01	16:42:59	KT										752	START	1-51
Jeanette	2	GLGU	N70.35903	W147.41084	5	13-Jul-01	16:50:52	KT	NE2	NE		H	U					753	2 chicks in nest, banded	1-51
Jeanette	3	COEI	N70.35891	W147.40984	5	13-Jul-01	16:53:28	KT	SC4	SC		L	L					754		1-51
Jeanette	4	COEI	N70.35891	W147.40982	5	13-Jul-01	16:54:02	KT	NE6	NE		Y	M					755		1-51
Jeanette	5	LTDU	N70.35847	W147.40832	5	13-Jul-01	16:55:58	KT										756	30 swimming	1-51
Jeanette	6	COEI	N70.36081	W147.41998	5	13-Jul-01	17:05:06	KT	SC8	SC		L	L					757		1-51
Jeanette	7	COEI	N70.35947	W147.41423	5	13-Jul-01	17:20:27	KT										758	END	1-51
Belvedere	1		N70.29105	W146.96072	2	14-Jul-01	11:58:00	KT										759	Start	1-52
Belvedere	2	SPEI			2	14-Jul-01	11:30:00	KT										760	Pair at east end of island	1-52
Belvedere	3	SAGU	N70.29097	W146.96106	2	14-Jul-01	11:59:27	KT										761	1 fly	1-52
Belvedere	4	ARFO	N70.29110	W146.96149	2	14-Jul-01	12:00:00	KT										762	Tracks	1-52
Belvedere	5	ARFO	N70.29162	W146.96141	2	14-Jul-01	12:04:55	KT										763	Tracks	1-52
Belvedere	6	GLGU	N70.29253	W146.96467	2	14-Jul-01	12:09:49	KT	SC2	SC		M	M					764		1-52
Belvedere	7	LTRA	N70.29253	W146.96467	2	14-Jul-01	12:09:49	KT										765	2 fly	1-52
Belvedere	8	COEI	N70.29253	W146.96467	2	14-Jul-01	12:09:52	KT	SC4	SC		M	M					766	Sand, twigs	1-52
Belvedere	9	COEI	N70.29300	W146.96854	2	14-Jul-01	12:15:00	KT	NE2	NE		0	M		P	ARFO	767	Fox, one prediged egg	1-52	
Belvedere	10	ARTE	N70.29300	W146.96854	2	14-Jul-01	12:15:00	KT										768	Tracks	1-52
Belvedere	11	COEI	N70.29361	W146.97303	2	14-Jul-01	12:22:57	KT	SC6	SC		L	L					769	Elder and fox tracks	1-52
Belvedere	12	COEI	N70.29364	W146.97322	2	14-Jul-01	12:23:53	KT	NE4	NE		0	L		P	ARFO	770	Fox tracks	1-52	
Belvedere	13	COEI	N70.29479	W146.97878	2	14-Jul-01	12:31:33	KT	SC8	SC		H	H					771	Sticks, fox tracks	1-52
Belvedere	14	COEI	N70.29515	W146.98025	2	14-Jul-01	12:33:32	KT	SC10	SC		H	H					772	Seaweed	1-52
Belvedere	15	ARFO	N70.29515	W146.98025	2	14-Jul-01	12:33:32	KT										773	Fox snoozing area	1-52
Belvedere	18	MUSK	N70.29522	W146.98056	2	14-Jul-01	12:34:27	KT										774	Tracks	1-52
Belvedere	17	COEI	N70.29553	W146.98150	2	14-Jul-01	12:36:28	KT	SC12	SC		H	H					775	Sticks, tracks	1-52
Belvedere	18	COEI	N70.29813	W146.98370	2	14-Jul-01	12:40:55	KT	SC14	SC		M	M					776	Sticks, tracks	1-52
Belvedere	19	COEI	N70.29647	W146.98427	2	14-Jul-01	12:43:06	KT	NE6	NE		0	H		P	U	777	Down	1-52	
Belvedere	20	COEI	N70.29663	W146.98478	2	14-Jul-01	12:44:26	KT	NE8	NE		0	H		P	U	778	Down	1-52	
Belvedere	21	ARTE	N70.29685	W146.98571	2	14-Jul-01	12:46:26	KT	SC16	SC		L	L					779	Blind present	1-52
Belvedere	22	COEI	N70.29686	W146.98585	2	14-Jul-01	12:47:22	KT	SC18	SC		M	M					780	Sticks, tracks	1-52
Belvedere	23	COEI	N70.29709	W146.98703	2	14-Jul-01	12:49:03	KT	SC20	SC		L	L					781	Sticks, tracks	1-52
Belvedere	24	COEI	N70.29715	W146.98805	2	14-Jul-01	12:50:10	KT	SC22	SC		L	L					782		1-52
Belvedere	25	COEI	N70.29748	W146.98784	2	14-Jul-01	12:52:03	KT	NE10	NE		0	H		P	U	783	Lots of down	1-52	
Belvedere	26	COEI	N70.29798	W146.98945	2	14-Jul-01	12:55:59	KT	NE12	NE		0	H		P	U	784	Down	1-52	
Belvedere	27	COEI	N70.29778	W146.98973	2	14-Jul-01	12:57:27	KT	NE14	NE		0	M		P	ARFO	785	Tracks, fox predation	1-52	
Belvedere	28	COEI	N70.29779	W146.98987	2	14-Jul-01	12:58:06	KT	NE16	NE		0	M		P	U	786		1-52	
Belvedere	29	COEI	N70.29799	W146.99084	2	14-Jul-01	12:59:40	KT	NE18	NE		0	L		P	U	787		1-52	
Belvedere	30	COEI	N70.29787	W146.99070	2	14-Jul-01	13:00:01	KT	NE20	NE		0	H		P	ARFO	788	Fox tracks	1-52	
Belvedere	31	ARFO	N70.29868	W146.99247	2	14-Jul-01	13:02:40	KT										789	Fox snoozing area	1-52
Belvedere	32	POBE	N70.29909	W146.99327	2	14-Jul-01	13:04:42	KT	NE22	NE		0	M		P	ARFO	790	Bed	1-53	
Belvedere	33	COEI	N70.29912	W146.99332	2	14-Jul-01	13:05:21	KT	NE24	NE		0	H		P	U	791	Elder and fox tracks	1-53	
Belvedere	34	COEI	N70.29955	W146.99432	2	14-Jul-01	13:08:08	KT	NE24	NE		0	H		P	U	792		1-53	
Belvedere	35	COEI	N70.29969	W146.99438	2	14-Jul-01	13:09:37	KT	NE28	NE		0	L		P	U	793		1-53	
Belvedere	38	GLGU	N70.29932	W146.99494	2	14-Jul-01	13:11:10	KT	NE28	NE		0	L		P	U	794	Has down	1-53	
Belvedere	37	GLGU	N70.30051	W146.99734	2	14-Jul-01	13:17:08	KT	NE30	NE		0	L		P	ARFO	795	Predated, fox tracks	1-53	
Belvedere	38	GLGU	N70.30052	W146.99799	2	14-Jul-01	13:18:38	KT	NE32	NE		0	L		P	U	796	Predated	1-53	
Pole	1	POBE	N70.30139	W147.00205	2	14-Jul-01	13:23:42	KT	NE40	NE		0	M		P	U	797	Tracks	1-53	
Pole	2	COEI	N70.30275	W147.00586	2	14-Jul-01	13:30:58	KT	NE34	NE		0	L		P	ARFO	798	Fox tracks	1-53	
Pole	3	COEI	N70.30398	W147.01096	2	14-Jul-01	13:38:49	KT	NE36	NE		0	M		P	U	799		1-53	
Pole	4	COEI	N70.30397	W147.01091	2	14-Jul-01	13:37:07	KT	NE38	NE		0	M		P	U	800		1-53	
Pole	5	GLGU	N70.30402	W147.01114	2	14-Jul-01	13:38:00	KT	NE40	NE		0	M		P	U	801		1-53	
Pole	6	COEI	N70.30405	W147.01153	2	14-Jul-01	13:38:47	KT	NE42	NE		0	L		P	U	802	Predated: ????	1-53	
Pole	7	COEI	N70.30419	W147.01207	2	14-Jul-01	13:39:50	KT	NE44	NE		0	M		P	U	803	??	1-53	
Pole	8	COEI	N70.30435	W147.01232	2	14-Jul-01	13:40:57	KT	NE48	NE		0	H		P	U	804	??	1-53	
Pole	9	COEI	N70.30435	W147.01232	2	14-Jul-01	13:40:57	KT	NE48	NE		0	H		P	U	805		1-53	
Pole	10	COEI	N70.30473	W147.01437	2	14-Jul-01	13:43:04	KT	SC24	SC		L	L					806		1-53
Pole	11	COEI	N70.30473	W147.01469	2	14-Jul-01	13:43:40	KT	SC26	SC		L	L					807		1-53
Pole	12	COEI	N70.30459	W147.01511	2	14-Jul-01	13:44:00	KT	SC28	SC		L	L					808		1-53

Table A-1. Continued

Island Pole	Sighting ID	Species	Latitude	Longitude	GPS	Date	Time	Recorder	Nest ID	Sight Type	Eggs	Live	Drift	Vsg	Pred	Pred Egg	Pred Type	Rec No	Comments	Bk No
	13	COEI	N70.30459	W147.01511	2	14-Jul-01	13:44:00	KT	SC30	SC			L					809		1-53
Pole	14	COEI	N70.30480	W147.01528	2	14-Jul-01	13:45:03	KT	NE50	NE	0		N		P		U	810	GLU mound; lungwort, COEI used-pred.	1-53
Pole	15	COEI	N70.30470	W147.01534	2	14-Jul-01	13:50:22	KT	SC32	SC	0		N		P		U	811		1-53
Pole	16	COEI	N70.30513	W147.01647	2	14-Jul-01	13:51:46	KT	NE52	NE	0		L		P		U	812		1-53
Pole	17	COEI	N70.30513	W147.01647	2	14-Jul-01	13:51:46	KT	NE54	NE	0		L		P		U	813		1-53
Pole	18	COEI	N70.30513	W147.01647	2	14-Jul-01	13:54:16	KT	SC34	SC			M					814		1-53
Pole	19	COEI	N70.30546	W147.01796	2	14-Jul-01	13:58:00	KT	SC36	SC			M					815	Fox tracks	1-53
Pole	20	COEI	N70.30545	W147.01794	2	14-Jul-01	13:58:20	KT	NE56	NE	0		H		P		ARFO	816	Down, fox tracks	1-53
Pole	21	COEI	N70.30539	W147.01968	2	14-Jul-01	13:58:38	KT	NE58	NE	0		M		P		ARFO	817	Down, fox tracks	1-53
Pole	22	COEI	N70.30539	W147.01974	2	14-Jul-01	13:58:59	KT	NE60	NE	0		M		P		ARFO	818	Down, fox tracks	1-53
Pole	23	COEI	N70.30535	W147.02011	2	14-Jul-01	13:59:58	KT	NE62	NE	0		L		P		ARFO	819	Down, fox tracks	1-53
Pole	24	COEI	N70.30535	W147.02011	2	14-Jul-01	13:59:58	KT	NE64	NE	0		L		P		ARFO	820	Down, fox tracks	1-53
Pole	25	COEI	N70.30553	W147.02111	2	14-Jul-01	14:03:20	KT	SC38	SC			L					821		1-54
Pole	26	COEI	N70.30557	W147.02152	2	14-Jul-01	14:03:40	KT	SC40	SC			M					822		1-54
Pole	27	COEI	N70.30551	W147.02240	2	14-Jul-01	14:04:28	KT	NE66	NE	0		L		P		U	823	Predated egg	1-54
Pole	28	COEI	N70.30557	W147.02234	2	14-Jul-01	14:05:48	KT	NE68	NE	0		L		P		U	824		1-54
Pole	29	COEI	N70.30537	W147.02234	2	14-Jul-01	14:06:00	KT	SC42	SC			L					825		1-54
Pole	30	COEI	N70.30531	W147.02363	2	14-Jul-01	14:07:06	KT	SC44	SC			M					826		1-54
Pole	31	COEI	N70.30511	W147.02293	2	14-Jul-01	14:08:10	KT	SC46	SC			M					827		1-54
Pole	32	SAGU	N70.30499	W147.02314	2	14-Jul-01	14:09:10	KT					M					828	4 SAGU, Pond	1-54
Pole	33	COEI	N70.30506	W147.02376	2	14-Jul-01	14:09:46	KT	NE70	NE	0		M		P		ARFO	829	Fox tracks	1-54
Pole	34	COEI	N70.30507	W147.02379	2	14-Jul-01	14:10:00	KT	NE72	NE	0		M		P		U	830	Down	1-54
Pole	35	COEI	N70.30499	W147.02410	2	14-Jul-01	14:10:32	KT	NE74	NE	0		H		P		U	831	Slicks	1-54
Pole	36	COEI	N70.30501	W147.02440	2	14-Jul-01	14:11:00	KT	NE76	NE	0		M		P		U	832	Down, sticks	1-54
Pole	37	COEI	N70.30499	W147.02410	2	14-Jul-01	14:12:29	KT	NE78	NE	0		L	V	P		U	833	Down	1-54
Pole	38	COEI	N70.30488	W147.02498	2	14-Jul-01	14:12:29	KT	SC48	SC			L					834	Slicks, lungwort	1-54
Pole	39	COEI	N70.30491	W147.02514	2	14-Jul-01	14:12:00	KT	SC50	SC			L					835	Slicks	1-54
Pole	40	COEI	N70.30490	W147.02538	2	14-Jul-01	14:13:09	KT	NE80	NE	0		L		P		U	836		1-54
Pole	41	COEI	N70.30490	W147.02538	2	14-Jul-01	14:13:09	KT	NE82	NE	0		M		P		U	837		1-54
Pole	42	COEI	N70.30487	W147.02523	2	14-Jul-01	14:13:00	KT	NE84	NE	0		L		P		U	838	Just N of pond	1-54
Pole	43	COEI	N70.30487	W147.02523	2	14-Jul-01	14:13:00	KT	NE86	NE	0		L		P		U	839		1-54
Pole	44	ARFO	N70.30498	W147.02592	2	14-Jul-01	14:14:49	KT					L					840	Sit	1-54
Pole	45	COEI	N70.30487	W147.02827	2	14-Jul-01	14:16:10	KT	SC52	SC			L					841		1-54
Pole	46	COEI	N70.30468	W147.02688	2	14-Jul-01	14:17:00	KT	NE88	NE	0		M		P		U	842		1-54
Pole	47	COEI	N70.30460	W147.02666	2	14-Jul-01	14:17:50	KT	NE90	NE	0		L		P		U	843	Former gull nest	1-54
Pole	48	COEI	N70.30483	W147.02777	2	14-Jul-01	14:19:21	KT	NE92	NE	0		L		P		U	844		1-54
Pole	49	COEI	N70.30487	W147.02777	2	14-Jul-01	14:19:21	KT	NE94	NE	0		L		P		U	845		1-54
Pole	50	COEI	N70.30489	W147.02806	2	14-Jul-01	14:19:47	KT	NE96	NE	0		L		P		U	846		1-54
Pole	51	COEI	N70.30493	W147.02818	2	14-Jul-01	14:20:00	KT	NE98	NE	0		L		P		U	847		1-54
Pole	52	COEI	N70.30505	W147.02791	2	14-Jul-01	14:20:47	KT	NE100	NE	0		M		P		U	848		1-54
Pole	53	COEI	N70.30508	W147.02816	2	14-Jul-01	14:21:21	KT	NE102	NE	0		L		P		U	849		1-54
Pole	54	COEI	N70.30503	W147.02927	2	14-Jul-01	14:23:31	KT	NE104	NE	0		M		P		U	850		1-54
Pole	55	COEI	N70.30498	W147.03013	2	14-Jul-01	14:24:46	LN	NE106	NE	0		M		P		U	851		1-55
Pole	56	COEI	N70.30498	W147.03013	2	14-Jul-01	14:24:50	LN	SC54	SC			L					852		1-55
Pole	57	COEI	N70.30465	W147.03274	2	14-Jul-01	14:27:50	LN	NE108	NE	0		M		P		U	853		1-55
Pole	58	COEI	N70.30460	W147.03348	2	14-Jul-01	14:28:50	LN	NE110	NE	0		L		P		U	854	1 shell	1-55
Pole	59	COEI	N70.30447	W147.03512	2	14-Jul-01	14:32:39	LN	NE112	NE	0		M		P		U	855		1-55
Pole	60	COEI	N70.30443	W147.03548	2	14-Jul-01	14:34:59	LN	NE114	NE	0		H		P		U	856		1-55
Pole	61	COEI	N70.30441	W147.03559	2	14-Jul-01	14:35:38	LN	NE116	NE	0		H		P		U	857		1-55
Pole	62	COEI	N70.30436	W147.03651	2	14-Jul-01	14:36:14	LN	SC118	SC			M					858		1-55
Pole	63	COEI	N70.30438	W147.03654	2	14-Jul-01	14:36:35	LN	NE120	NE	0		H		P		U	859	2 males, 5 females about 200m ahead	1-55
Pole	64	COEI	N70.30436	W147.03756	2	14-Jul-01	14:38:00	LN										860		1-55
Pole	65	COEI	N70.30437	W147.03759	2	14-Jul-01	14:38:15	LN	NE122	NE	0		H		P		U	861		1-55
Pole	66	COEI	N70.30438	W147.03764	2	14-Jul-01	14:39:00	LN	NE124	NE	0		H		P		U	862		1-55
Pole	67	COEI	N70.30446	W147.04004	2	14-Jul-01	14:40:35	LN	NE128	NE	0		M		P		U	863		1-55
Pole	68	COEI	N70.30444	W147.04805	2	14-Jul-01	14:45:44	LN	SC56	SC			M					864	Log	1-55

Table A-1. Continued

Island	Sighting ID	Species	Latitude	Longitude	GPS	Date	Time	Recorder	Nest ID	Sight Type	Eggs	Live	Drift	Veg	Prod	Prod Egg	Pred Type	Rec No	Comments	Bk No
Pole	69	LTDU	N70.30453	W147.04886	2	14-Jul-01	14:46:40	LN										865	14 sum on beach	1-55
Pole	70	LTDU	N70.30522	W147.05739	2	14-Jul-01	14:54:09	LN										866	14 swim	1-55
Pole	71	COEI	N70.30522	W147.05739	2	14-Jul-01	14:54:09	LN										867	4 pair + 5 females swim--	1-55
Pole	72	COEI	N70.30553	W147.06213	2	14-Jul-01	14:57:58	LN	SC58	SC		L					868	were on beach	1-55	
Pole	73	COEI	N70.30727	W147.07504	2	14-Jul-01	15:20:28	LN	SC60	SC		L					869		1-55	
Pole	74	COEI	N70.30758	W147.07758	2	14-Jul-01	15:22:28	LN	SC62	SC		L					870		1-55	
Pole	75	COEI	N70.30744	W147.07859	2	14-Jul-01	15:23:43	LN	SC64	SC		M					871		1-55	
Pole	76	COEI	N70.30751	W147.07900	2	14-Jul-01	15:24:52	LN	NE128	NE	0	M			P		872	Slicks down tracks	1-55	
Pole	77	LTDU	N70.30760	W147.08062	2	14-Jul-01	15:26:08	LN									873	35 swim	1-55	
Pole	78	COEI	N70.30779	W147.08481	2	14-Jul-01	15:29:15	LN	SC66	SC		M					874		1-55	
Pole	79	COEI	N70.30808	W147.08753	2	14-Jul-01	15:32:00	LN									875	9 females, no nest	1-55	
Pole	80	COEI	N70.30809	W147.08857	2	14-Jul-01	15:33:19	LN	NE130	NE	0	M			P		876	discs	1-55	
Pole	81	COEI	N70.30812	W147.08918	2	14-Jul-01	15:34:11	LN	SC68	SC		L					877		1-55	
Pole	82	ARTE	N70.30819	W147.09143	2	14-Jul-01	15:37:42	LN	NE132	NE	Y	H					878	to south	1-55	
Pole	83	COEI	N70.30819	W147.09142	2	14-Jul-01	15:38:23	LN	NE134	NE	0	H			P		879		1-55	
Pole	84	COEI	N70.30819	W147.09140	2	14-Jul-01	15:38:40	LN	NE136	NE	0	M			P		880		1-55	
Pole	85	COEI	N70.30837	W147.09180	2	14-Jul-01	15:39:35	LN	SC70	SC		L					881		1-55	
Pole	86	ARTE	N70.30839	W147.09230	2	14-Jul-01	15:40:35	LN									882	11 mob	1-56	
Pole	87	COEI	N70.30844	W147.09275	2	14-Jul-01	15:41:50	LN	NE140	NE	0	L			P		883	Pieces of 1 egg	1-56	
Pole	88	COEI	N70.30857	W147.09515	2	14-Jul-01	15:43:49	LN	NE142	NE	0	L			P		884		1-56	
Pole	89	COEI	N70.30874	W147.09736	2	14-Jul-01	15:46:41	LN	SC72	SC		L					885		1-56	
Pole	90	COEI	N70.30882	W147.09816	2	14-Jul-01	15:47:35	LN	SC74	SC		M					886		1-56	
Pole	91	COEI	N70.30887	W147.09923	2	14-Jul-01	15:48:56	LN	SC76	SC		H					887		1-56	
Pole	92	COEI	N70.30887	W147.10289	2	14-Jul-01	15:51:38	LN	SC78	SC		M					888		1-56	
Pole	93	COEI	N70.30887	W147.10559	2	14-Jul-01	15:54:00	LN	SC80	SC		L					889		1-56	
Pole	94	COEI	N70.30883	W147.10715	2	14-Jul-01	15:55:19	LN	SC82	SC		L					890		1-56	
Pole	95	COEI	N70.30886	W147.10922	2	14-Jul-01	15:57:54	LN	NE144	NE	0	L			P		891		1-56	
Pole	96	GLGU	N70.30886	W147.11206	2	14-Jul-01	16:00:32	LN	NE146	NE	0	N			P		892		1-56	
Pole	97	COEI	N70.30891	W147.11275	2	14-Jul-01	16:01:28	LN	SC84	SC		L					893		1-56	
Pole	98	COEI	N70.30893	W147.11323	2	14-Jul-01	16:02:01	LN	SC86	SC		L					894		1-56	
Pole	99	COEI	N70.30895	W147.11344	2	14-Jul-01	16:02:33	LN	SC88	SC		L					895	rocks	1-56	
Pole	100	COEI	N70.30873	W147.11519	2	14-Jul-01	16:03:55	LN	NE148	NE	0	L			P		896		1-56	
Pole	101	COEI	N70.30888	W147.11531	2	14-Jul-01	16:04:24	LN	NE150	NE	0	L			P		897		1-56	
Pole	102	COEI	N70.30807	W147.11605	2	14-Jul-01	16:06:26	LN	SC90	SC		L					898		1-56	
Pole	103	COEI	N70.30807	W147.11605	2	14-Jul-01	16:08:26	LN	SC92	SC		L					899		1-56	
Pole	104	COEI	N70.30797	W147.11611	2	14-Jul-01	16:07:12	LN	NE152	NE	0	M			P		900	Lots of down	1-56	
Pole	105	COEI	N70.30733	W147.11408	2	14-Jul-01	16:12:50	LN	NE154	NE	0	L			P		901		1-56	
Pole	106					14-Jul-01	16:19:22	LN										902	GPS 2 full, switching to GPS 5	1-56
Pole	107	COEI	N70.30846	W147.10685	5	14-Jul-01	16:29:56	LN	SC94	SC		L					903		1-56	
Pole	108	COEI	N70.30841	W147.10534	5	14-Jul-01	16:31:04	LN	NE156	NE	0	L			P		904		1-56	
Pole	109	COEI	N70.30836	W147.10421	5	14-Jul-01	16:32:00	LN	SC96	SC		L					905		1-56	
Pole	110	ARTE	N70.30653	W147.09870	5	14-Jul-01	16:38:59	LN	SC98	SC		L					906		1-56	
Pole	111	ARTE	N70.30653	W147.09870	5	14-Jul-01	16:38:59	LN	SC100	SC		L					907		1-56	
Pole	112	ARTE	N70.30653	W147.09870	5	14-Jul-01	16:38:59	LN	SC102	SC		L					908		1-56	
Pole	113	COEI	N70.30621	W147.09795	5	14-Jul-01	16:41:00	LN	NE158	NE	0	L			P		909		1-56	
Pole	114	ARTE	N70.30608	W147.09773	5	14-Jul-01	16:41:39	LN	SC104	SC		L					910	tracks	1-56	
Pole	115	COEI	N70.30495	W147.09619	5	14-Jul-01	16:44:14	LN	NE160	NE	0	L			P		911		1-56	
Pole	116	COEI	N70.30493	W147.09616	5	14-Jul-01	16:45:37	LN	NE162	NE	0	L			P		912		1-57	
Pole	117	COEI	N70.30503	W147.09527	5	14-Jul-01	16:46:36	LN									913	17 males, 10 females	1-57	
Pole	118	COEI	N70.30541	W147.09383	5	14-Jul-01	16:48:06	LN	NE164	NE	0	L			P		914		1-57	
Pole	119	COEI	N70.30541	W147.09383	5	14-Jul-01	16:48:06	LN	NE166	NE	0	M			P		915		1-57	
Pole	120	COEI	N70.30541	W147.09380	5	14-Jul-01	16:48:15	LN	SC106	SC		L					916		1-57	
Pole	121	COEI	N70.30568	W147.09338	5	14-Jul-01	16:49:30	LN	SC108	SC		L					917		1-57	
Pole	122	COEI	N70.30568	W147.09338	5	14-Jul-01	16:49:30	LN	NE168	NE	0	M			P		918		1-57	
Pole	123	COEI	N70.30568	W147.09338	5	14-Jul-01	16:49:30	LN	SC110	SC		L					919		1-57	
Pole	124	COEI	N70.30568	W147.09338	5	14-Jul-01	16:49:30	LN	SC112	SC		L					920		1-57	

Table A-1. Continued

Island	Sighting ID	Species	Latitude	Longitude	GPS	Date	Time	Recorder	Nest ID	Sight Type	Eggs	Live	Drift	Veg	Pred	Pred Egg	Pred Type	Rec No	Comments	Bk No
Lion Point	36	COEI	N70.24322	W147.26429	5	14-Jul-01	18:19:37	LN	NE40	NE	0	0	M				U	964		1-59
Lion Point	37	COEI	N70.24329	W147.26497	5	14-Jul-01	18:20:28	LN	SC28	SC			M					965		1-59
Lion Point	38	COEI	N70.24331	W147.26506	5	14-Jul-01	18:20:59	LN	SC28	SC			M					966		1-59
Lion Point	39	COEI	N70.24331	W147.26508	5	14-Jul-01	18:20:59	LN	SC30	SC			M					967		1-59
Lion Point	40	GLGU	N70.24323	W147.26522	5	14-Jul-01	18:21:51	LN	NE42	NE	0	0	H		U			968	Lots of junk around	1-59
Lion Point	41	COEI	N70.24330	W147.26537	5	14-Jul-01	18:22:26	LN	NE44	NE	0	0	M		P			969		1-59
Lion Point	42	COEI	N70.24330	W147.26537	5	14-Jul-01	18:22:26	LN	SC32	SC			L					970		1-59
Lion Point	43	COEI	N70.24343	W147.26600	5	14-Jul-01	18:23:13	LN	NE46	NE	0	0	M		P			971		1-59
Lion Point	44	COEI	N70.24345	W147.26606	5	14-Jul-01	18:23:30	LN	NE48	NE	0	0	M		P			972		1-59
Lion Point	45	COEI	N70.24345	W147.26611	5	14-Jul-01	18:23:53	LN	NE50	NE	0	0	L		U			973		1-59
Lion Point	46	COEI	N70.24343	W147.26614	5	14-Jul-01	18:24:13	LN	NE52	NE	0	0	M		P			974		1-59
Lion Point	47	COEI	N70.24347	W147.26648	5	14-Jul-01	18:24:42	LN	NE54	NE	0	0	M		P	2 shells		975		1-59
Lion Point	48	GLGU	N70.24347	W147.26662	5	14-Jul-01	18:25:45	LN	NE58	NE	3	3	H		P			976	Lots of stuff	1-59
Lion Point	49	COEI	N70.24338	W147.26679	5	14-Jul-01	18:26:14	LN	NE58	NE	3	3	H		P			977		1-59
Lion Point	50	COEI	N70.24339	W147.26689	5	14-Jul-01	18:26:51	LN	SC34	SC			L					978		1-59
Lion Point	51	COEI	N70.24339	W147.26689	5	14-Jul-01	18:26:51	LN	NE60	NE	Y	Y	H					979		1-59
Lion Point	52	COEI	N70.24339	W147.26729	5	14-Jul-01	18:27:35	LN	NE62	NE	0	0	M		P			980		1-59
Lion Point	53	COEI	N70.24341	W147.26762	5	14-Jul-01	18:28:14	LN	NE64	NE	0	0	M		P			981		1-59
Lion Point	54	COEI	N70.24346	W147.26822	5	14-Jul-01	18:29:08	LN	NE66	NE	0	0	L		P			982		1-59
Lion Point	55	COEI	N70.24346	W147.26822	5	14-Jul-01	18:29:08	LN	NE66	NE	0	0	L		P			983		1-59
Lion Point	56	COEI	N70.24349	W147.26817	5	14-Jul-01	18:29:46	LN	NE68	NE	0	0	L		P			984		1-59
Lion Point	57	COEI	N70.24349	W147.26817	5	14-Jul-01	18:29:46	LN	NE70	NE	0	0	L		P			985		1-59
Lion Point	58	COEI	N70.24349	W147.26817	5	14-Jul-01	18:30:49	LN	NE72	NE	0	0	H		P			986	in gull mound	1-59
Lion Point	59	COEI	N70.24352	W147.26864	5	14-Jul-01	18:31:15	LN	NE74	NE	0	0	M		P			987		1-59
Lion Point	60	COEI	N70.24354	W147.26893	5	14-Jul-01	18:31:54	LN	NE76	NE	0	0	H		P			988		1-59
Lion Point	61	COEI	N70.24355	W147.26901	5	14-Jul-01	18:32:30	LN	NE78	NE	1	1	H					989		1-60
Lion Point	62	COEI	N70.24355	W147.26901	5	14-Jul-01	18:32:30	LN	NE80	NE	0	0	M		P			990		1-60
Lion Point	63	COEI	N70.24355	W147.26901	5	14-Jul-01	18:32:30	LN	NE82	NE	0	0	M		P			991		1-60
Lion Point	64	COEI	N70.24354	W147.26913	5	14-Jul-01	18:33:04	LN	NE84	NE	0	0	M		P			992	Pieces of black sand, gravel bags	1-60
Lion Point	65	COEI	N70.24356	W147.26935	5	14-Jul-01	18:33:49	LN	SC36	SC			M					993		1-60
Lion Point	66	COEI	N70.24356	W147.26935	5	14-Jul-01	18:33:49	LN	NE86	NE	0	0	M		P			994		1-60
Lion Point	67	COEI	N70.24356	W147.26936	5	14-Jul-01	18:34:15	LN	NE88	NE	0	0	L		P			995		1-60
Lion Point	68	COEI	N70.24356	W147.26985	5	14-Jul-01	18:34:38	LN	NE90	NE	0	0	M		P			996		1-60
Lion Point	69	COEI	N70.24357	W147.26973	5	14-Jul-01	18:35:04	LN	NE92	NE	0	0	M		P			997		1-60
Lion Point	70	COEI	N70.24357	W147.27022	5	14-Jul-01	18:35:36	LN	NE94	NE	0	0	L		P	1 egg		998		1-60
Lion Point	71	COEI	N70.24357	W147.27022	5	14-Jul-01	18:35:36	LN	SC36	SC			L					999		1-60
Lion Point	72	COEI	N70.24357	W147.27022	5	14-Jul-01	18:35:36	LN	SC40	SC			L					1000		1-60
Lion Point	73	COEI	N70.24357	W147.27026	5	14-Jul-01	18:35:58	LN	NE96	NE	Y	Y	H					1001		1-60
Lion Point	74	COEI	N70.24357	W147.27029	5	14-Jul-01	18:36:34	LN	SC42	SC			L					1002		1-60
Lion Point	75	COEI	N70.24359	W147.27053	5	14-Jul-01	18:36:50	LN	NE98	NE	Y	Y	H					1003		1-60
Lion Point	76	COEI	N70.24365	W147.27092	5	14-Jul-01	18:37:28	LN	SC44	SC			M					1004		1-60
Lion Point	77	COEI	N70.24365	W147.27092	5	14-Jul-01	18:37:28	LN	SC46	SC			L					1005		1-60
Lion Point	78	COEI	N70.24365	W147.27092	5	14-Jul-01	18:37:26	LN	SC48	SC			L					1006		1-60
Lion Point	79	COEI	N70.24364	W147.27093	5	14-Jul-01	18:37:53	LN	NET00	NE	0	0	M		P			1007		1-60
Lion Point	80	COEI	N70.24363	W147.27122	5	14-Jul-01	18:38:18	LN	NE102	NE	0	0	H		P			1008		1-60
Lion Point	81	COEI	N70.24362	W147.27121	5	14-Jul-01	18:38:38	LN	NE104	NE	0	0	L		P			1009		1-60
Lion Point	82	COEI	N70.24362	W147.27132	5	14-Jul-01	18:39:00	LN	NET06	NE	0	0	H		P			1010		1-60
Lion Point	83	COEI	N70.24362	W147.27132	5	14-Jul-01	18:39:00	LN	NE108	NE	0	0	M		P			1011		1-60
Lion Point	84	COEI	N70.24362	W147.27132	5	14-Jul-01	18:39:00	LN	NET10	NE	0	0	L		P			1012		1-60
Lion Point	85	COEI	N70.24363	W147.27147	5	14-Jul-01	18:39:32	LN	SC50	SC			L					1013		1-60
Lion Point	86	COEI	N70.24363	W147.27147	5	14-Jul-01	18:39:32	LN	SC52	SC			L					1014		1-60
Lion Point	87	COEI	N70.24363	W147.27147	5	14-Jul-01	18:39:40	LN	SC54	SC			L					1015		1-60
Lion Point	88	COEI	N70.24356	W147.27211	5	14-Jul-01	18:41:00	LN	SC56	SC			L					1016		1-60
Lion Point	89	COEI	N70.24356	W147.27211	5	14-Jul-01	18:41:00	LN	NET12	NE	0	0	H		P			1017		1-60
Lion Point	90	COEI	N70.24356	W147.27211	5	14-Jul-01	18:41:00	LN	NET14	NE	Y	Y	H					1018		1-60
Lion Point	91	COEI	N70.24356	W147.27206	5	14-Jul-01	18:41:56	LN	NET16	NE	4	4	N					1019	Open gravel	1-61
Lion Point	92	COEI	N70.24356	W147.27233	5	14-Jul-01	18:42:45	LN	NET18	NE	4	4	H					1020		1-61
Lion Point	93	COEI	N70.24356	W147.27226	5	14-Jul-01	18:42:59	LN	NET20	NE	Y	Y	H					1021		1-61

Table A-1. Continued

Island	Sighting ID	Species	Latitude	Longitude	GPS	Date	Time	Recorder	Nest ID	Sight Type	Eggs	Live	Drift	Veg	Pred	Pred Egg	Pred Type	Rec No	Comments	Est No
Lion Point	94	COEI	N70.24360	W147.27242	5	14-Jul-01	18:43:37	LN	NE122	NE	0	0	L		P		U	1022		1-81
Lion Point	95	COEI	N70.24360	W147.27242	5	14-Jul-01	18:43:37	LN	SC58	SC			L					1023		1-81
Lion Point	96	COEI	N70.24368	W147.27238	5	14-Jul-01	18:44:02	LN	NE124	NE	Y	Y	H					1024		1-81
Lion Point	97	COEI	N70.24382	W147.27269	5	14-Jul-01	18:44:28	LN	SC60	SC			L					1025		1-81
Lion Point	98	COEI	N70.24362	W147.27269	5	14-Jul-01	18:44:30	LN	NE140	NE	0	0	L		P		U	1028		1-81
Lion Point	99	COEI	N70.24362	W147.27315	5	14-Jul-01	18:45:10	LN	NE126	NE	4	4	M					1027		1-81
Lion Point	100	COEI	N70.24362	W147.27315	5	14-Jul-01	18:45:10	LN	NE128	NE	0	0	L		P		U	1028		1-81
Lion Point	101	COEI	N70.24362	W147.27319	5	14-Jul-01	18:45:33	LN	NE130	NE	0	0	M		P		U	1029		1-81
Lion Point	102	COEI	N70.24364	W147.27345	5	14-Jul-01	18:46:00	LN	NE132	NE	0	0	M		P		U	1030		1-81
Lion Point	103	COEI	N70.24364	W147.27357	5	14-Jul-01	18:46:20	LN	SC82	SC			L					1031		1-81
Lion Point	104	COEI	N70.24355	W147.27433	5	14-Jul-01	18:47:04	LN	NE134	NE	0	0	M		P		U	1032		1-81
Lion Point	105	COEI	N70.24355	W147.27433	5	14-Jul-01	18:47:04	LN	SC82	SC			L					1033		1-81
Lion Point	106	COEI	N70.24349	W147.27475	5	14-Jul-01	18:47:52	LN	NE136	NE	Y	Y	M					1034	By 2 logs	1-81
Lion Point	107	COEI	N70.24349	W147.27475	5	14-Jul-01	18:47:52	LN	SC64	SC			L					1035		1-81
Lion Point	108	COEI	N70.24338	W147.27523	5	14-Jul-01	18:48:41	LN	SC66	SC			L					1036		1-81
Lion Point	109	COEI	N70.24323	W147.27542	5	14-Jul-01	18:49:18	LN	NE138	NE	0	0	M		P		U	1037		1-81
Lion Point	110	COEI	N70.24307	W147.27548	5	14-Jul-01	18:49:57	LN	SC68	SC			L					1038		1-81
Lion Point	111	COEI	N70.24269	W147.27518	5	14-Jul-01	18:51:12	LN	NE142	NE	0	0	L		P		U	1039		1-81
Lion Point	112	COEI	N70.24269	W147.27516	5	14-Jul-01	18:51:12	LN	NE144	NE	Y	Y	M					1040		1-81
Lion Point	113	COEI	N70.24263	W147.27503	5	14-Jul-01	18:51:55	LN	NE146	NE	2	2	N					1041	COEI male 2 ea 9 adults fly	1-81
Lion Point	114	COEI	N70.24263	W147.27503	5	14-Jul-01	18:52:30	LN					L					1042		1-81
Lion Point	115	COEI	N70.24264	W147.27503	5	14-Jul-01	18:52:30	LN	SC70	SC			L					1043		1-81
Lion Point	116	COEI	N70.24263	W147.27508	5	14-Jul-01	18:53:20	LN	NE148	NE	0	0	L		P		U	1044		1-81
Lion Point	117	COEI	N70.24258	W147.27569	5	14-Jul-01	18:54:11	LN	NE150	NE	0	0	N		P		U	1045		1-81
Lion Point	118	COEI	N70.24258	W147.27569	5	14-Jul-01	18:54:11	LN	NE152	NE	0	0	N		P		U	1046		1-81
Lion Point	119	COEI	N70.24258	W147.27569	5	14-Jul-01	18:54:11	LN	NE154	NE	0	0	N		P		U	1047		1-81
Lion Point	120	COEI	N70.24258	W147.27569	5	14-Jul-01	19:00:00	LN					N					1048	END SEARCH	1-81
Reindeer	1		N70.48301	W148.34545	2	15-Jul-01	11:34:32	KT										1049		3-12
Reindeer	2	GLGU	N70.48408	W148.35852	2	15-Jul-01	11:45:11	KT	NE2	NE	H	H	L					1050	1 chick swim, one in nest	3-12
Reindeer	3	COEI	N70.48352	W148.36218	2	15-Jul-01	11:48:45	KT	NE4	NE	Y	Y	M					1051		3-12
Reindeer	4	COEI	N70.48359	W148.36485	2	15-Jul-01	11:51:28	KT	SC4	SC			L					1052		3-12
Reindeer	5	COEI	N70.48408	W148.36955	2	15-Jul-01	11:54:05	KT	SC4	SC			L					1053		3-12
Reindeer	6	COEI			2	15-Jul-01		KT	NE6	NE	Y	Y	L					1054	Sieve saw from helicopter but we never got to site.	3-12
Reindeer	7				2	15-Jul-01		KT										1055	Around 12-1230 we had to leave the island very quickly due to fog. GPS was left on.	3-12
Reindeer	8		N70.48481	W148.36287	2	16-Jul-01	11:13:00	LN	NE8	NE	0	0	L		P		GLGU	1056	START	3-12
Reindeer	9	COEI	N70.48465	W148.36321	2	16-Jul-01	11:13:47	LN	SC6	SC			L					1057	Gull	3-12
Reindeer	10	COEI	N70.48473	W148.36509	2	16-Jul-01	11:15:59	LN	NE10	NE	0	0	L		P		U	1058		3-12
Reindeer	11	COEI	N70.48474	W148.36848	2	16-Jul-01	11:17:18	LN	NE12	NE	0	0	L					1059		3-12
Reindeer	12	COEI	N70.48404	W148.36936	2	16-Jul-01	11:20:22	LN	NE12	NE	Y	Y	L					1060	To N	3-12
Reindeer	13	COEI	N70.48372	W148.37199	2	16-Jul-01	11:22:22	LN	SC8	SC			N					1061		3-12
Reindeer	14	COEI	N70.48430	W148.37893	2	16-Jul-01	11:44:50	LN	NE14	NE	0	0	L		P		GLGU	1062	Gull tracks	3-12
Reindeer	15	COEI	N70.48439	W148.37793	2	16-Jul-01	11:45:52	LN	SC10	SC			L					1063		3-12
Reindeer	16	COEI	N70.48440	W148.37794	2	16-Jul-01	11:46:15	LN										1064	25 COEI fly, males and females	3-12
Reindeer	17	COEI	N70.48433	W148.37453	2	16-Jul-01	11:50:11	LN	NE16	NE	Y	Y	L					1065	To N	3-12
Reindeer	18		N70.48410	W148.37199	2	16-Jul-01	11:53:00	LN										1066	Stop for lunch, finished search	3-12

Table A-1. Continued

Island	Sighting ID	Species	Latitude	Longitude	GPS	Date	Time	Recorder	Nest ID	Sight. Type	Eggs	Live	Drift	Veg	Pred	Egg	Pred	Type	Rec. No	Comments	Bk No
Reindeer	19				2	18-Jul-01	12:35:00	LN											1087	GLGU chick 771347-39004 R tarsus, 28.6, other older chick swam away, egg pipped, 12:47 released	3-12
Reindeer	20				2	18-Jul-01	13:11:00	LN											1088	Caught older chick NE o2-1347-39005, R tarsus 35.7, release 13:25-moving away with band well. Photos 35, 36, 37	3-12
Cross	1	COEI	N70.48845	W147.94532	2	16-Jul-01	14:27:00	LN	NE2	NE	0	H			P				1089	START	3-13
Cross	2	COEI	N70.48838	W147.94499	2	16-Jul-01	14:31:51	LN	NE4	NE	2	M							1071	Gulls ?	3-13
Cross	3	COEI	N70.48835	W147.94489	2	16-Jul-01	14:32:46	LN	SC2	SC		M							1072		3-13
Cross	4	POBE	N70.48835	W147.94489	2	16-Jul-01	14:33:00	LN											1073	PBTX	3-13
Cross	5	COEI	N70.48852	W147.94512	2	16-Jul-01	14:34:31	LN	NE6	NE	0	M			P				1074		3-13
Cross	6	COEI	N70.48890	W147.94613	2	16-Jul-01	14:36:38	LN	SC4	SC	0	L							1075		3-13
Cross	7	COEI	N70.48890	W147.94613	2	16-Jul-01	14:38:38	LN	NE8	NE	0	L			P				1076	By log	3-13
Cross	8	ARTE	N70.48910	W147.94700	2	16-Jul-01	14:39:48	LN	SC6	SC		L							1077		3-13
Cross	9	ARTE	N70.48910	W147.94700	2	16-Jul-01	14:39:48	LN	SC8	SC		N							1078		3-13
Cross	10	ARTE	N70.48912	W147.94699	2	16-Jul-01	14:40:13	LN	SC10	SC		L							1079		3-13
Cross	11	COEI	N70.48925	W147.94722	2	16-Jul-01	14:40:55	LN	NE10	NE	0	M			P				1080		3-13
Cross	12	COEI	N70.48941	W147.94741	2	16-Jul-01	14:41:36	LN	SC12	SC		M							1081		3-13
Cross	13	ARTE	N70.48957	W147.94756	2	16-Jul-01	14:42:26	LN	SC14	SC		M							1082		3-13
Cross	14	COEI	N70.48957	W147.94756	2	16-Jul-01	14:42:26	LN	SC16	SC		M							1083		3-13
Cross	15	COEI	N70.48976	W147.94783	2	16-Jul-01	14:43:16	LN	NE12	NE	0	M			P				1084		3-13
Cross	16	COEI	N70.49001	W147.94835	2	16-Jul-01	14:44:19	LN	SC18	SC		M							1085		3-13
Cross	17	COEI	N70.49001	W147.94835	2	16-Jul-01	14:44:19	LN	SC20	SC		L							1086		3-13
Cross	18	COEI	N70.49030	W147.94924	2	16-Jul-01	14:45:45	LN	SC22	SC		L							1087	# of bear tracks?	3-13
Cross	19	COEI	N70.49030	W147.94924	2	16-Jul-01	14:45:45	LN											1088		3-13
Cross	20	POBE	N70.49030	W147.94924	2	16-Jul-01	14:45:45	LN	SC24	SC		M							1089		3-13
Cross	21	COEI	N70.49060	W147.94981	2	16-Jul-01	14:47:05	LN	SC26	SC		M							1090		3-13
Cross	22	COEI	N70.49060	W147.94988	2	16-Jul-01	14:47:24	LN	SC28	SC		L							1091		3-13
Cross	23	COEI	N70.49134	W147.95102	2	16-Jul-01	14:49:15	LN	SC30	SC		L							1092		3-13
Cross	24	COEI	N70.49143	W147.95136	2	16-Jul-01	14:49:57	LN	NE14	NE	0	M			P				1093		3-13
Cross	25	COEI	N70.49149	W147.95141	2	16-Jul-01	14:50:24	LN	SC32	SC		L							1094	Fresh tracks	3-13
Cross	26	POBE	N70.49185	W147.95242	2	16-Jul-01	14:54:43	LN											1095		3-13
Cross	27	POBE	N70.49185	W147.95242	2	16-Jul-01	14:54:43	LN	SC34	SC		M							1096		3-13
Cross	28	COEI	N70.49185	W147.95242	2	16-Jul-01	14:55:17	LN	NE16	NE	0	M			P				1097		3-13
Cross	29	COEI	N70.49326	W147.95688	2	16-Jul-01	14:56:05	LN	SC36	SC		M							1098	6 females, no nasal discs	3-13
Cross	30	COEI	N70.49370	W147.95816	2	16-Jul-01	15:00:27	LN											1099		3-13
Cross	31	COEI	N70.49376	W147.95878	2	16-Jul-01	15:01:38	LN	EE	EE									1100	1 crushed	3-14
Cross	32	COEI	N70.49392	W147.95940	2	16-Jul-01	15:03:22	LN	NE18	NE	0	L			P				1101		3-14
Cross	33	COEI	N70.49401	W147.95963	2	16-Jul-01	15:04:32	LN	SC40	SC		L							1102		3-14
Cross	34	COEI	N70.49416	W147.96021	2	16-Jul-01	15:05:47	LN	SC42	SC		L							1103		3-14
Cross	35	COEI	N70.49416	W147.96021	2	16-Jul-01	15:05:47	LN	SC44	SC		L							1104		3-14
Cross	36	POBE	N70.49436	W147.96045	2	16-Jul-01	15:07:03	LN	NE20	NE	0	N	70%		P				1105	PBSC	3-14
Cross	37	COEI	N70.49410	W147.96128	2	16-Jul-01	15:09:59	LN	NE22	NE	0	N	50%		P				1106	Elymus	3-14
Cross	38	COEI	N70.49410	W147.96128	2	16-Jul-01	15:09:59	LN	NE24	NE	0	N	70%		P				1107	Elymus	3-14
Cross	39	COEI	N70.49410	W147.96128	2	16-Jul-01	15:09:59	LN	NE26	NE	0	N	30%		P				1108	Elymus	3-14
Cross	40	COEI	N70.49410	W147.96128	2	16-Jul-01	15:09:59	LN	SC44	SC		N	50%						1109	Elymus	3-14
Cross	41	COEI	N70.49410	W147.96128	2	16-Jul-01	15:09:59	LN	SC46	SC		N	50%						1110	Elymus	3-14
Cross	42	COEI	N70.49410	W147.96128	2	16-Jul-01	15:09:59	LN	SC48	SC		N	30%		P				1111	Elymus	3-14
Cross	43	COEI	N70.49410	W147.96128	2	16-Jul-01	15:09:59	LN	NE28	NE	0	N	30%		P				1112	PP80	3-14
Cross	44	COEI	N70.49409	W147.96157	2	16-Jul-01	15:10:47	LN	NE30	NE	0	M							1113	Artesemia, lungwort	3-14
Cross	45	COEI	N70.49426	W147.96243	2	16-Jul-01	15:12:25	LN	NE32	NE	0	M							1114		3-14
Cross	46	COEI	N70.49427	W147.96242	2	16-Jul-01	15:13:08	LN	NE34	NE	0	M							1115		3-14
Cross	47	COEI	N70.49433	W147.96242	2	16-Jul-01	15:13:50	LN				Y									3-14

Table A-1. Continued

Island	Sighting ID	Species	Latitude	Longitude	GPS	Date	Time	Recorder	Nest ID	Sight Type	Eggs	Live	Drift	Veg	Pred	Pred Egg	Pred Type	Rec No	Comments	Bk No
Cross	48	COEI	N70.49428	W147.96245	2	16-Jul-01	15:14:18	LN	NE34	NE	1		N					1116	By barrel	3-14
Cross	49	COEI	N70.49431	W147.96245	2	16-Jul-01	15:14:31	LN	NE38	NE	0		M		P		U	1117		3-14
Cross	50	COEI	N70.49437	W147.96248	2	16-Jul-01	15:15:08	LN	NE40	NE	0		N	40%	P		U	1118	Photos 34,34	3-14
Cross	51	COEI	N70.49448	W147.96235	2	16-Jul-01	15:16:55	LN	NE42	NE	0		N	30%	P		U	1119	Artesemia, lungwort	3-14
Cross	52	COEI	N70.49454	W147.96232	2	16-Jul-01	15:17:21	LN	NE44	NE	0		M		P		U	1120		3-14
Cross	53	COEI	N70.49462	W147.96240	2	16-Jul-01	15:17:54	LN	SC50	SC			H				1121		3-14	
Cross	54	COEI	N70.49488	W147.96216	2	16-Jul-01	15:18:59	LN	NE46	NE	0		M		P		U	1122		3-14
Cross	55	COEI	N70.49506	W147.96250	2	16-Jul-01	15:20:19	LN	SC52	SC			L				1123		3-14	
Cross	56	COEI	N70.49521	W147.96303	2	16-Jul-01	15:21:36	LN	SC54	SC			L				1124		3-14	
Cross	57	COEI	N70.49550	W147.96356	2	16-Jul-01	15:22:32	LN	SC56	SC			L				1125		3-14	
Cross	58	COEI	N70.49573	W147.96556	2	16-Jul-01	15:24:38	LN	NE48	NE	0		M		P		U	1126		3-14
Cross	59	COEI	N70.49582	W147.96600	2	16-Jul-01	15:25:40	LN	NE50	NE	0		M		P		U	1127		3-14
Cross	60	COEI	N70.49588	W147.96660	2	16-Jul-01	15:27:48	LN	NE52	NE	0		M		P		U	1128		3-14
Cross	61	COEI	N70.49566	W147.96660	2	16-Jul-01	15:27:48	LN	NE54	NE	1		H				1129		3-14	
Cross	62	COEI	N70.49566	W147.96660	2	16-Jul-01	15:27:48	LN	NE56	NE	1		H				1130	2 predated eggs	3-14	
Cross	63	GLGU	N70.49563	W147.96653	2	16-Jul-01	15:28:58	LN	NE58	NE	3		N	20%			1131	Artesemia	3-15	
Cross	64	COEI	N70.49563	W147.96653	2	16-Jul-01	15:29:58	LN	NE60	NE	0		M		P		1132		3-15	
Cross	65	COEI	N70.49563	W147.96653	2	16-Jul-01	15:29:58	LN	SC58	SC			L				1133		3-15	
Cross	66	COEI	N70.49560	W147.96687	2	16-Jul-01	15:30:24	LN	SC60	SC			L				1134		3-15	
Cross	67	COEI	N70.49543	W147.96705	2	16-Jul-01	15:31:26	LN	NE62	NE	0		L		P		1135		3-15	
Cross	68	COEI	N70.49532	W147.96712	2	16-Jul-01	15:32:00	LN	NE64	NE	0		M		P		1136		3-15	
Cross	69	COEI	N70.49517	W147.96729	2	16-Jul-01	15:32:59	LN	SC62	SC			M				1137		3-15	
Cross	70	POBE	N70.49533	W147.96963	2	16-Jul-01	15:35:55	LN									1138	PBBD-2 fresh	3-15	
Cross	71	COEI	N70.49578	W147.97124	2	16-Jul-01	15:38:07	LN	SC64	SC			L				1139		3-15	
Cross	72	COEI	N70.49578	W147.97124	2	16-Jul-01	15:38:07	LN	SC66	SC			L				1140		3-15	
Cross	73	COEI	N70.49578	W147.97124	2	16-Jul-01	15:38:07	LN	NE68	NE	0		M		P		1141		3-15	
Cross	74	COEI	N70.49563	W147.97511	2	16-Jul-01	15:41:44	LN	NE70	NE	0		M		P		1142		3-15	
Cross	75	COEI	N70.49558	W147.97647	2	16-Jul-01	15:43:12	LN	NE72	NE	0		M		P		1143		3-15	
Cross	76	COEI	N70.49557	W147.97731	2	16-Jul-01	15:44:30	LN	SC68	SC			L				1144		3-15	
Cross	77	COEI	N70.49557	W147.97731	2	16-Jul-01	15:44:30	LN	NE74	NE	0		L		P		1145		3-15	
Cross	78	COEI	N70.49458	W147.98057	2	16-Jul-01	15:48:50	LN	NE76	NE	0		L		P		1146		3-15	
Cross	79	COEI	N70.49427	W147.98137	2	16-Jul-01	15:50:02	LN	NE80	NE	0		M		P		1147		3-15	
Cross	80	COEI	N70.49390	W147.98251	2	16-Jul-01	15:51:37	LN	NE82	NE	4		L				1148		3-15	
Cross	81	COEI	N70.49273	W147.98210	2	16-Jul-01	15:54:44	LN	NE84	NE	0		L		P		1149		3-15	
Cross	82	COEI	N70.49260	W147.98228	2	16-Jul-01	15:55:34	LN	NE86	NE	2		L				1150		3-15	
Cross	83	COEI	N70.49051	W147.98683	2	16-Jul-01	16:06:10	LN	NE88	NE	2		H				1151		3-15	
Cross	84				2	16-Jul-01		LN										1152	Move to east end	3-15
Cross	85				2	16-Jul-01	16:22:00	LN										1153	START	3-15
Cross	86	COEI	N70.47138	W147.94504	2	16-Jul-01	16:26:24	LN	SC70	SC			L				1154		3-15	
Cross	87	COEI	N70.47204	W147.94349	2	16-Jul-01	16:28:46	LN	SC72	SC			L				1155		3-15	
Cross	88	COEI	N70.47239	W147.94277	2	16-Jul-01	16:29:58	LN	NE90	NE	0		L		P		1156		3-15	
Cross	89	COEI	N70.47407	W147.93894	2	16-Jul-01	16:33:52	LN	SC74	SC			L				1157		3-15	
Cross	90	COEI	N70.47407	W147.93894	2	16-Jul-01	16:33:52	LN	SC76	SC			L				1158		3-15	
Cross	91	COEI	N70.47412	W147.93889	2	16-Jul-01	16:34:24	LN	SC78	SC			L				1159		3-15	
Cross	92	COEI	N70.47451	W147.93898	2	16-Jul-01	16:36:32	LN	NE92	NE	Y		L				1160		3-15	
Cross	93	COEI	N70.47451	W147.93898	2	16-Jul-01	16:36:32	LN	NE94	NE	Y		M				1161		3-15	
Cross	94	COEI	N70.47483	W147.93856	2	16-Jul-01	16:39:41	LN	NE96	NE	Y		M				1162		3-16	
Cross	95	COEI	N70.47483	W147.93856	2	16-Jul-01	16:39:41	LN	NE98	NE	Y		H				1163		3-16	
Cross	96	COEI	N70.47519	W147.93846	2	16-Jul-01	16:40:26	LN	NE100	NE	Y		H				1164	1 live egg, one dead chick	3-16	
Cross	97	GLGU	N70.47522	W147.93845	2	16-Jul-01	16:40:49	LN	NE102	NE	1		H				1165		3-16	
Cross	98	COEI	N70.47551	W147.93826	2	16-Jul-01	16:43:57	LN	NE104	NE	Y		N				1166		3-16	
Cross	99	COEI	N70.47569	W147.93756	2	16-Jul-01	16:46:45	LN	NE106	NE	0		M		P		1167		3-16	
Cross	100	COEI	N70.47618	W147.93774	2	16-Jul-01	16:47:59	LN	NE108	NE	Y		M				1168		3-16	
Cross	101	COEI	N70.47695	W147.93671	2	16-Jul-01	16:50:04	LN	SC80	SC			M				1169		3-16	
Cross	102	COEI	N70.47724	W147.93666	2	16-Jul-01	16:52:21	LN	SC82	SC			M				1170		3-16	
Cross	103	COEI	N70.47779	W147.93686	2	16-Jul-01	16:53:08	LN	SC84	SC			L				1171		3-16	
Cross	104	COEI	N70.47831	W147.93709	2	16-Jul-01	16:54:44	LN	SC86	SC			M				1172		3-16	
Cross	105	ARTE	N70.47847	W147.93724	2	16-Jul-01	16:55:13	LN	SC88	SC			L				1173		3-16	

Table A-1. Continued

Island	Sighting ID	Species	Latitude	Longitude	GPS	Date	Time	Recorder	Nest ID	Sight Type	Eggs	Lvs	Drift	Veg	Pred	Pred Egg	Pred Type	Rec. No.	Comments	Bk No
Cross	106	COEI	N70.47851	W147.93729	2	16-Jul-01	16:55:37	LN	SC90	SC			L					1174		3-16
Cross	107	ARTE	N70.47860	W147.93728	2	16-Jul-01	16:56:38	LN	SC92	SC			L					1175		3-16
Cross	108	ARTE	N70.47860	W147.93728	2	16-Jul-01	16:56:38	LN	EE									1176		3-16
Cross	109	ARTE	N70.47860	W147.93728	2	16-Jul-01	16:58:53	LN	NE110	NE	1		L					1177		3-16
Cross	110	COEI	N70.47880	W147.93728	2	16-Jul-01	16:58:53	LN	SC94	SC			L					1178		3-16
Cross	111	POBE	N70.47939	W147.93715	2	16-Jul-01	16:59:22	LN					L					1179	Tracks	3-16
Cross	112	COEI	N70.47948	W147.93717	2	16-Jul-01	17:00:08	LN	SC96	SC			L					1180		3-16
Cross	113	COEI	N70.47948	W147.93717	2	16-Jul-01	17:00:08	LN	NE112	NE	0		M		P			1181	Egg pieces	3-16
Cross	114	COEI	N70.47957	W147.93716	2	16-Jul-01	17:00:46	LN	NE114	NE	0		H		P			1182		3-16
Cross	115	COEI	N70.47957	W147.93716	2	16-Jul-01	17:00:46	LN	SC98	SC			H					1183		3-16
Cross	116	COEI	N70.48001	W147.93722	2	16-Jul-01	17:02:26	LN	SE118	NE	0		M		P			1184		3-16
Cross	117	GLGU	N70.48021	W147.93743	2	16-Jul-01	17:03:58	LN	NE118	NE	0		M		U			1185	Possibly hatched	3-16
Cross	118	COEI	N70.48047	W147.93734	2	16-Jul-01	17:05:08	LN	SC100	SC			L					1186		3-16
Cross	119	GLGU	N70.48090	W147.93759	2	16-Jul-01	17:06:10	LN	NE120	NE	0		L		U			1187	Possibly hatched	3-16
Cross	120	COEI	N70.48235	W147.93833	2	16-Jul-01	17:09:47	LN	NE122	NE	0		L		P			1188	PBTRX	3-16
Cross	121	COEI	N70.48515	W147.94030	2	16-Jul-01	17:16:02	LN	SC102	SC			L					1189		3-16
Cross	122	COEI	N70.48549	W147.94061	2	16-Jul-01	17:17:38	LN	SC104	SC			M					1190		3-16
Cross	123	COEI	N70.48549	W147.94061	2	16-Jul-01	17:17:38	LN	SC106	SC			M					1191		3-16
Cross	124	LTDU	N70.48559	W147.94071	2	16-Jul-01	17:18:58	LN										1192	44 swim	3-16
Cross	125	COEI	N70.48559	W147.94071	2	16-Jul-01	17:18:56	LN										1193	31 males, 2 females swim	3-16
Cross	126	COEI	N70.48698	W147.94288	2	16-Jul-01	17:23:04	LN	SC108	SC			L					1194		3-17
Cross	127	COEI	N70.48761	W147.94394	2	16-Jul-01	17:25:19	LN	NE124	NE	Y		M					1195		3-17
Cross	128	COEI	N70.48728	W147.94503	2	16-Jul-01	17:27:57	LN	SC110	SC			L					1196		3-17
Cross	129	COEI	N70.48728	W147.94503	2	16-Jul-01	17:27:57	LN	NE128	NE	0		M		P			1197		3-17
Cross	130	COEI	N70.48750	W147.94598	2	16-Jul-01	17:29:10	LN	NE128	NE	0		M		U			1198		3-17
Cross	131	GLGU	N70.48767	W147.94622	2	16-Jul-01	17:30:08	LN	NE130	NE	0		L	15%	P			1199	Sandwort	3-17
Cross	132	COEI	N70.48773	W147.94669	2	16-Jul-01	17:31:04	LN	NE132	NE	0		M		P			1200	Sticks	3-17
Cross	133	COEI	N70.48774	W147.94688	2	16-Jul-01	17:31:28	LN	SC112	SC			L					1201		3-17
Cross	134	GLGU	N70.48830	W147.94746	2	16-Jul-01	17:34:07	LN	NE134	NE	0		N	2%	P			1202	Sandwort	3-17
							17:35:00											1203	END SEARCH	3-17