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Nesting Status of the Common Eider and the Glaucous Gull in the Central Alaskan Beaufort Sea 2002

Prepared for

BP EXPLORATION (ALASKA) INC.
Environmental Studies Group
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by

Lynn E. Noel

Gillian M. O'Doherty

LGL ALASKA RESEARCH ASSOCIATES, INC.
1101 East 76th Avenue, Suite B
Anchorage, Alaska 99518

and

Stephen R. Johnson

LGL LIMITED, environmental research associates
9768 Second Street
Sidney, British Columbia, Canada V8L 3Y8

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Inquiries about this report may be addressed to:

BP EXPLORATION (ALASKA) INC.
Environmental Studies Group
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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*). It is not known whether this decline is reflected in nest numbers found in the vicinity of Alaska's North Slope. To assess the nesting status of common eiders in this region, common eider, glaucous gull (*Larus hyperboreus*), and arctic tern (*Sterna paradisaea*) nests were documented on 15 islands along the central Alaskan Beaufort Sea coast from Thetis Island to the Stockton Islands during 9–15 July 2002. Common eider nests were most numerous, accounting for 63% (88 of 140) of all active nests within the approximately 321-ha area searched. Glaucous gull and arctic tern nests represented approximately 36% (51 of 140) and 1% (1 of 140), respectively, of all active nests. Mean and 95% confidence intervals of clutch size for common eider nests were 3.0 ± 0.44 eggs per nest ($n = 35$) and for glaucous gulls 2.0 ± 0.76 eggs per nest ($n = 7$). Active common eider nests were not distributed evenly across islands and island groups searched during 2002 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 where more active nests on Thetis Island than expected, and fewer active nests on the Stockton Islands than expected. Of the islands searched during 2002, the artificial island Duck Island #1&2 supported the most active common eider nests (23%, 20 of 88, 9.5 nests/ha) although nest density was highest on the artificial island Niakuk #4,5&6 (19.0 nests/ha, 22%, 19 of 88). Niakuk A&B supported the highest number (67%, 34 of 51) and density (7.6 nests/ha) of glaucous gull nests. Of the 601 active and failed common eider nest sites with habitat data, 4 nest sites (1%) were within buildings, 34 nest sites (6%) were not situated near driftwood or any other cover type, 255 nest sites (42%) were located in low-density driftwood, 236 (39%) were in medium-density driftwood, and 72 (12%) were in high-density driftwood. Common eider nest sites occurred more frequently than expected in medium- and low-density driftwood and less frequently than expected in high-density and no driftwood habitats ($P < 0.001$). Common eider nests were concentrated at medium and high relative elevations (85%, 514 of 601) above sea level (ASL) in contrast to the proportion of available habitats ($P < 0.001$). Of the 82 glaucous gull nests sites, active and failed combined, with habitat data 35% (29 of 82) had no driftwood, 43% (35 of 82) were located in low-density driftwood, 18% (15 of 82) were in medium-density driftwood, and 4% (3 of 82) were in high-density driftwood habitat. Glaucous gull nest sites occurred more frequently than expected in low-density driftwood and less frequently than

expected in high-density driftwood ($P = 0.017$). Glaucous gull nests sites were concentrated at medium elevations ASL, 27% were high elevation, 47% were medium elevation, and 26% were low elevation, similar to the distribution of available habitat area ($P = 0.208$). Predation by arctic foxes, polar bears, and glaucous gulls at the islands searched in 2002 had a marked impact on nesting success of common eiders (85% of 601 nests were depredated). The most productive nesting islands from 1970-2002 have included Cross Island (mean = 110.9 nests/year), Pole Island (mean = 55.8 nests/year), Egg Island (W) (mean = 45.6 nests/year), Stump Island (mean = 44.7 nests/year), Lion Point (mean = 42.1 nests/year), and Thetis Island (mean = 38.2 nest/year). The mean annual number of common eider nests for 17 islands for which data were collected consistently over many years was lower during 1970-1974 (144.4 ± 66.10 nests/year [± 95% CI]) than during either 1975-1985 (569.4 ± 352.91 nests/year, $P = 0.01$) or 1987-2002 (574.5 ± 273.58 nests/year, $P = 0.01$). The mean annual number of common eider nests was not different from 1975-1985 through 1987-2002 ($P = 0.98$). The mean annual number of glaucous gull nests for 19 islands for which data were collected consistently over many years was also not different from 1975-1985 (154.4 ± 77.89 nests/year) and 1987-2002 (132.4 ± 63.16 nests/year, $P = 0.559$). Variation in nest survey method and timing 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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INTRODUCTION

Global sea duck populations, including the Pacific race of the common eider *Somateria mollissima v-nigrum*, appear to be in decline on a global level (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 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 also 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). A number of these species occur 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 Society 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, however, with prospects for development in the Point Thomson Unit, efforts were resumed in 1998 (Noel et al. 1999a, 2001, 2002; 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, glaucous gulls, and other species nesting on barrier islands in the central Alaskan Beaufort Sea in 2002.
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 erosional 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 of sand and gravel substrates 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 eroded away. Current human use of this island was documented during common eider nesting surveys in 1999-2002 (Noel et al. 1999a, 2001; Noel and Johnson 2000). During 1999, Thetis Island remained intact, but during 2000 and 2001 the island was separated by small channels into 3 pieces. In 2002 Thetis Island was broken into 2 parts. The main portion of the island was intact, but a small spit off the south end of the island was disconnected.

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 and 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 and 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 and 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 and 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 and 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 breech 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 and 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 and 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 and 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 and 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 Island has been split into 2 parts since summer 2000.

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

The Niakuk Islands

The Niakuk Islands (6.4 ha) are a series of five small islands stretching in a northwesterly direction off Heald Point at the mouth of the Sagavanirktok River. ***Niakuk A*** or ***Sag Delta #5***, at 4.0 ha the largest island as well as the closest to shore, measures approximately 400 m long and 190 m wide at the widest points. Maximum elevation on Niakuk A is 3.3 ft (1 m), and this island contained an exploratory drilling pad at one time. Niakuk A, ***Niakuk B*** (0.5 ha), and ***Niakuk #1&2*** are natural islands. *Niakuk #1&2* (0.9 ha) was enlarged by the construction of a drilling pad; is about 130 m long and a maximum of 120 m wide, and has a maximum elevation of 2.9 ft (0.9 m). Niakuk B is triangular (100 m by 70 m at widest points) and has a maximum elevation of 4 ft (1.2 m). ***Niakuk C*** (0.05 ha) is a small (70 m by 20 m) shoal. ***Niakuk 4,5&6*** (1.0 ha) is an artificial island, roughly 300 m long and <100 m wide, with a maximum elevation of 3.4 ft (1.0 m). Gavin (1976) describes these islands as composed of silt, sand and some fine gravel, with a few patches of sparse tundra vegetation. Scattered driftwood covers approximately 15-20% of the island surfaces.

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 but about 40% of the islands surface is higher than 1 m ASL. 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.

Duck Island

Duck Island (1.5 ha) is located at the mouth of the east channel of the Sagavanirktok River, between Howe Island and the Endicott Causeway. Duck Island consists of 2 small islands with mud flats between. Duck Island is approximately 360 m long and a maximum of 60 m wide. Maximum elevation is 7.9 ft (2.4 m). Gavin (1976) describes the island as composed of mostly sand and gravel, with some tundra vegetation along the higher reaches. About 46% of the island's surface is higher than 1 m above sea level, and scattered pieces of driftwood occur across the island.

Duck Island #1&2

Duck Island #1&2 (2.1 ha) is an artificial island, located about 500 m east of the Endicott Causeway and south of Endicott's Satellite Drilling Island (SDI). It is 740 m long and 70 m wide at its widest point, although most of the island is less than 50 m wide. The island is composed of medium and fine gravels. The maximum elevation is 8.5 ft (2.6 m) at the site of the abandoned drilling pad. About 40% of the island's surface is higher than 1 m above sea level, and scattered driftwood covers approximately 30% of the surface area below the gravel pad.

The McClure Islands

Narwhal Island (38 ha) is located 15 km north of Point Brower. Narwhal Island was split into 2 parts during 2000-2001 with a total length of 3.8 km. Narwhal Island was a single island 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. Belvedere Island and Pole Island were connected to each other by gravel during 2001-2002.

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, composted of silt, fine sand and some gravel with no vegetation. No topographic information exists for Challenge Island; but 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. Northstar Island should not be confused with 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 but 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.

METHODS

We coordinated our search area during July 2002 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). Nest searches were conducted by LGL Alaska Research Associates, Inc. (LGL) on Thetis Island, the Midway Islands (Reindeer Island), the Niakuk Islands, Cross Island, No Name Island, the Endicott Causeway, Duck Island #1&2, the McClure Islands (Narwhal, Jeanette, and Karluk islands), Lion Point, and the Stockton Islands (Pole and Belvedere islands, Table 1). Nest searches were conducted by the ASC on Spy Island, the Jones-Return Islands, the Maguire Islands, Flaxman Island, and spits along the mainland near Point Thomson in conjunction with common eider and long-tailed duck studies (John Reed, USGS ASC, pers. com., 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; John Reed, USGS ASC, pers. com.). LGL searches during 9–15 July 2002 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 or by boat (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 long-handled 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 on the small leg of the gull chick, but gradually wears thin as the chicks tarsus grows (Figure 5).

Chi square analyses (χ^2, Zar 1974), followed by habitat use-availability analyses in some cases (Neu et al. 1974, Manly et al. 1993), 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 computed for the proportions of island habitats that were used by nesting common eiders and these were compared (use-availability analysis) to expected values that were based on the surface area or the area of driftwood habitat cover for each island (Neu et al. 1974, Manly et al. 1993). Distributions of all nests and active nests among driftwood cover classes were assessed by comparing observed distributions. Distributions were characterized in two different ways (1) *t*-distributions (proportions) of nests, nest scrapes and predated islands across the entire island and (2) distributions (proportions) of nests, nest scrapes and predated nests within each cover class using χ^2 analyses (Zar 1974). Two sample *t*-tests assuming unequal variances (Zar 1974) were used to compare the mean number of active common eider nests for 17 islands with consistent data during 3 time periods: 1970-1974 (n = 5 years), 1975-1985 (n = 5 years), and 1987-2002 (n = 6 years). Two sample *t*-tests assuming unequal variances (Zar 1974) were also used to compare the mean number of active glaucous gull nests for 19 islands with consistent data for these same 3 time periods. Time periods were selected based on oil-field development history in the Prudhoe Bay area. Construction of the Trans-Alaska Pipeline began during the winter of 1984-1985, and the Prudhoe Bay land fill was opened during 1986.

RESULTS

This report presents the results of nest searches on Thetis Island, Reindeer Island, the Niakuk Islands, Cross Island, No Name Island, Duck Island #1&2, Narwhal Island, Jeanette Island, Karluk Island, Lion Point, Pole Island, and Belvedere Island during July 2002 (Figure 1, Table 1).

Nesting Effort

Common eiders, glaucous gulls, king eiders (*Somateria spectabilis*), arctic terns, and Canada geese (*Branta canadensis*) were recorded nesting on central Alaskan Beaufort Sea barrier islands during July 2002 (Figures 6-13, Table 2). The total nesting effort was dominated by common eiders at 90% (total nests and pre-nesting scrapes recorded), followed by glaucous gulls at 8%, and arctic terns at 1% (Table 2). Common eider nests composed 63% of the total number of active nests, followed by glaucous gulls (36%), and arctic terns (1%) (Table 2). Of the 601 common eider nests recorded, 15% were active nests with live eggs or incubating hens, and 85% were depredated (Tables 2–4). The largest number of common eider nests occurred on Cross Island where 89% of nests were depredated. All common eider nests on Pole Island and Belvedere Island, which was attached to Pole Island, were depredated. Active common eider nests were rarely greater that 50% of the total number of nests on any of the barrier islands searched during 2002 (Tables 2 and 3).

Mean and 95% confidence intervals (95% CI) of clutch size for common eider nests was 3.0 ± 0.44 eggs per nest (n = 35), and for glaucous gulls was 2.0 ± 0.76 eggs per nest (n = 7). One arctic tern nest had 1 egg. Many incubating common eider hens remained undisturbed, which limited data on nest clutch sizes.

For all species combined and for common eider alone, total nesting effort, expressed as the sum of active and failed nests, and nest scrapes, was highest on Cross Island, Narwhal Island, and Pole Island (Table 2). Total nesting effort on each of the remaining islands was ≤ 10% (Table 2). Glaucous gull nesting effort was highest on Niakuk A&B followed by Cross Island and Reindeer Island. Arctic tern nesting effort was concentrated on Belvedere Island followed by Jeanette Island, Cross Island, and Karluk Island (Table 2).

Active common eider nests were not evenly distributed across islands and island groups searched during 2002 either in proportion to island surface area (Table 5, $\chi^2 = 28.30$, df = 5, $P < 0.001$), or in proportion to the available island area with driftwood habitat (Table 6, $\chi^2 = 53.24$, df = 5, $P < 0.001$). In both cases, there where more active nests on Thetis Island than expected, and fewer active nests on the Stockton Islands than expected (Tables 5 and 6). Combined active and depredated common eider nests were also not distributed evenly across islands and island groups searched during 2002 based on island surface area (Table 7, $\chi^2 = 440.15$, df = 5, $P < 0.001$), or based on driftwood habitat area (Table 8, $\chi^2 = 1674.17$, df = 5, $P < 0.001$). Results for island area and driftwood habitat area were consistent for 5 of 6 cases; Reindeer Island and the Stockton Islands with fewer than expected nests, McClure Islands and Lion Point with more than expected nests, and Cross Island not different than expected (Tables 7 and 8). Results for island area and driftwood habitat area were inconsistent for 1 of 6 cases (Tables 7 and 8). Thetis 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.

Habitat

During 2002, the density of active common eider nests was highest at Niakuk #4,5&6, and Duck Island #1&2; both artificial islands (Table 3). The density of active common eider nests on the remaining islands was much lower. The density of active glaucous gull nests was highest on Niakuk A&B followed by Niakuk #4,5&6, and Duck Island #1&2 (Table 4).

Of 601 common eider nest sites, with habitat data, active and failed nests combined <1% were inside abandoned buildings, 6% were in areas of no driftwood, 42% were located in low-density driftwood, 39% were in medium-density driftwood, and 12% were in high-density driftwood habitat (Figure 3, Table 9). Common eider nests were not distributed evenly among driftwood categories (χ^2 = 146.57, df = 3, P < 0.001, Table 9). Nests occurred more frequently than expected, based on the assumption of uniform habitat distribution, in medium- and low-density driftwood and less frequently than expected in high-density driftwood and no driftwood (Table 9). Common eider nest scrapes were also not distributed evenly among driftwood categories (χ^2 = 235.80, df = 3, P < 0.001, Table 9). 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 to assess selection of habitat cover categories. The distribution of common eider nests was different from the distribution of scrapes among driftwood categories (χ^2 = 24.11, df = 3, P < 0.001, Table 9). More nests than scrapes 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.

Of the 601 common eider nest sites with relative elevation data, 35% were high elevation, 50% were medium elevation, and 15% were low elevation ASL (Table 10). Island descriptions indicate that roughly 32% of the total island surfaces searched during 2002 was >1m high. The distribution of the remaining 68% of available island surface we estimated was about half 0.5-1m ASL (medium elevation) and about half <0.5m ASL (low elevation). Using these proportions of available elevations, more common eider nests than expected were at medium elevations and fewer than expected were at low elevations ($\chi^2 = 67.41$, df = 2, $P < 0.001$, Table 10). Common eider nests and scrapes were distributed similarly within elevation categories ($\chi^2 = 3.06$, df = 2, $P = 0.216$, Table 10).

Vegetation cover at common eider nest sites may include beach rye grass, seabeach sandwort (*Honckenya peploides*), lungwort (*Mertensia maritima*), and *Puccinellia phryganodes*. Vegetation was recorded at 28 common eider nest sites on 4 islands (Figure 3, Appendix A). These sites were on Pole Island (20 sites), Belvedere Island (4 sites), and on Lion Point (1 site). Of the 20 nest sites on Pole Island with vegetation cover, 18 included beach rye grass. Beach rye grass was noted at 2 of the 4 nest sites on Belvedere Island.

Of the 82 glaucous gull nests sites, active and failed combined, with habitat data 35% had no driftwood, 43% were located in low-density driftwood, 18% were in medium-density driftwood, and 4% were in high-density driftwood habitat (Table 9). 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 ($\chi^2 = 18.94$, df = 3, $P = 0.017$, Figure 4, Table 9). Glaucous gull nests and scrapes were distributed similarly among driftwood habitat categories ($\chi^2 = 4.12$, df = 3, $P = 0.248$, Figure 4, Table 9). Glaucous gull nests sites were concentrated at medium elevations, 27% were high elevation, 47% were medium elevation, and 26% were low elevation (Table 10). This distribution was similar to the distribution of available habitat area ($\chi^2 = 3.14$, df = 3, $P = 0.208$, Table 10). Vegetation cover was recorded at 3 nest sites; 1 on Pole Island with beach rye grass cover, 1 on Narwhal island with seabeach sandwort cover and 1 on Lion Point.

Depredation

All 513 failed common eider nests and all 31 failed glaucous gull nests were thought to have failed due to predation, primarily by arctic fox, polar bears, and glaucous gulls or a combination of these predators (Tables 3 and 4). Arctic fox and/or polar bear tracks were recorded on 9 of the 15 islands searched during 2002 (Table 1). Polar bears appeared to be the primary nest predator on No Name Island, Jeanette Island and Karluk Island (Table 1). 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 2002, and appeared to be the primary nest predator on Reindeer Island, the Niakuk Islands and Duck Island #1&2 (Table 1). No live arctic foxes were observed on any islands during 2002. A dead arctic fox in winter pelage was recorded on Cross Island, and fresh fox signs were recorded on several other islands (Table 1, Appendix A).

Banding

During 1999-2001, 15 common eider hens were captured, banded, and marked with nasal discs on Thetis Island (1 hen), Narwhal Island (7 hens), and Pole Island (7 hens, Figure 14, Table 11). Two additional common eider hens were captured and marked (1 on Thetis Island and 1 on Duck Island #1&2) in 2002 (Table 11). Two of the marked birds were resighted one year after they were marked. No marked birds were re-sighted during July 2002. Weights, measurements, nest identification number, clutch size, band numbers, banding dates, and disc color combinations of marked birds are listed in Table 11.

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 1970-2002 (Table 12). The most productive islands have been Cross Island, Pole Island, Stump Island, Egg Island, Lion Point, and Thetis Island (Table 12). In addition to these natural islands, some artificial exploration and production structures have been searched for nesting common eiders since 1982 (Table 13). For the locations searched during 2002, Niakuk #4,5&6 and Duck Island #1&2 were 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 17 common eider hens that have been individually marked, 2 hens have been re-sighted nesting on the islands where they were originally captured (Table 11). The islands with the most marked hens (Pole and Narwhal) were disturbed by predators in both 2001 and 2002. In 2002 there were no common eider nests remaining in the areas where these marked birds were expected to nest.

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 during 3 time periods (Figure 15). The mean annual number of common eider nests for 17 islands with consistently collected data was lower during 1970-1974 (144.4 ± 66.10 nests/year) than during either 1975-1985 (569.4 ± 352.91 nests/year, t = 3.28, df = 8, P = 0.01) or 1987-2002 (574.5 ± 273.58 nests/year, t = 3.59, df = 9, P = 0.006). The mean annual number of common eider nests was not different from 1975-1985 to 1987-2002 (t = -0.03, df = 9, P = 0.976). Variation in nest survey methods and timing 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.

We completed a similar analysis to evaluate changes in the nesting population size for glaucous gulls on 19 islands, for which data were collected using consistently similar methods over a number of years. Three blocks of years were used in this analysis (Table 14, Noel et al. in prep.). Results of this that include the 2002 are different from those in Noel et al. (in prep.). The addition of the 2002 data have changed the results of the t-test for the periods 1970-1974 (77.6 ± 10.48 nests/year) to 1987-2002 (132.4 ± 63.16 nests/year) from statistically significant (t = , -5.79, df = 4, P = 0.004, Noel et al. in prep.) to non-significant (t = -2.37, df = 4, P = 0.076). The mean annual number of glaucous gull nests for the 19 islands was not different between 1975-1985 (n = 5 years) and 1987-2002 (n=6 years, t = 0.61, df = 8, P = 0.559, Noel et al. in prep.).

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 area of individual islands is unclear.

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 islands searched during 2002, except on Pole Island. Some small patches of beach rye grass were also noted on Cross Island. Most nests with vegetation cover during 2002 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 2000 and 2001 (Noel et al. 2001, 2002). 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). Nest depredation was too extensive during 2002 to make this comparison (Tables 3 and 4).

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 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. While common eiders appear to prefer medium to high elevation sites, glaucous gulls appear to prefer medium to low elevation nest sites; and glaucous gulls use high-density driftwood habitats less frequently than expected (Table 9 and 10).

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. During 2002, arctic foxes were responsible for 40% of nest depredation, polar bears 27%, glaucous gulls 15%, and a combination of these predators 18% of depredated nests.

The total destruction of all nests on Pole Island in 2001 by an arctic fox indicates that cover probably provides no protection 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. Polar bears may be less efficient as nest predators; 11 active common eider nests survived on Cross Island and 6 on No Name Island 1 day after a polar bear was sighted on Cross Island. Cover is probably most important when the primary predators are gulls, common ravens (*Corvis corax*) and jaegers (*Stercorarius* spp.). 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 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 13). However, Duck Island #1&2, adjacent to the causeway, appears to support numerous common eider nests (Table 13). 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), arctic fox and glaucous gulls in 2001 (Noel et al. 2002), and arctic fox, polar bear and glaucous gulls in 2002. The arctic fox present on the contiguous Jones-

Return Islands (Long Island to Bertoncini 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 from remaining adjacent offshore ice, after most nests had been initiated. An arctic fox may have been present during nest initiation during 2002 on Pole Island; common eider nesting effort during 2002 was 29% of the effort during 2001 (279 nests in 2001, 82 nests in 2002, Noel et al. 2002, Table 3).

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 feed little or not at all 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 3) and variability likely accounts for 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). The connection between Belvedere and Pole islands in both 2001 and 2002 allowed a fox to depredate every nest on these islands.

Polar bear depredation appears to be increasing on nesting common eiders (Noel et al. 1999a, 2001, 2002; Noel and Johnson 2000; Table 1). Intense depredation by polar bears and arctic foxes may lead to shifts in nesting distributions of common eiders; marked common eider hens which nested on Challenge and Alaska islands during 2001 were found nesting on small isolated spits along the mainland shoreline during 2002 (John Reed, USGS ASC, pers. comm.).

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 grizzly bears, and polar bears. These anthropogenic 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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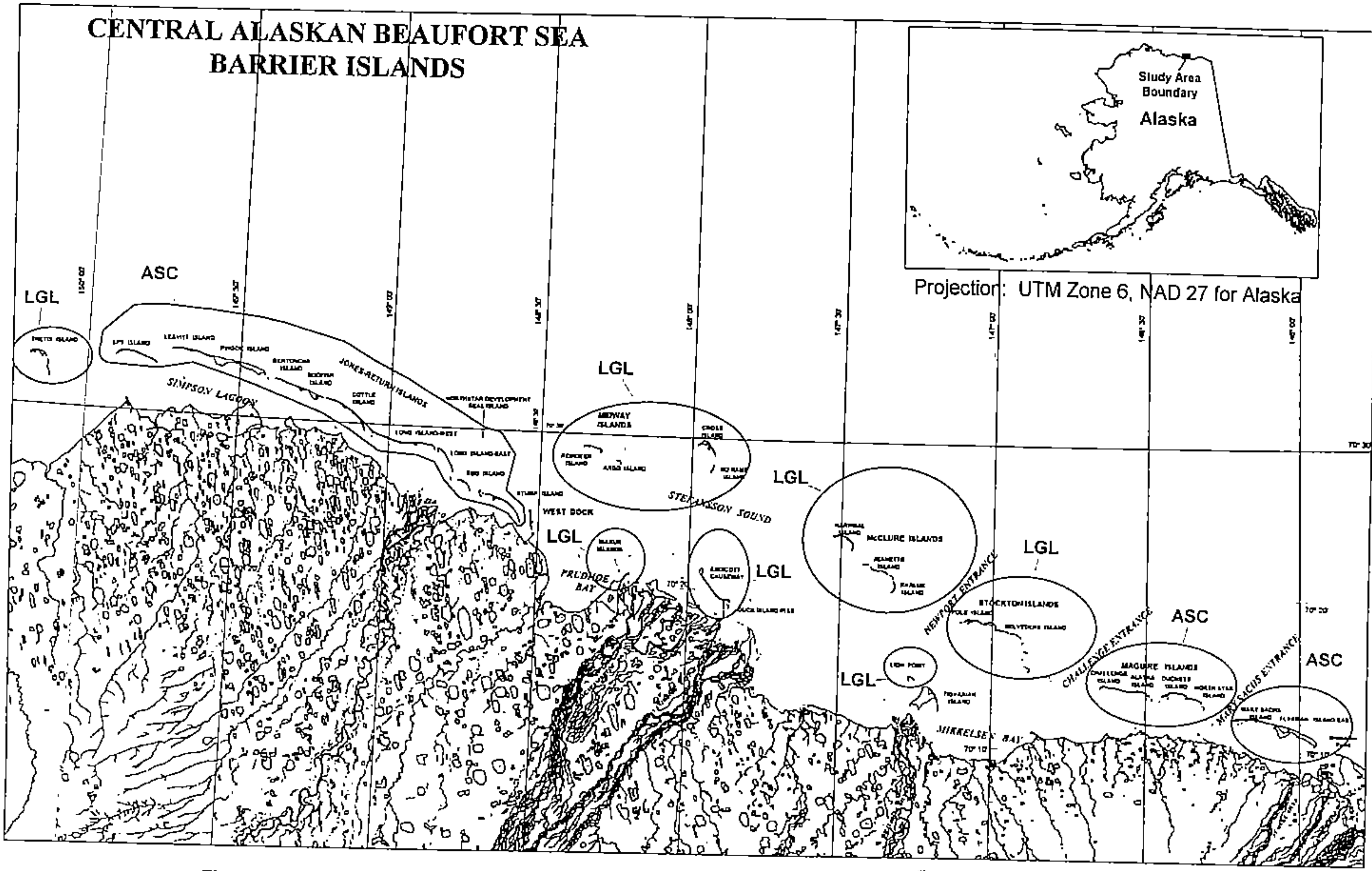

Figure 1. Search area for barrier island nesting birds from Thetis Island to Flaxman Island, central Alaskan Beaufort Sea, 1970-2002. Islands searched by LGL Alaska Research Associates, Inc. (LGL) and U.S. Geological Survey, Alaska Science Center (ASC) during 2002 are circled.

Photo by Lynn Noel

Nest search crew and helicopter on Cross Island, 15 July 2002.

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.

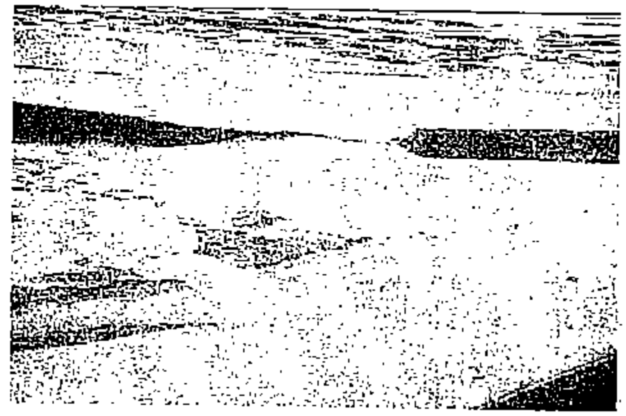

Photo by Lynn Noel

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

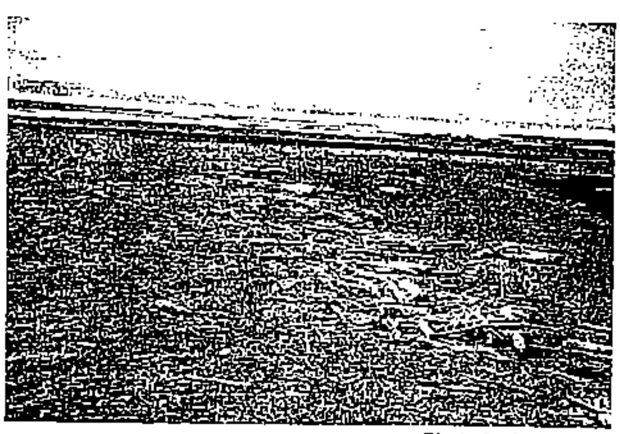

Photo by Lynn Noel

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

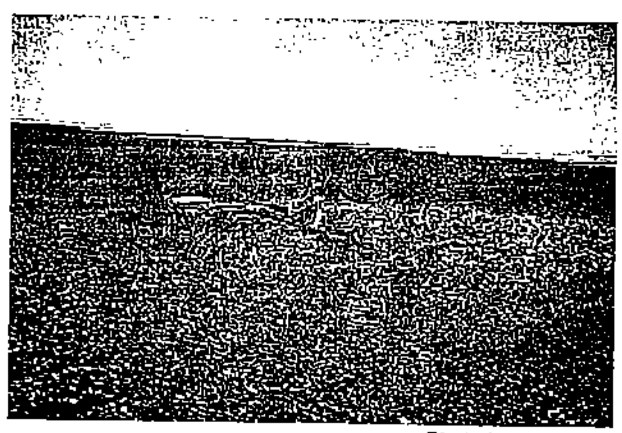

Photo by Lynn Noel

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 1999-2002.

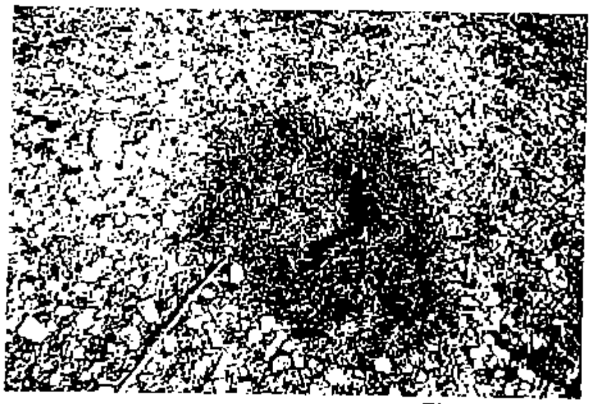

Photo by Lynn Noel

Artemesia glomerata, no driftwood, Cross Island, 16 July 2001.

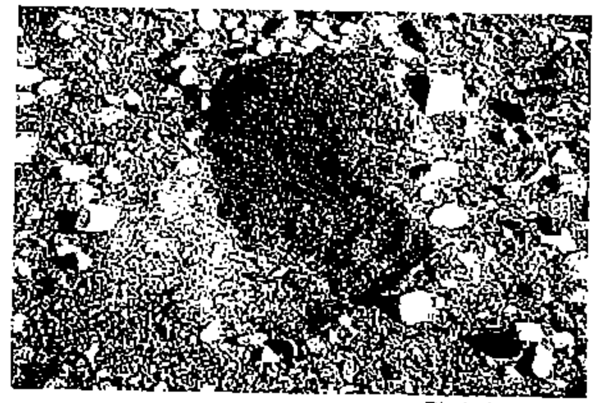

Photo by Lynn Noel

Aerenaria sp., no driftwood, Pole Island, 12 July 2000.

Photo by Bob Rodrigues

Elymus arenarius, low driftwood, Pole Island, 14 July 2001.

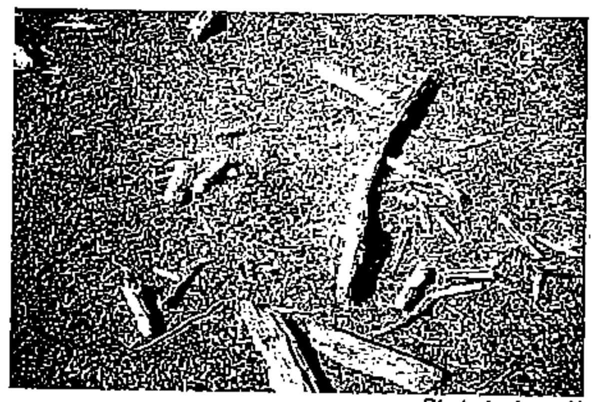

Photo by Lynn Noel

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.

Figure 3. Examples of common eider nest cover types, central Alaskan Beaufort Sea barrier islands, July 1998–2002.

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 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 1998-2002.

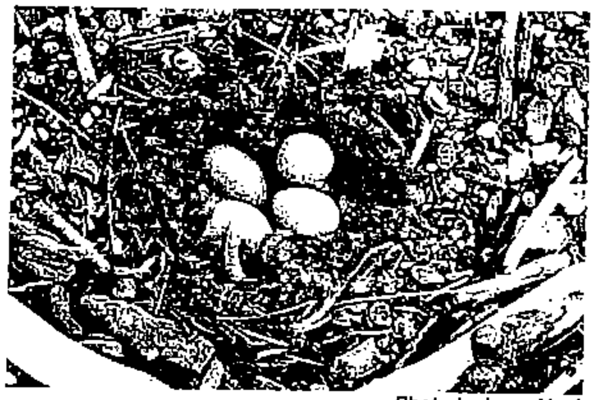

Photo by Lynn Noel

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 1999-2002.

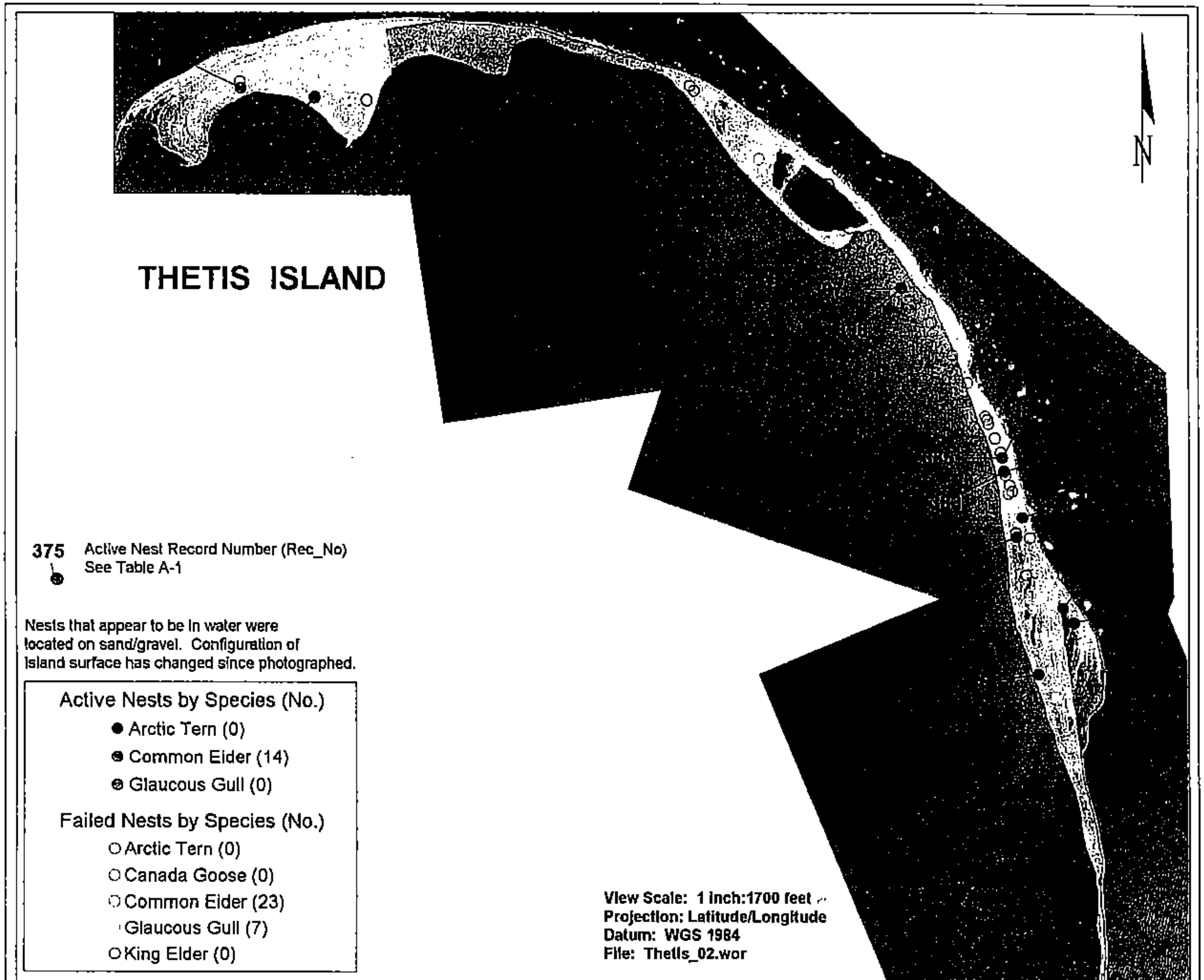

Figure 6. Distribution of active and failed nests on Thetis Island, central Alaskan Beaufort Sea, 13 July 2002.

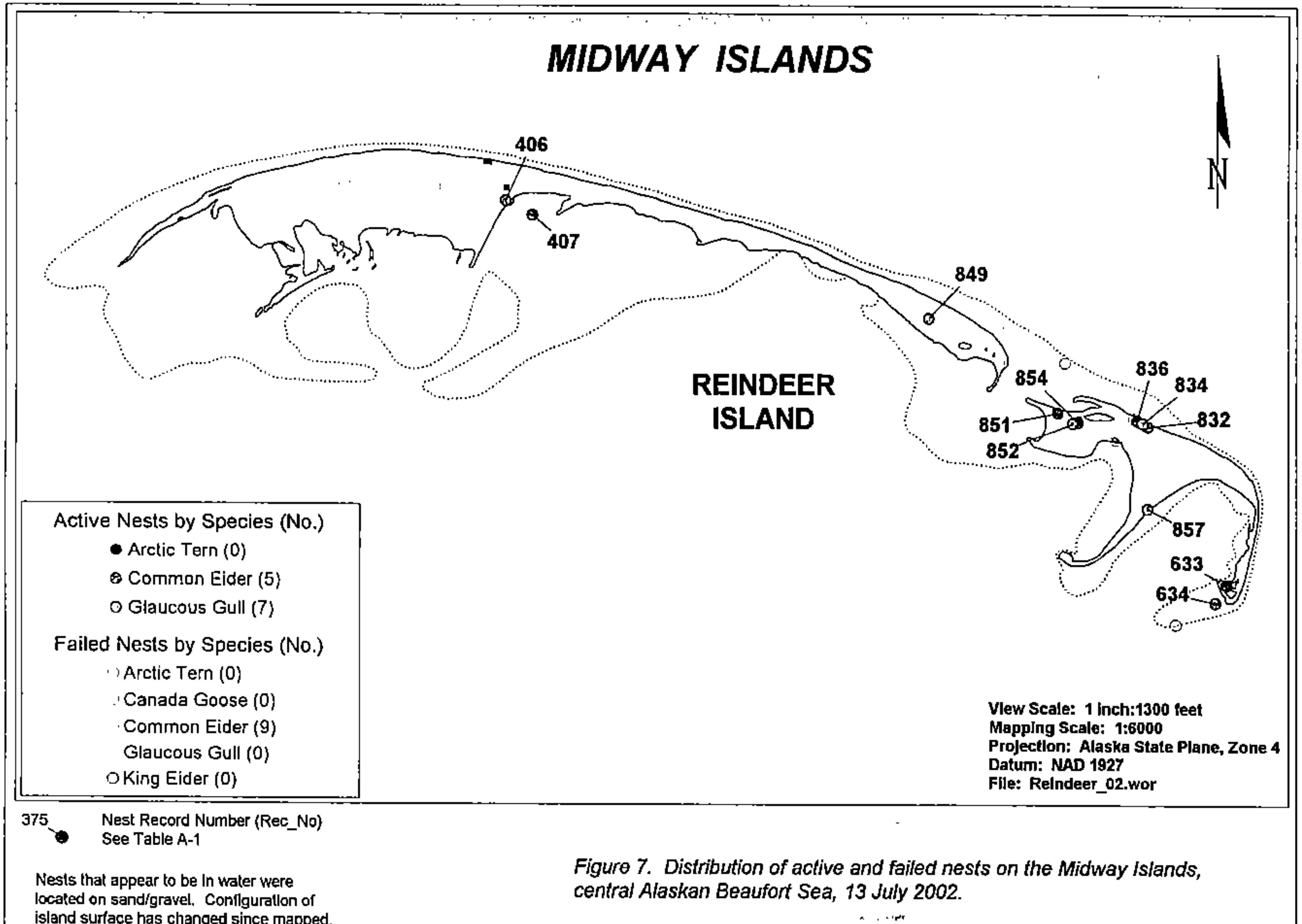

Figure 7. Distribution of active and failed nests on the Midway Islands, central Alaskan Beaufort Sea, 13 July 2002.

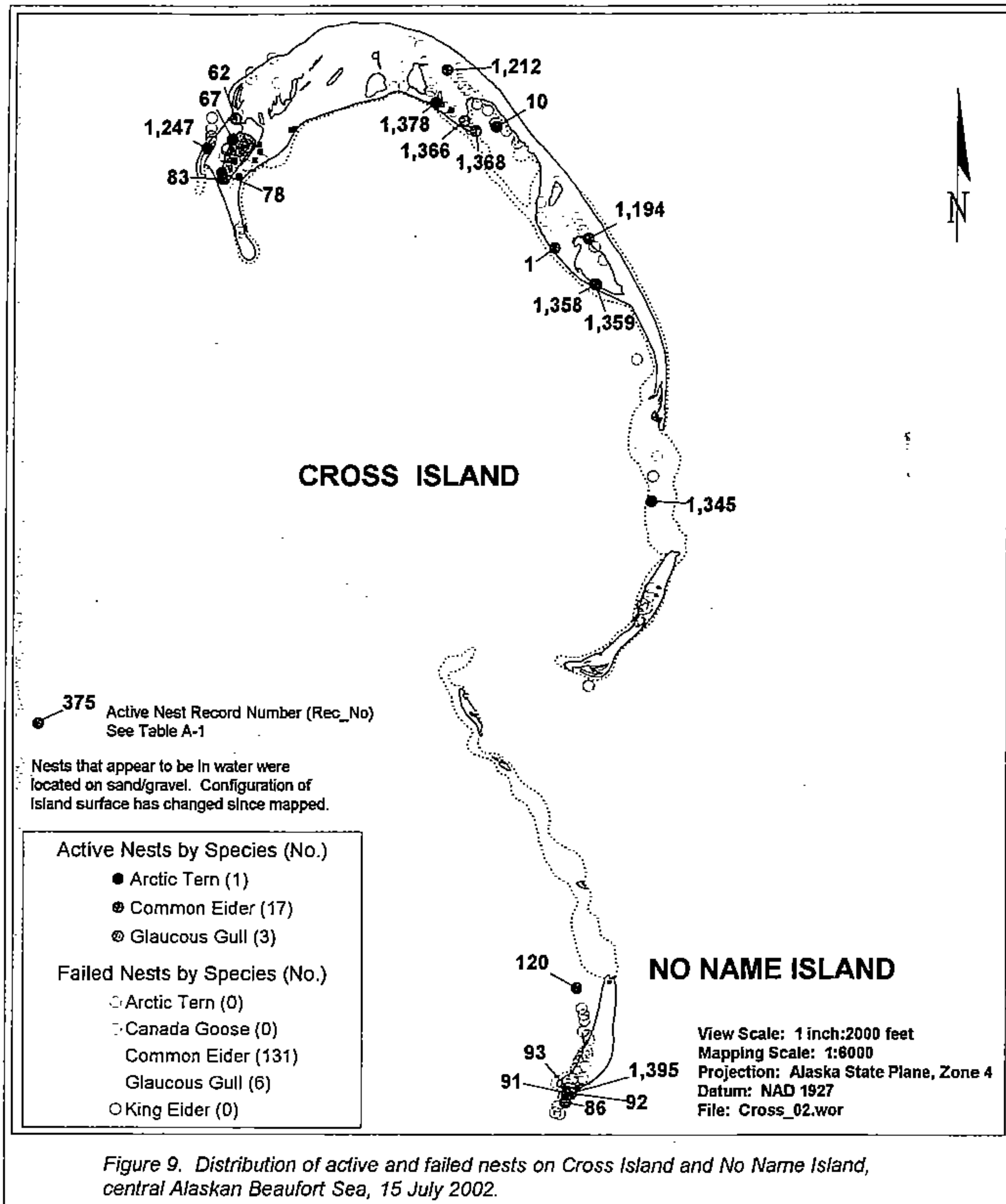

Figure 9. Distribution of active and failed nests on Cross Island and No Name Island, central Alaskan Beaufort Sea, 15 July 2002.

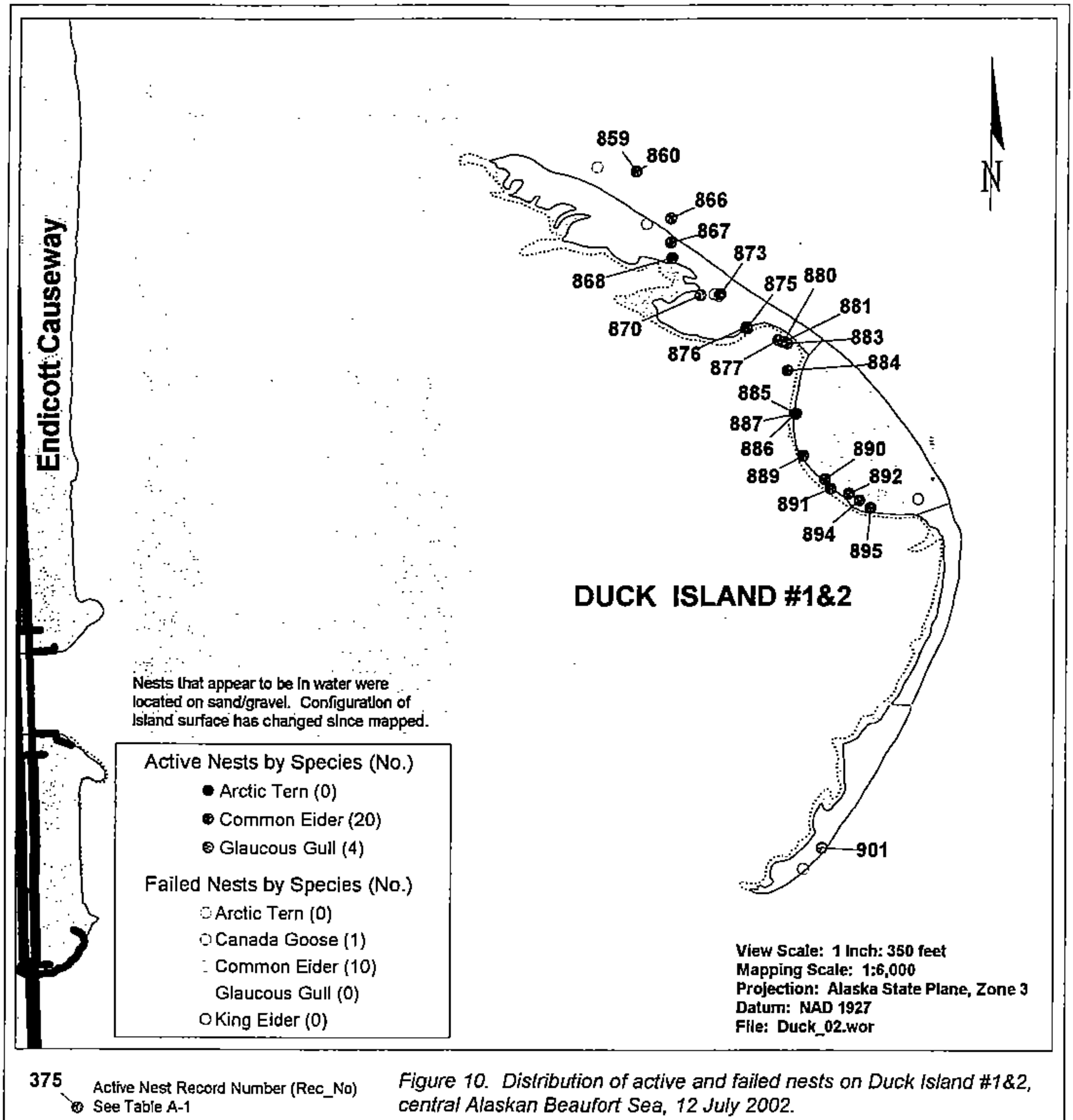

Figure 10. Distribution of active and failed nests on Duck Island #1&2, central Alaskan Beaufort Sea, 12 July 2002.

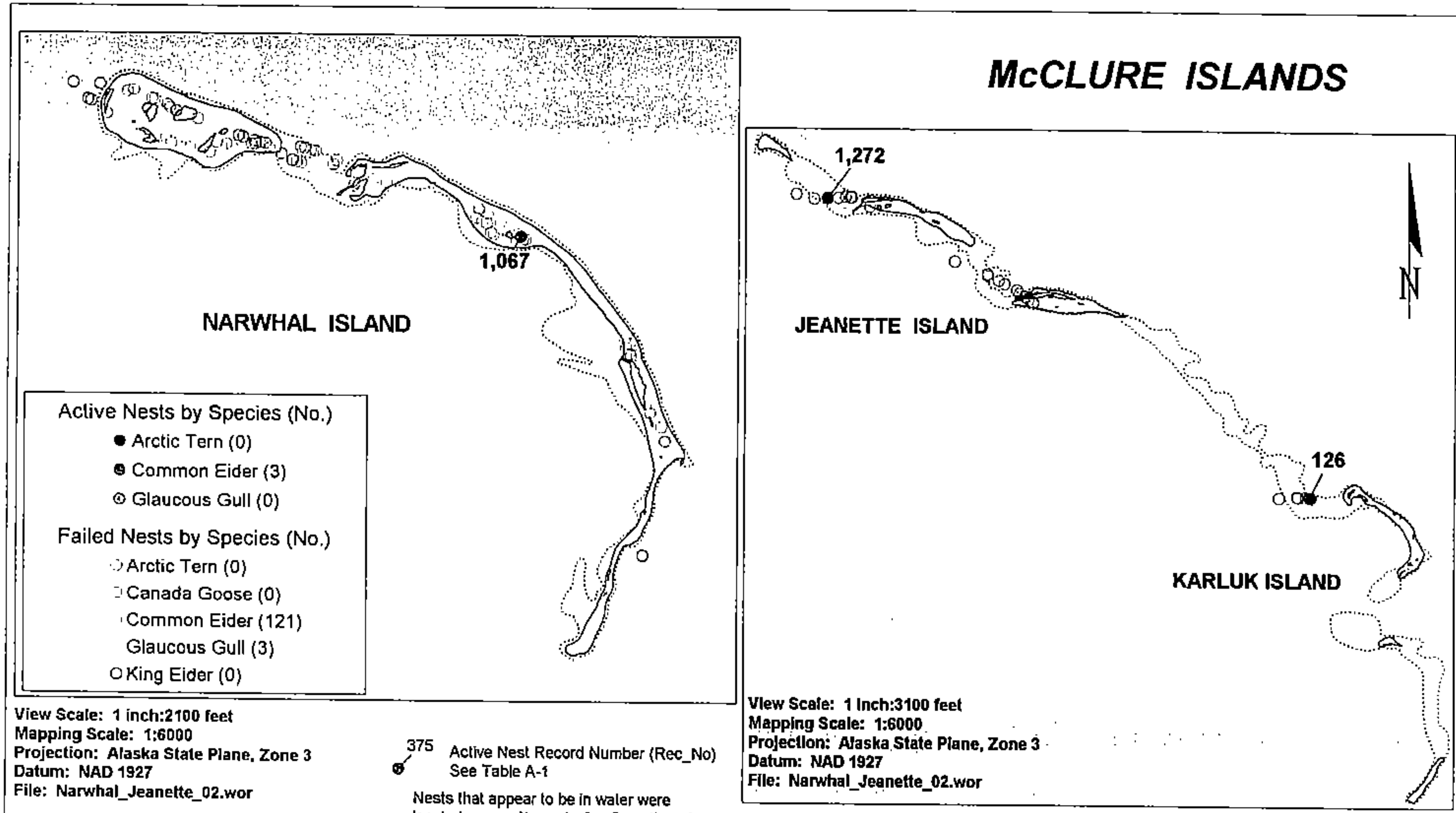

Figure 11. Distribution of active and failed nests on the McClure Islands, central Alaskan Beaufort Sea, 14-15 July 2002.

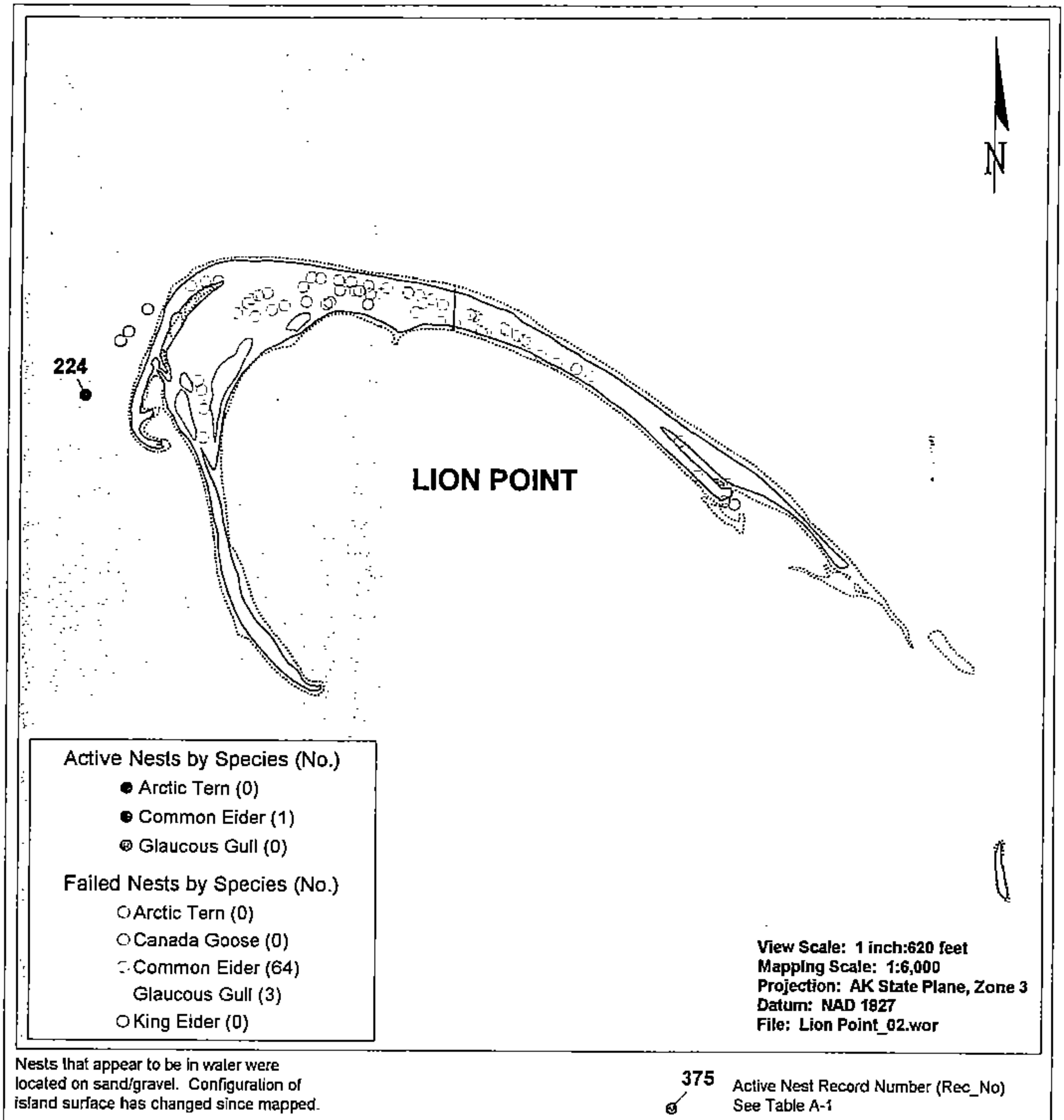

Figure 12. Distribuion of active and failed nests on Lion Point, near Tigvariak Island, central Alaskan Beaufort Sea, 15 July 2002.

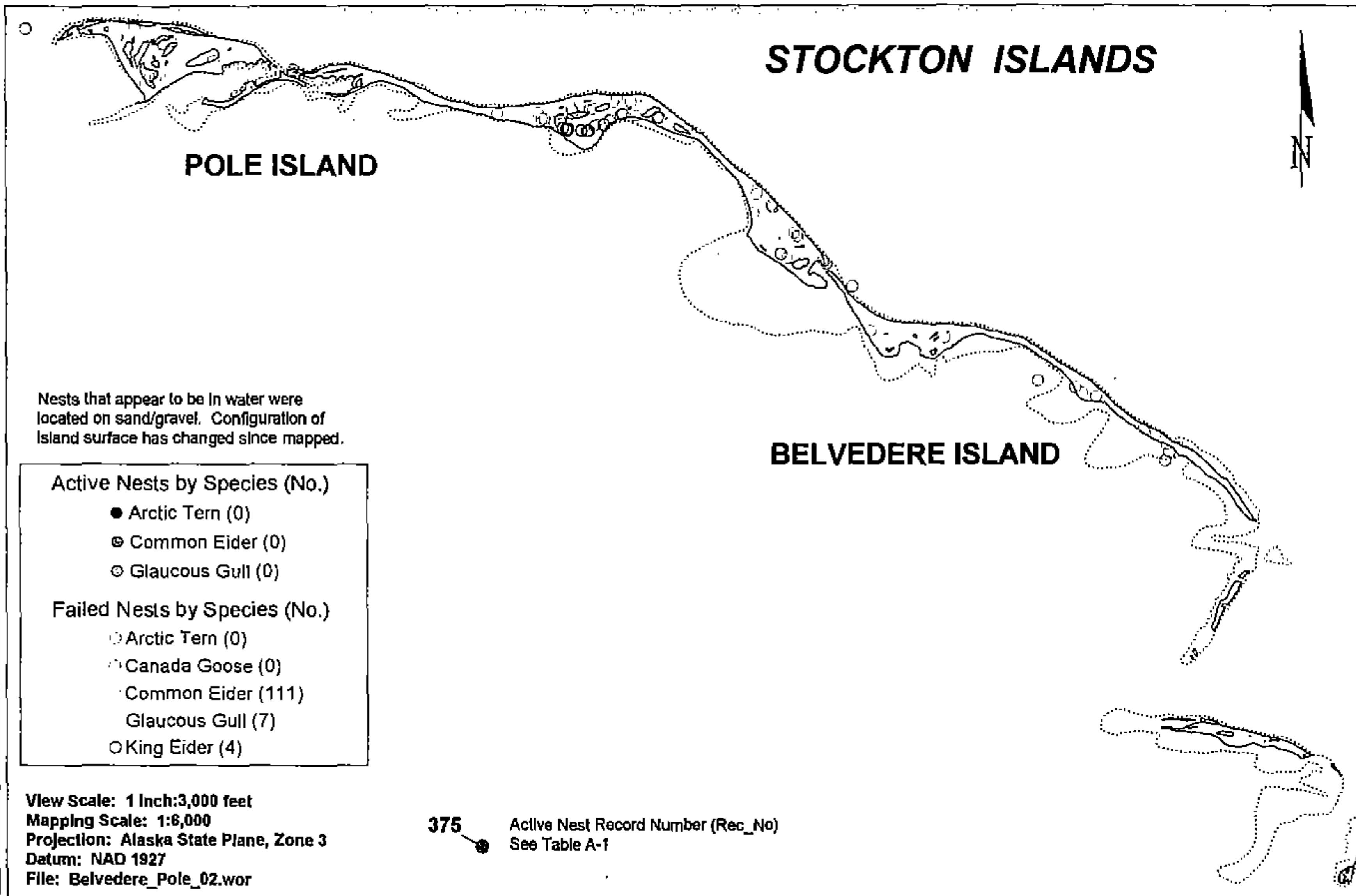

Figure 13. Distribution of active and failed nests on the Stockton Islands, central Alaskan Beaufort Sea, 14 July 2002.

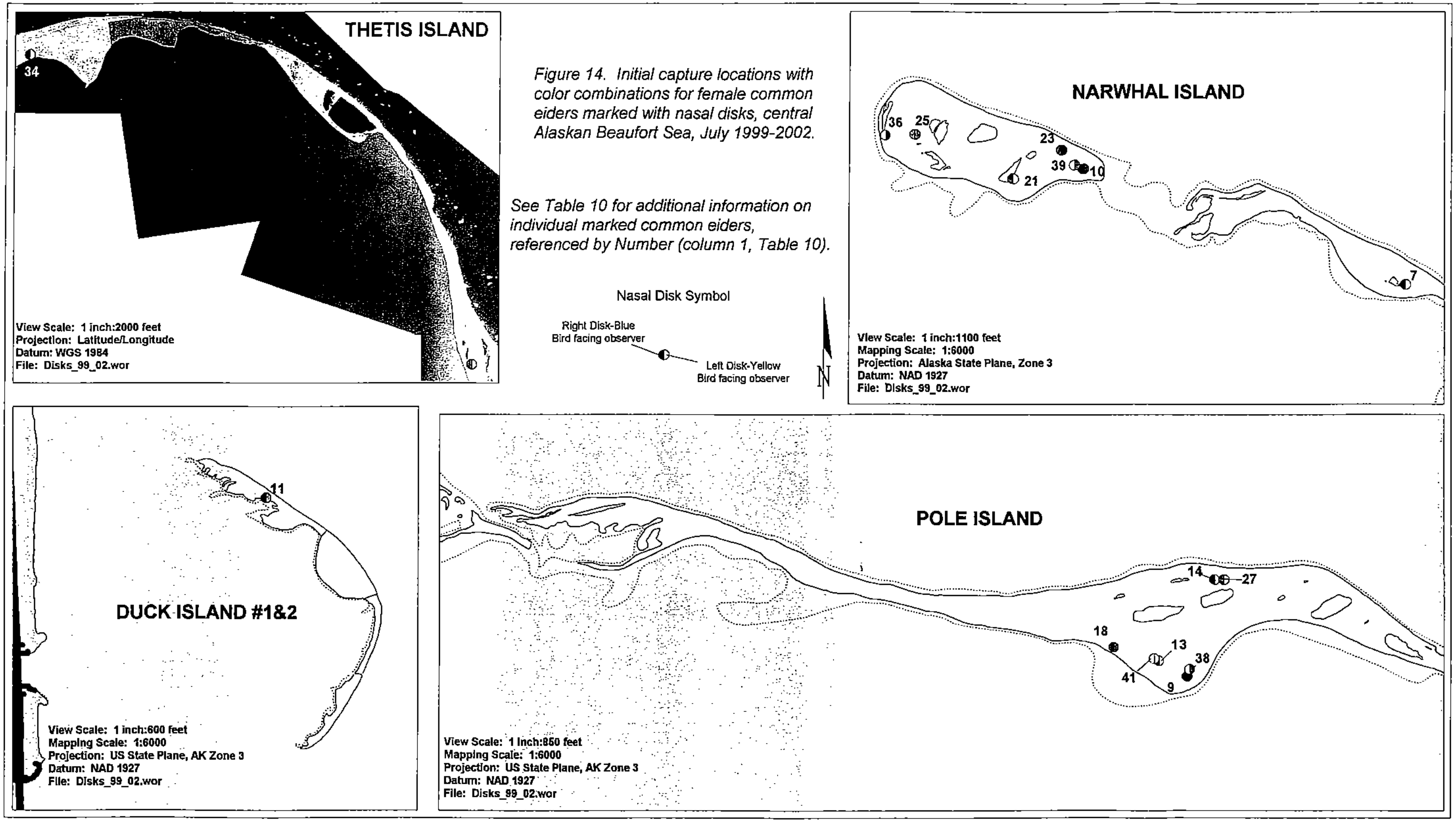

Figure 14. Initial capture locations with color combinations for female common eiders marked with nasal disks, central Alaskan Beaufort Sea, July 1999-2002.

See Table 10 for additional information on individual marked common eiders, referenced by Number (column 1, Table 10).

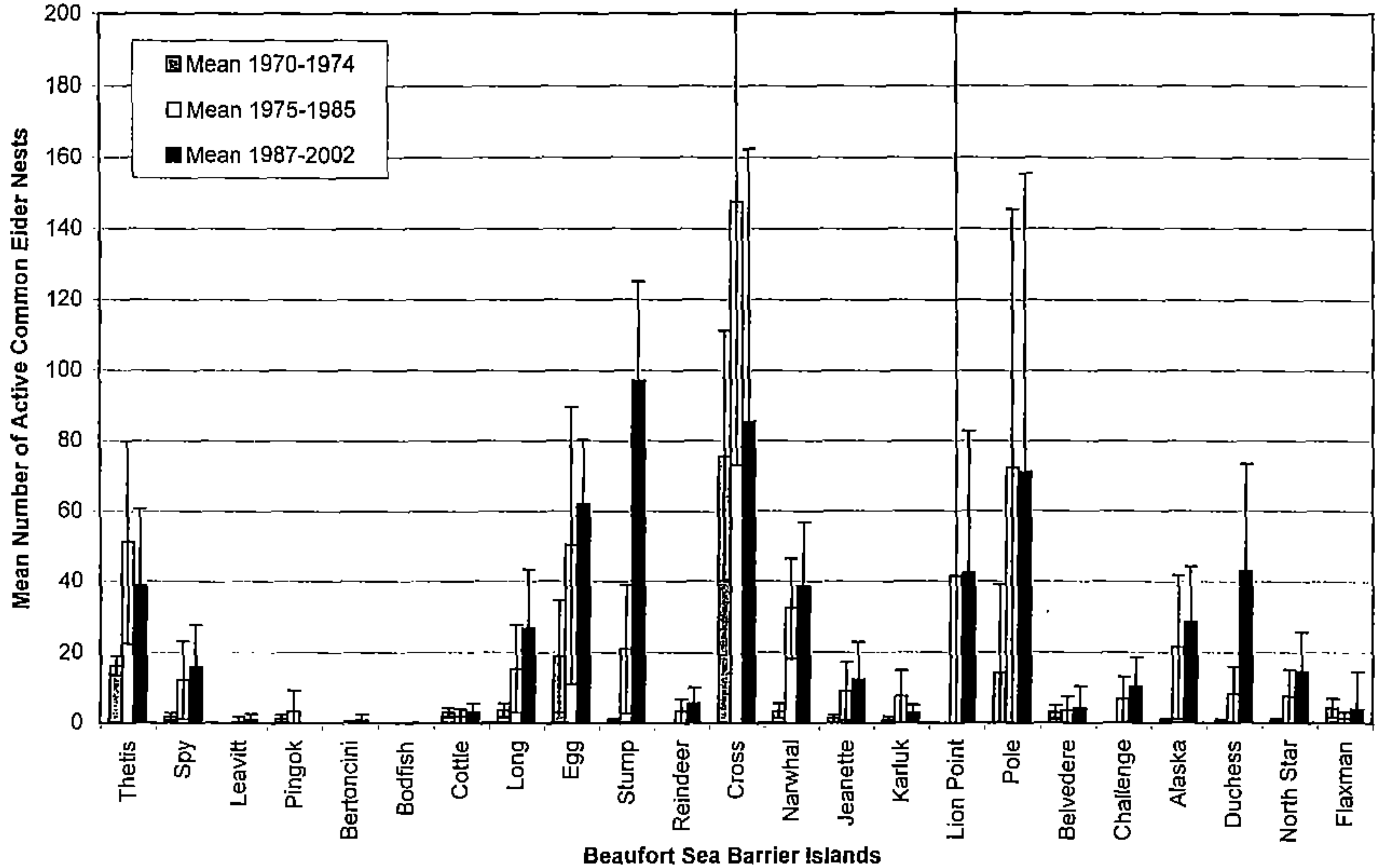

Figure 15. Mean number (with 95% confidence intervals) of active common eider nests by island during 3 time periods 1970-1974, 1975-1985, and 1987-2002 for the central Alaskan Beaufort Sea barrier islands (Table 12). Most islands have at least 3 years of data during each time period; a few islands have no data for the period 1970-1974. See Table 12 for citation of data sources.

Table 3. Productivity and fate of common eider nests on barrier islands along the central Alaskan Beaufort Sea coast from Thetis Island to the Stockton Islands, 9-15 July 2002.

Island	Nests[1]	Active Nests[2]	Active Nest Density (No./ha)	Mean Clutch Size[3]	Failed Nests		Predator[5]			
					Depredated	% of Nests Depredated[4]	Arctic Fox	Glaucous Gull	Polar Bear	Multiple Predators[6]
Thetis Island (51.5 ha)	37	14	0.27	3.5±1.05(n=6)	23	62.2	0	4	0	8
Reindeer Island (35.0 ha)	14	5	0.14	3(n=2)	9	64.3	0	9	0	0
Niakuk A&B (4.5 ha)	25	6	1.33	2.5(n=2)	19	76.0	0	19	0	0
Niakuk #1&2 (0.9 ha)	16	3	3.33		13	81.3	0	13	0	0
Niakuk #4,5&6 (1.0 ha)	31	19	19.00	3.8±0.86(n=5)	12	38.7	0	12	0	0
Cross Island (57.9 ha)	101	11	0.19	2.9±.99(n=8)	90	89.1	57	0	5	23
No Name (5.0 ha)	47	6	1.20	3.3±1.50(n=4)	41	87.2	0	0	20	13
Duck Island #1&2 (2.1 ha)	30	20	9.52	2.1±1.35(n=7)	10	33.3	0	10	0	0
Narwhal Island (37.7 ha)	92	1	0.03	2(n=1)	91	98.9	0	2	89	0
Jeanette Island (17.2 ha)	24	1	0.06		23	95.8	0	0	8	14
Karluk Island (1.7 ha)	8	1	0.59		7	87.5	0	0	0	6
Lion Point (5.9 ha)	65	1	0.17		64	98.5	35	2	5	22
Pole Island (71.3 ha)	82	0	0.00		82	100.0	76	4	2	0
Belvedere Island (29.3 ha)	29	0	0.00		29	100.0	29	0	0	0

[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.

[6] Multiple predators were present on the island and the type of predation for some nests could not be determined.

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, 9–15 July 2002.

Species and Nest		Midway Islands	Niakuk Islands						Duck	McClure Islands				Stockton Islands		Total Nests
Information[1]	Thetis	Reindeer	A	B	#1&2	#4,5&6	Cross	No Name	Island #1&2	Narwhal	Jeanette	Karluk	Lion Point	Pole	Belvedere	and Scrapes
Common Eider																
Active Nests	14	5	6	0	3	19	11	6	20	1	1	1	1	0	0	88
Failed Nests	23	9	19	0	13	12	90	41	10	91	23	7	64	82	29	513
Nest Scrapes	40	25	9	3	3	3	125	23	5	137	30	14	62	132	60	671
Total Effort	77	39	34	3	19	34	226	70	35	229	54	22	127	214	89	1272
% Effort by Island	6	3	3	0	1	3	18	6	3	18	4	2	10	17	7	100
Glaucous Gull																
Active Nests	0	7	19	15	1	2	3	0	4	0	0	0	0	0	0	51
Failed Nests	7	0	4	1	0	0	6	0	0	2	1	0	3	5	2	31
Nest Scrapes	1	3	19	1	4	0	1	0	4	0	0	1	1	0	0	35
Total Effort	8	10	42	17	5	2	10	0	8	2	1	1	4	5	2	117
% Effort by Island	7	9	36	15	4	2	9	0	7	2	1	1	3	4	2	100
Arctic Tern																
Active Nests	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Failed Nests	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nest Scrapes	0	0	0	0	0	0	2	0	0	0	4	3	0	0	10	19
Total Effort	0	0	0	0	0	0	3	0	0	0	4	3	0	0	10	20
% Effort by Island	0	0	0	0	0	0	15	0	0	0	20	15	0	0	50	100
All Species[2]																
Active Nests	14	12	25	15	4	21	15	6	24	1	1	1	1	0	0	140
Failed Nests	30	9	23	1	13	12	96	41	11	93	24	7	67	91	31	549
Nest Scrapes	41	28	28	4	7	3	128	23	9	137	34	18	63	132	70	725
Total Effort for All Species	85	49	76	20	24	36	239	70	44	231	59	26	131	223	101	1414
% Effort by Island for All Species	6	3	5	1	2	3	17	5	3	16	4	2	9	16	7	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, 1 failed Canada goose nest on Duck Island #1&2, and 4 failed king eider nests on Pole Island.

Table 3. Productivity and fate of common eider nests on barrier islands along the central Alaskan Beaufort Sea coast from Thetis Island to the Stockton Islands, 9-15 July 2002.

Island	Nests[1]	Active Nests[2]	Active Nest Density (No./ha)	Mean Clutch Size[3]	Failed Nests: Depredated	Failed Nests: % of Nests Depredated[4]	Predator[5]: Arctic Fox	Predator[5]: Glaucous Gull	Predator[5]: Polar Bear	Predator[5]: Multiple Predators[6]
Thetis Island (51.5 ha)	37	14	0.27	3.5±1.05(n=6)	23	62.2	0	4	0	8
Reindeer Island (35.0 ha)	14	5	0.14	3(n=2)	9	64.3	0	9	0	0
Niakuk A&B (4.5 ha)	25	6	1.33	2.5(n=2)	19	76.0	0	19	0	0
Niakuk #1&2 (0.9 ha)	16	3	3.33		13	81.3	0	13	0	0
Niakuk #4,5&6 (1.0 ha)	31	19	19.00	3.8±0.86(n=5)	12	38.7	0	12	0	0
Cross Island (57.9 ha)	101	11	0.19	2.9±.99(n=8)	90	89.1	57	0	5	23
No Name (5.0 ha)	47	6	1.20	3.3±1.50(n=4)	41	87.2	0	0	20	13
Duck Island #1&2 (2.1 ha)	30	20	9.52	2.1±1.35(n=7)	10	33.3	0	10	0	0
Narwhal Island (37.7 ha)	92	1	0.03	2(n=1)	91	98.9	0	2	89	0
Jeanette Island (17.2 ha)	24	1	0.06		23	95.8	0	0	8	14
Karluk Island (1.7 ha)	8	1	0.59		7	87.5	0	0	0	6
Lion Point (5.9 ha)	65	1	0.17		64	98.5	35	2	5	22
Pole Island (71.3 ha)	82	0	0.00		82	100.0	76	4	2	0
Belvedere Island (29.3 ha)	29	0	0.00		29	100.0	29	0	0	0

[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.

[6] Multiple predators were present on the island and the type of predation for some nests could not be determined.

Table 4. Productivity and fate of glaucous gulls and other waterbird nests on barrier islands along the central Alaskan Beaufort Sea coast from Thetis Island to the Stockton Islands, 9-15 July 2002.

					Failed Nests		Predator[5]			
Island and Species	Nests[1]	Active Nests[2]	Active Nest Density (No./ha)	Mean Clutch Size[3]	Depredated	% of Nests Depredated[4]	Arctic Fox	Glaucous Gull	Polar Bear	Multiple Predators[6]
Thetis Island (51.5 ha)										
Glaucous Gull	7	0	0.00		7	100.0	0	0	0	3
Reindeer Island (35.0 ha)										
Glaucous Gull	7	7	0.20	2(n=1)	0	0.0	0	0	0	0
Niakuk A&B (4.5 ha)										
Glaucous Gull	39	34	7.56	2.2±1.04(n=5)	5	12.8	0	5	0	0
Niakuk #1&2 (0.9 ha)										
Glaucous Gull	1	1	1.11		0	0.0	0	0	0	0
Niakuk #4,5&6 (1.0 ha)										
Glaucous Gull	2	2	2.00		0	0.0	0	0	0	0
Cross Island (57.9 ha)										
Glaucous Gull	9	3	0.05	1(n=1)	6	66.7	3	0	1	2
Arctic Tern	1	1	0.02	1(n=1)	0	0.0	0	0	0	0
Duck Island #1&2 (2.1 ha)										
Glaucous Gull	4	4	1.90		0	0.0	0	0	0	0
Narwhal Island (37.7 ha)										
Glaucous Gull	2	0	0.00		2	100.0	0	0	2	0
Jeanette Island (17.2 ha)										
Glaucous Gull	1	0	0.00		1	100.0	0	0	1	0
Lion Point (5.9 ha)										
Glaucous Gull	3	0	0.00		3	100.0	3	0	0	0
Pole Island (71.3 ha)										
Glaucous Gull	5	0	0.00		5	100.0	5	0	0	0
King Eider	4	0	0.00		4	100.0	4	0	0	0
Belvedere Island (29.3 ha)										
Glaucous Gull	2	0	0.00		2	100.0	2	0	0	0

[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.

[6] Multiple predators were present on the island and the type of predation for some nests could not be determined.

Table 5. 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 2002.

Island or Island Group	Island Surface 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	52	0.169	14	6	0.412	0.189	0.634	>Expected
Reindeer	35	0.114	5	4	0.147	-0.013	0.307	Within
Cross	58	0.189	11	6	0.324	0.112	0.535	Within
McClure	55	0.179	3	6	0.088	-0.040	0.217	Within
Lion Point	6	0.020	1	1	0.029	-0.047	0.106	Within
Stockton	101	0.329	0	11	0.000	0.000	0.000	<Expected
Island Area Total	307	1.000	34	34	1.000			

[1] χ^2 for observed versus expected number of common eiders per island ($\chi^2 = 28.30$, df = 5, $P < 0.001$).

[2] Expected number based on available island surface area.

Table 6. 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 2002.

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	14	4	0.412	0.189	0.634	>Expected
Reindeer	3.5	0.072	5	2	0.147	-0.013	0.307	Within
Cross	11.6	0.238	11	8	0.324	0.112	0.535	Within
McClure	3.9	0.080	3	3	0.088	-0.040	0.217	Within
Lion Point	0.3	0.006	1	0	0.029	-0.047	0.106	Within
Stockton	24.2	0.497	0	17	0.000	0.000	0.000	<Expected
Island Area Total	48.7	1.000	34	34	1.000			

[1]χ^2 for observed versus expected number of common eiders per island ($\chi^2 = 53.24$, df = 5, $P < 0.001$).

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

Table 7. 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 2002.

Island or Island Group	Island Surface Area (ha)	Proportion of Total Area	Observed Number of Active and Predated Common Eider Nests[1]	Expected Number of Active and Predated 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	52	0.169	37	77	0.082	0.048	0.116	<Expected
Reindeer	35	0.114	14	52	0.031	0.009	0.052	<Expected
Cross	58	0.189	101	85	0.223	0.172	0.275	Within
McClure	55	0.179	124	81	0.274	0.219	0.330	>Expected
Lion Point	6	0.020	65	9	0.144	0.100	0.187	>Expected
Stockton	101	0.329	111	149	0.246	0.192	0.299	<Expected
Island Area Total	307	1.000	452	452	1.000			

[1]χ^2 for observed versus expected number of common eiders per island ($\chi^2 = 440.15$, df = 5, $P < 0.001$).

[2]Expected number based on available island surface area.

Table 8. 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 2002.

Island or Island Group	Habitat Area (ha)	Proportion of Total Area	Observed Number of Active and Predated Common Eider Nests[1]	Expected Number of Active and Predated Common Eider Nests[2]	Proportion Observed on Each Island	Confidence Interval on Proportion of Occurrence (95% Confidence Interval) Lower	Confidence Interval on Proportion of Occurrence (95% Confidence Interval) Upper	Comparison of Proportion of Total Area with Confidence Interval
Thetis	5.2	0.107	37	48	0.082	0.048	0.116	Within
Reindeer	3.5	0.072	14	32	0.031	0.009	0.052	<Expected
Cross	11.6	0.238	101	108	0.223	0.172	0.275	Within
McClure	3.9	0.080	124	36	0.274	0.219	0.330	>Expected
Lion Point	0.3	0.006	65	3	0.144	0.100	0.187	>Expected
Stockton	24.2	0.497	111	225	0.246	0.192	0.299	<Expected
Island Area Total	48.7	1.000	452	452	1.000			

[1]χ^2 for observed versus expected number of common eiders per island ($\chi^2 = 1674.17$, df = 5, $P < 0.001$).

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

Table 9. Summary of driftwood density at nest sites on barrier islands along the central Alaskan Beaufort Sea coast from Thetis Island to Belvedere Island, 9-15 July 2002.

	Driftwood Density[1]										Total
	High Density		Medium Density		Low Density		No Driftwood		Buildings		Nests &
Island and Species	Nests	Scrapes	Nests	Scrapes	Nests	Scrapes	Nests	Scrapes	Nests	Scrapes	Scrapes
Thetis Island											
Common Eider	6	6	9	11	22	23	0	0	0	0	77
Glaucous Gull	0	0	1	0	6	1	0	0	0	0	8
Reindeer Island											
Common Eider	0	0	7	7	7	18	0	0	0	0	39
Glaucous Gull	0	0	3	1	3	1	1	1	0	0	10
Niakuk A&B											
Common Eider	0	0	8	1	14	8	3	3	0	0	37
Glaucous Gull	0	0	4	0	14	3	21	17	0	0	59
Niakuk #1&2											
Common Eider	0	0	8	1	8	2	0	0	0	0	19
Glaucous Gull	0	0	0	1	1	3	0	0	0	0	5
Niakuk #4,5&6											
Common Eider	0	0	13	0	18	3	0	0	0	0	34
Glaucous Gull	0	0	0	0	2	0	0	0	0	0	2
Cross Island											
Common Eider	6	0	33	38	48	71	14	15	0	0	225
Glaucous Gull	0	0	5	1	4	0	0	0	0	0	10
Arctic Tern	0	0	0	0	1	2	0	0	0	0	3
No Name Island											
Common Eider	3	0	23	8	20	14	1	1	0	0	70
Duck Island #1&2											
Common Eider	4	0	14	2	10	3	2	0	0	0	35
Glaucous Gull	0	0	1	0	1	3	2	1	0	0	8
Canada Goose	0	0	1	0	0	0	0	0	0	0	1
Narwhal Island											
Common Eider	11	6	43	40	30	89	4	2	4	0	229
Glaucous Gull	1	0	0	0	0	0	1	0	0	0	2
Jeanette Island											
Common Eider	1	1	13	9	10	20	0	0	0	0	54
Glaucous Gull	0	0	0	0	0	0	1	0	0	0	1
Arctic Tern	0	0	0	0	0	4	0	0	0	0	4
Karluk Island											
Common Eider	1	3	6	5	1	6	0	0	0	0	22
Glaucous Gull	0	1	0	0	0	0	0	0	0	0	1
Arctic Tern	0	0	0	1	0	2	0	0	0	0	3
Lion Point											
Common Eider	13	3	27	30	25	29	0	0	0	0	127
Glaucous Gull	1	0	1	0	0	1	1	0	0	0	4
Pole Island											
Common Eider	24	24	23	41	26	53	9	14	0	0	214
Glaucous Gull	0	0	0	0	3	0	2	0	0	0	5
King Eider	0	0	3	0	1	0	0	0	0	0	4
Belvedere Island											
Common Eider	3	3	9	23	16	32	1	2	0	0	89
Glaucous Gull	1	0	0	0	1	0	0	0	0	0	2
Arctic Tern	0	0	0	4	0	6	0	0	0	0	10
Totals											
Common Eider	72	46	236	216	255	371	34	37	4	0	1271
Glaucous Gull	3	1	15	3	35	12	29	19	0	0	117
Arctic Tern	0	0	0	5	1	14	0	0	0	0	20

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

Table 10. Summary of relative elevations at nest sites on barrier islands along the central Alaskan Beaufort Sea coast from Thetis Island to Belvedere Island, 9-15 July 2002.

	Relative Elevation[1]						
	High Elevation		Medium Elevation		Low Elevation		Total Nests & Scrapes
Island and Species	Nests	Scrapes	Nests	Scrapes	Nests	Scrapes	
Thetis Island							
Common Eider	14	11	18	26	5	3	77
Glaucous Gull	0	0	6	0	1	1	8
Reindeer Island							
Common Eider	0	0	7	10	7	15	39
Glaucous Gull	2	0	3	0	2	3	10
Niakuk A&B							
Common Eider	5	1	5	6	15	5	37
Glaucous Gull	6	0	18	1	15	19	59
Niakuk #1&2							
Common Eider	0	0	5	0	11	3	19
Glaucous Gull	0	0	0	1	1	3	5
Niakuk #4,5&6							
Common Eider	9	0	8	0	14	3	34
Glaucous Gull	2	0	0	0	0	0	2
Cross Island							
Common Eider	39	51	52	65	10	8	225
Glaucous Gull	3	1	6	0	0	0	10
Arctic Tern	0	0	1	2	0	0	3
No Name Island							
Common Eider	0	2	47	21	0	0	70
Duck Island #1&2							
Common Eider	10	1	15	1	5	3	35
Glaucous Gull	0	0	2	1	2	3	8
Canada Goose	1	0	0	0	0	0	1
Narwhal Island							
Common Eider	40	34	39	84	13	19	229
Glaucous Gull	1	0	1	0	0	0	2
Jeanette Island							
Common Eider	2	4	21	22	1	4	54
Glaucous Gull	0	0	1	0	0	0	1
Arctic Tern	0	0	0	4	0	0	4
Karluk Island							
Common Eider	0	0	7	13	1	1	22
Glaucous Gull	0	0	0	1	0	0	1
Arctic Tern	0	0	0	3	0	0	3
Lion Point							
Common Eider	23	17	41	41	1	4	127
Glaucous Gull	3	0	0	1	0	0	4
Pole Island							
Common Eider	59	75	21	53	2	4	214
Glaucous Gull	3	0	2	0	0	0	5
King Eider	4	0	0	0	0	0	4
Belvedere Island							
Common Eider	12	31	15	22	2	7	89
Glaucous Gull	2	0	0	0	0	0	2
Arctic Tern	0	1	0	9	0	0	10
Totals							
Common Eider	213	227	301	364	87	79	1271
Glaucous Gull	22	1	39	5	21	29	117
Arctic Tern	0	1	1	18	0	0	20

[1] Estimated relative elevation for nests or scrapes above water level. High = ≥1m, Medium = 0.5 to 1m, Low = near water level.

Table 11. Female common eiders captured and marked with round colored nasal disks on barrier islands in the central Alaskan Beaufort Sea, July 1999-2002. Resightings of marked birds are also included in this table.

No.	Right Disk	Left Disk	USFWS Number	Status	Leg	Weight with bag (kg)	Culmen Short (mm)	Culmen Long (mm)	Ant. Nares Width (mm)	Bill Width at feather line (mm)	Rt. Tarsus (mm)	Date	Time ADST	Bag Wt. = 75 gm Location
7	Black	Yellow	134739003	New	Rt	1.9		69.2	14.5		51.2	13 Jul 01	11:40	Narwhal I., AK, Nest 37
9	Blue	Blue	103740029	New	Rt	1.7	48.4	63.5	15.3		50.7	14 Jul 00	~13:40	Pole I., AK, Driftwood along beach S of *Elymus*/Peat "hills"
10	Blue	Green	103740021	New	Rt	1.7	49.3			23.5	52.5	17 Jul 99	~13:30	Narwhal I., AK, Nest 11
11	Blue	Orange	134739006	New	Rt	1.6	49.1	58.7	16.1		50.4	12 Jul 02	`18:00	Duck I. #1&1, AK, Nest 20
13	Blue	White	103740030	New	Rt	1.7	47.1	59.9	13.5		52.4	14 Jul 00	~14:00	Pole I., AK, ~100 m W of capture locations for 103740028 and 103740029 (Could be White and Blue, not Blue and White)
14	Blue	Yellow	103740027	New	Rt	1.7	48.7	59.6			51.3	14 Jul 00	~11:00	Pole I., AK, Northernmost *Elymus*/Peat "hill"
18	Green	Orange	103740032	New	Rt	2.0	48.8	68.0	14.0		52.8	14 Jul 00	14:45	Pole I., AK, ~200 m W of capture locations for 103740028 and 103740029
21	Green	Yellow	103740023	New	Rt	2.0	42.0			22.1	51.5	17 Jul 99	~14:50	Narwhal I., AK, Nest 28
23	Orange	Blue	103740020	New	Rt	1.7	48.6				52.6	17 Jul 99	~13:08	Narwhal I., AK, Inside doorway of NW bldg along N beach
23	Orange	Blue	103740020	Resight	Rt							11 Jul 00	~15:00	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	103740024	New	Rt	2.2	46.9	63.9			51.5	11 Jul 00	~13:41	Narwhal I., AK, 75 m NE of big orange Mooring Buoy
25	Orange	Orange	103740024	Resight	Rt							13 Jul 01	11:05	Narwhal I., hen on Nest 25
27	Orange	White	103740026	New	Rt	1.5	40.3	57.5			49.6	14 Jul 00	~11:00	Pole I., AK, Northernmost *Elymus*/Peat "hill"
28	Orange	Yellow	103740025	New	Rt	1.9	45.6	64.0			51.9	13 Jul 00	~17:30	Thetis I., AK
34	Red	White	134739007	New	Rt	1.8	46.4	61.3	16.5		51.8	13 Jul 02	`15:40	Thetis I., AK, Nest 7
36	White	Black	103740033	New	Rt	2.0	44.0	60.4	15.4		50.9	13 Jul 01	15:58	Narwhal I., AK, Nest 142
38	White	Green	103740028	New	Rt	1.6	50.3	64.7			52.7	14 Jul 00	~13:00	Pole I., AK, Driftwood along beach S of *Elymus*/Peat "hills"
39	White	Orange	103740022	New	Rt	2.2	52.7			24.0	51.1	17 Jul 99	~14:50	Narwhal I., AK, Nest 39
41	White	White	103740031	New	Rt	1.9	44.4	63.1	13.5		50.6	14 Jul 00	~14:20	Pole I., AK, ~100 m W of capture locations for 103740028 and 103740029

Table 14. Glaucous gull nests counted on barrier islands along the central Alaskan Beaufort Sea coast, 1970-2002 (Table adopted from Noel et al. in prep.).

	Year of Census[1]																														
Location	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1982	1983	1984	1985	1986	1987	1988	1989	1990	1995	1996	1997	1998	1999	2000	2001	2002	*n*	Max.	Mean	SD
Thetis I. [2]	2	2	4	6	5	6	4		5	6	5	0	5	2	13	0	12	8							4	2	4	0	21	13	4.52	3.43
Spy I.	2	1	2	2	1	3	3	0	4			3	6	21	11	0	5	5							6	2	5	0	20	21	4.10	4.78
Leavitt I.	2	2	1	1	1	2	0		1				0	0	0	0	0								0	0	0	0	17	2	0.59	0.80
Pingok I.	0	0	0	0	0	0	0		0			0	0			0									0	0	0	0	15	0	0.00	0.00
Bertoncini I.	0	0	0	0	0	0	0	0				0	0	0	0	0									0	0	0	0	17	0	0.00	0.00
Bodfish I.	0	0	0	0	0	0	0	0	0			- 0	0		2	0									0	0	0	0	17	2	0.12	0.49
Cottle I.	2	1	2	3	2	3	0	0	1			0	0	0	4	0	6	1							0	0	0	0	20	6	1.25	1.68
Duck I. [3]	51	40	54	47	41	48	22							47	41	*52*	42		44	32	34	39	32	35	26	34	19	- 17	21	54	37.95	10.66
Long I.	1	3	3	4	3	4	24		27	27		0	34	10	18	^	15	30							1	0	2	1	19	34	10.89	11.90
Egg I.	2	16	3	3	3	5	21			16			35	32	22	*35*	22	24							15	2	21	9	18	35	15.89	11.46
Stump I. [4]	2	2	2	2	1	3	5		10	12			12	40	39	^	34	44									63	16	16	63	17.94	19.54
Gull I.	1	0	1	1	0	0			0				0	0															9	1	0.33	0.50
Reindeer I.	1	0	1	1	0	0	1						4	2	2		2	1							8	4	5	7	16	8	2.44	2.48
Argo I. [5]	1	0	1	0	0	0	2					2	1	3	2		3	2							0	0	0	0	17	3	1.00	1.12
Niakuk I. [6]	53	57	55	55	66	67	151		37						30	80												37	11	151	62.55	32.80
Cross I.	0	3	0	3	4	3	2					2	12	7	3		10	5									4	3	15	12	4.07	3.33
NoName I.	1	1	0	1	0	1	1					1	1	2	0		2	1										0	14	2	0.86	0.66
Narwhal I.	1	1	2	2	2	3	1						4	4	1		2	4							2	1	0	0	16	4	1.88	1.31
Pt. Brower Spits							81									40													2	81	60.50	28.99
Jeanette I.	2	1	1	1	0	1	0					1	4	2	2		2	1							1	1	1	0	17	4	1.24	0.97
Karluk I.	1	1	1	1	0	1	0					0	1	3	1		2	0							1	2		0	16	3	0.94	0.85
Lion Point							5								4	0	9	9								2	1	0	8	9	3.75	3.69
Pole I.	1	2	1	2	2	3	1			2		0	35	12	5		10	9								10	0	0	17	35	5.59	8.56
Cold I.	1	1	2	1	2	1																							6	2	1.33	0.52
Belvedere I.	1	1	2	1	0	2	1					0	5	11	1		1	0								3	0	0	16	11	1.81	2.79
Challenge I.	1	1	1	2	1	1	4					2	6	1	4		3	4						2		3	3	0	17	6	2.29	1.57
Alaska I.	1	1	2	1	0	1	1			0			9	7	2		1	2						1		7	2	0	17	9	2.24	2.70
Duchess I.	1	1	1	1	1	2	0			0			17	6	0		4	3						2		4	4	0	17	17	2.76	4.07
Northstar I.	1	1	2	2	1	1	0						2	2	1		0	3						0		4	3	0	16	4	1.44	1.21
Flaxman I.	2	1	1	1	0	1	0			0			0	0	2									1		0	0	0	15	2	0.60	0.74
All Locations	134	140	145	144	136	162	330	0	85	63	5	11	193	214	210	207	187	156	44	32	34	39	32	41	64	81	137	90		594	250.86	163.6

[1] 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 as active nests. Sources: Schamel (1974); Gavin (1976); Divoky (1978); Johnson and Richardson (1981); Johnson (1984); U.S. Fish and Wildlife Service, Office of Ecological Services, Fairbanks, Alaska (unpublished data); Noel et al. (1999a); Noel and Johnson 2000; Noel et al. 2001; this study; Flint et al. 2001, Lanctot et al. 2001, and J. Reed, USGS ASC, pers.com. Blanks indicate no data.

[2] Thetis and Spy Island data for 1978 from Johnson and Richardson, 1981.

[3] Johnson reports at least 41 glgu nests for Duck Island in 1985, count is known to be low as survey was terminated. Duck Island censused 18 August 1986, Murphy et al. 1987.

^ indicates nest counts that have been combined with italicized island.

[4] Search limited to a small portion of the western end of Stump Island during 2000 (Rick Lanctot, pers. com.).

[5] Argo Island has existed only as a submerged shoal since 1998.

[6] Includes several artificial islands constructed near the Niakuk Islands.

Table 13. Active common eider nests counted on man-made structures along the central Alaskan Beaufort Sea coast, 1982–2002 (Table adopted from Johnson 2000).

	Year of Census[1]																		
Location	1982	1984	1985	1987	1988	1989	1990	1991	1992	1995	1998	2000	2001	2002	*n*	Max	Total	Mean	SD
Endicott Causeway					2	4	20	19	3	2	0	2	3	0	10	20	55	5.5	7.49
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			22	20	6	22	94	15.7	5.24
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
Niakuk 1&2														3	1	3	3	3.0	
Naikuk 4-6														19	1	19	19	19.0	
All Locations	2	3	6	6	5	10	39	37	16	18	0	2	25	42	13	42	211	53.8	18.42

[1] Censuses were conducted on various dates from 5-15 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); blanks indicate no data.

Table 12. Active common eider nests counted on barrier islands along the central Alaskan Beaufort Sea coast, 1970-2002 (Table adopted from Johnson 2000).

	Year of Census [1]																													
Location	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1982	1983	1984	1985	1987	1988	1989	1990	1991	1995	1998	1999	2000	2001	2002	*n*	Max.	Mean	SD
Thetis I.	19	15	18	14	15	35	40		34		41	0	112	66	82	88	57	58		27			27	25	15	14	21	112	38.2	29.03
Spy I.	2	1	3	1	2	5	4	0	4			0	30	16	26	10	16	5		2			26	40	28	2	21	40	10.6	12.22
Leavitt I.													0	0	1	1		4					0	1	0	0	9	4	0.8	1.30
Pingok I.	2	2	1	1	0	6	0		17	0		0	0	0									0	0	0	0	16	17	1.8	4.34
Bertoncini I.	0	0	0	0	0	0	0					0	0	0	1					0			0	1	3	0	16	3	0.3	0.79
Bodfish I.	0	0	0	0	0	0	0		0			0	0	0	0								0	0	0	0	16	0	0.0	0.00
Cottle I.	3	4	4	2	2	6	0		2	2		0	0	0	5	7	4	0					5	4	2	0	20	7	2.6	2.21
Long I. (W)	3	6	4	2	3	7	25			2			11	2	15	17	24	15			8		5	18	2	1	19	25	8.9	7.78
Long I. (E)							1		4	29		0		2	25	23	31	1			16		8	35	5	5	14	35	13.2	12.80
Egg I. (W)[2]	8	25	38	15	8	14	24			16			63	58	87	61	68	62		47	54		79	88	55	42	20	88	45.6	26.01
Egg I. (E)													10	13	17	14			8		6			19	11	5	9	19	11.4	4.77
Stump I.[3]	1	0	1	1	1	4	10		30	15			21	5	60	70	107	66	89	152	80			12	142	72	21	152	44.7	48.45
Gull I.													2	0													2	2	1.0	1.41
Reindeer I.	0	0	0	0	0	0	4					1	9	4	2	2	0	0					11	11	9	5	18	11	3.2	4.08
Argo I.	0	0	0	0	0	0	0					1	0	3	6	3	3	4					0	0			16	6	1.3	1.91
Cross I.	97	73	90	91	27	115	139			0		129	216	192	243	223	166	60		105					19	11	18	243	110.9	74.62
No Name I.	0	0	0	0	0	0						6	10	17	13	11	8	7								6	14	17	5.6	5.75
Narwhal I.	2	3	2	4	6	8	33					30	35	48	40	61	63	30		62			32	30	30	1	19	63	27.4	21.45
Jeanette I.	1	2	2	1	0	4	5					0	10	13	22	28	24	0					18	12	3	1	18	28	8.1	9.26
Karluk I.	1	1	2	1	0	3	0					3	7	18	14	4	3	0					3	6		1	17	18	3.9	5.01
Lion Point							6								77	90	88	17						42	16	1	8	90	42.1	37.65
Pole I.	7	5	50	5	4	16	64			10		0	141	60	215	158	162	0						107	0	0	18	215	55.8	70.05
Belvedere I.	5	1	4	3	2	5	10					0	1	4	1	15	7	1						2	0	0	17	15	3.6	4.02
Challenge I.	0	0	0	0	0	1	4					4	17	3	11	4	9	28				14		12	2	3	18	28	6.2	7.63
Alaska I.	1	0	1	1	0	2	12			0			44	29	41	26	38	21				21		60	28	5	18	60	18.3	18.74
Duchess I.	0	1	0	1	0	2	0			9			11	6	21	31	27	42				8		113	41	38	18	113	19.5	27.92
Northstar I.	1	1	1	1	0	2	0					4	6	18	15	2	17	28				0		29	20	7	18	29	8.4	9.98
Flaxman I. (W)	3	6	7	3	2	5	0			0		0		0	2							1		13	0	1	15	13	2.9	3.62
Flaxman I. (E)													2									0		1	0	0	5	2	0.6	0.89
All Locations	156	146	228	147	72	240	381	0	91	83	41	178	758	577	1042	949	922	449	97	395	164	44	214	681	431	221		1455	497.0	453.7

[1] 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 as active nests. Sources: Schamel (1974); Gavin (1976); Divoky (1978); Johnson and Richardson (1981); Johnson (1984); U.S. Fish and Wildlife Service, Office of Ecological Services, Fairbanks, Alaska (unpublished data); Noel et al. (1999a); Noel and Johnson 2000; Noel et al. 2001; this study; Flint et al. 2001, Lanctot et al. 2001, and J. Reed, USGS ASC, pers.com. Blanks indicate no data.

[2] In years when Egg Island is not split into 2 pieces, numbers appear to be recorded for the west end only. 1999 data are presented accordingly.

[3] Search limited to a small portion of the western end of Stump Island during 2000 (Rick Lanctot, pers. com.).

APPENDIX A. 2002 NEST DATA

Data Description

Island: Name of island.
Species: Species sighted; ARFO=arctic fox, ARTE=arctic tern, CAGO=Canada goose, COEI=Common eider/ Pacific eider, Elymus=*Elymus arenarius,* GLGU=glaucous gull, HUMAN=human, KIEI= king eider, POBE=polar bear, RUTU=ruddy turnstone.
Nest_ID: Nest or scrape identification number
Sight_Type: Sighting Type; AFT=arctic fox tracks, EE=predated egg (not associated w/ nest), Elymus=*Elymus arenarius,* HU=human tracks or signs, NE=nest, PBB=polar bear bed, PBT=polar bear tracks, PPT=people tracks, SC=scrape, SGS=shell casings, shotgun
Eggs_Live: Number of eggs in nest, if counted; Y=sitting hen, eggs not counted, H=hatched eggs.
Drift: Driftwood cover within 1m diameter (0.5 m radius) of nest; N=none 0% cover, L=low 1-33% cover, M=medium 34-66% cover, H=high 67-100% cover, B=building.
Elev: Elevation above sea level; L= near water level, M= 0.5m-1.0m above water level, H= 1.0m or more above water level
Veg: Estimated % vegetation cover within 1 m diameter (0.5 m radius) of nest; E= *Elymus arenarius*, V= other vegetation.
Pred: Was the nest depredated? P= depredated nest.
Pred_Egg: Number of predated eggs
Pred_type: Predator type; U=unknown, ARFO=arctic fox, AVIAN=avian, GLGU=glaucous gull, POBE=polar bear, HUMAN=human, AAAA/AAAA=combination of predator types.
Rec_No: Record number for sighting.
Bk_No.: Field book number and page number for original data reference.

Appendix A. Nest census data for common eiders and other barrier island nesting birds along the central Alaskan Beaufort Sea coast from Thetis Island to the Stockton Islands, 12-16 July 2001. Data are sorted by island name and record number.

Island	Species	Date	Time	Nest_ID	Sight_Type	Eggs_Live	Drift	Elev	Veg	Pred	Pred_Egg	Pred_Type	Rec_No	Bk-No
Belvedere	ARFO	14 Jul 02	8:32:35		AFT								413	2-56
Belvedere	COEI	14 Jul 02	8:35:26	NE1	NE	0	L	M		P		ARFO	414	2-56
Belvedere	COEI	14 Jul 02	8:36:58	NE3	NE	0	L	L		P		ARFO	415	2-56
Belvedere	COEI	14 Jul 02	8:43:26	SC5	SC		L	L					416	2-56
Belvedere	COEI	14 Jul 02	8:48:25	SC7	SC		L	M					417	2-56
Belvedere	ARFO	14 Jul 02	8:48:40		AFT								418	2-56
Belvedere	ARTE	14 Jul 02	8:49:29	SC9	SC		L	M					419	2-56
Belvedere	ARTE	14 Jul 02	8:50:10	SC11	SC		M	M					420	2-56
Belvedere	ARTE	14 Jul 02	8:50:37	SC13	SC		M	M					421	2-56
Belvedere	ARTE	14 Jul 02	8:50:49	SC15	SC		L	M					422	2-56
Belvedere	ARTE	14 Jul 02	8:51:07	SC17	SC		L	M					423	2-56
Belvedere	ARTE	14 Jul 02	8:51:26	SC19	SC		L	M					424	2-56
Belvedere	ARTE	14 Jul 02	8:52:53	SC21	SC		M	M					425	2-56
Belvedere	ARTE	14 Jul 02	8:54:03	SC23	SC		L	M					426	2-56
Belvedere	ARTE	14 Jul 02	8:55:15	SC25	SC		L	M					427	2-56
Belvedere	COEI	14 Jul 02	8:55:47	SC27	SC		M	M					428	2-56
Belvedere	COEI	14 Jul 02	9:02:00	SC29	SC		M	M					429	2-56
Belvedere	ARFO	14 Jul 02	9:20:14		AFT								430	2-57
Belvedere	COEI	14 Jul 02	9:26:19	SC1	SC		L	M					431	2-57
Belvedere	COEI	14 Jul 02	9:28:34	SC3	SC		L	M					432	2-57
Belvedere	COEI	14 Jul 02	9:30:30	SC5	SC		L	L					433	2-57
Belvedere	COEI	14 Jul 02	9:31:34	SC7	SC		L	H					434	2-57
Belvedere	COEI	14 Jul 02	9:36:50	SC9	SC		M	H					435	2-57
Belvedere	COEI	14 Jul 02	9:40:59	NE11	NE	0	L	M		P		ARFO	436	2-57
Belvedere	POBE	14 Jul 02	9:43:43		PBT								437	2-57
Belvedere	COEI	14 Jul 02	9:45:33	SC13	SC		L	M					438	2-57
Belvedere	COEI	14 Jul 02	9:50:32	SC15	SC		L	M					439	2-57
Belvedere	COEI	14 Jul 02	9:52:17	SC17	SC		L	M					440	2-57
Belvedere	COEI	14 Jul 02	9:53:30	SC19	SC		L	M					441	2-57
Belvedere	COEI	14 Jul 02	9:55:41	SC21	SC		M	H					442	2-57
Belvedere	COEI	14 Jul 02	9:56:36	NE23	NE	0	L	H	E30	P		ARFO	443	2-57
Belvedere	COEI	14 Jul 02	9:56:36	NE25	NE	0	L	H	E30	P		ARFO	444	2-57
Belvedere	COEI	14 Jul 02	9:58:22	SC27	SC		M	H					445	2-57
Belvedere	COEI	14 Jul 02	9:59:47	SC29	SC		M	H					446	2-57
Belvedere	ARTE	14 Jul 02	10:00:24	SC31	SC		M	H					447	2-57
Belvedere	COEI	14 Jul 02	10:01:08	SC33	SC		L	H					448	2-57
Belvedere	COEI	14 Jul 02	10:02:23	SC35	SC		M	H					449	2-57
Belvedere	COEI	14 Jul 02	10:02:42	SC37	SC		M	H					450	2-57
Belvedere	COEI	14 Jul 02	10:03:00	NE39	NE	0	M	H	V02	P		ARFO	451	2-57
Belvedere	COEI	14 Jul 02	10:04:35	SC41	SC		L	H					452	2-57
Belvedere	COEI	14 Jul 02	10:04:35	SC43	SC		L	H					453	2-57
Belvedere	COEI	14 Jul 02	10:04:35	NE45	NE	0	M	H		P		ARFO	454	2-57
Belvedere	COEI	14 Jul 02	10:05:42	SC47	SC		L	H					455	2-57
Belvedere	COEI	14 Jul 02	10:06:29	SC49	SC		L	H					456	2-57
Belvedere	COEI	14 Jul 02	10:06:50	SC51	SC		M	H	V05				457	2-57
Belvedere	COEI	14 Jul 02	10:07:02	SC53	SC		M	H					458	2-58
Belvedere	GLGU	14 Jul 02	10:07:58	NE55	NE	0	H	H		P		ARFO	459	2-58
Belvedere	COEI	14 Jul 02	10:08:10	SC57	SC		H	H					460	2-58
Belvedere	COEI	14 Jul 02	10:08:30	SC59	SC		M	H					461	2-58
Belvedere	COEI	14 Jul 02	10:09:02	SC61	SC		M	H					462	2-58
Belvedere	COEI	14 Jul 02	10:10:16	SC63	SC		M	H					463	2-58
Belvedere	COEI	14 Jul 02	10:11:32	SC65	SC		L	M					464	2-58
Belvedere	COEI	14 Jul 02	10:11:56	SC67	SC		N	M	V10				465	2-58
Belvedere	COEI	14 Jul 02	10:11:56	SC69	SC		L	H					466	2-58
Belvedere	COEI	14 Jul 02	10:12:52	SC71	SC		L	H					467	2-58
Belvedere	COEI	14 Jul 02	10:15:51	NE73	NE	0	L	M		P		ARFO	468	2-58
Belvedere	GLGU	14 Jul 02	10:22:00	NE75	NE	0	L	H		P		ARFO	469	2-58
Belvedere	COEI	14 Jul 02	8:35:18	SC2	SC		L	L					903	3-27
Belvedere	COEI	14 Jul 02	8:37:07	NE4	NE	0	L	L		P		ARFO	904	3-27
Belvedere	COEI	14 Jul 02	8:37:29	SC6	SC		L	L					905	3-27
Belvedere	COEI	14 Jul 02	8:38:11	SC8	SC		L	L					906	3-27
Belvedere	COEI	14 Jul 02	8:39:06	NE10	NE	0	M	M		P		ARFO	907	3-27
Belvedere	COEI	14 Jul 02	8:39:38	NE12	NE	0	L	M		P		ARFO	908	3-27
Belvedere	COEI	14 Jul 02	8:40:42	NE14	NE	0	L	M		P		ARFO	909	3-27
Belvedere	COEI	14 Jul 02	8:42:00	SC16	SC		N	M					910	3-27
Belvedere	COEI	14 Jul 02	8:43:45	SC18	SC		L	L					911	3-27

Island	Species	Date	Time	Nest_ID	Sight_Type	Eggs_Live	Drift	Elev	Veg	Pred	Pred_Egg	Pred_Type	Rec_No	Bk-No
Belvedere	COEI	14 Jul 02	8:44:27	SC20	SC		L	L					912	3-27
Belvedere	COEI	14 Jul 02	8:51:05	NE22	NE	0	M	M		P		ARFO	913	3-27
Belvedere	COEI	14 Jul 02	8:55:44	NE24	NE	0	M	M		P		ARFO	914	3-27
Belvedere	COEI	14 Jul 02	8:57:38	SC26	SC		L	M					915	3-27
Belvedere	COEI	14 Jul 02	8:58:07	SC28	SC		L	M					916	3-27
Belvedere	COEI	14 Jul 02	8:58:32	NE30	NE	0	L	M		P		ARFO	917	3-27
Belvedere	COEI	14 Jul 02	8:58:32	NE32	NE	0	L	M		P		ARFO	918	3-27
Belvedere	COEI	14 Jul 02	8:59:52	SC34	SC		L	M					919	3-27
Belvedere	COEI	14 Jul 02	9:00:50	SC36	SC		L	M					920	3-27
Belvedere	COEI	14 Jul 02	9:05:40	NE38	NE	0	L	M		P		ARFO	921	3-27
Belvedere	COEI	14 Jul 02	9:26:18	NE2	NE	0	L	M		P		ARFO	922	3-27
Belvedere	COEI	14 Jul 02	9:28:50	SC4	SC		M	M					923	3-27
Belvedere	COEI	14 Jul 02	9:36:14	SC6	SC		M	M					924	3-27
Belvedere	COEI	14 Jul 02	9:43:56	NE8	NE	0	M	H		P		ARFO	925	3-27
Belvedere	COEI	14 Jul 02	9:48:50	SC10	SC		M	H					926	3-27
Belvedere	COEI	14 Jul 02	9:49:30	SC12	SC		M	H					927	3-27
Belvedere	COEI	14 Jul 02	9:51:55	NE14	NE	0	H	H		P		ARFO	928	3-27
Belvedere	COEI	14 Jul 02	9:52:39	NE16	NE	0	H	H		P		ARFO	929	3-27
Belvedere	COEI	14 Jul 02	9:53:36	SC18	SC		L	H					930	3-27
Belvedere	COEI	14 Jul 02	9:54:21	SC20	SC		M	M					931	3-28
Belvedere	COEI	14 Jul 02	9:55:30	SC22	SC		L	M					932	3-28
Belvedere	COEI	14 Jul 02	9:56:00	SC24	SC		L	H					933	3-28
Belvedere	COEI	14 Jul 02	9:56:21	SC26	SC		M	H					934	3-28
Belvedere	COEI	14 Jul 02	9:56:44	SC28	SC		M	M					935	3-28
Belvedere	COEI	14 Jul 02	9:57:46	SC30	SC		H	H					936	3-28
Belvedere	COEI	14 Jul 02	9:57:59	SC32	SC		M	H					937	3-28
Belvedere	COEI	14 Jul 02	9:58:19	SC34	SC		L	H					938	3-28
Belvedere	COEI	14 Jul 02	9:58:47	SC36	SC		M	H					939	3-28
Belvedere	COEI	14 Jul 02	9:59:10	NE38	NE	0	M	H		P		ARFO	940	3-28
Belvedere	COEI	14 Jul 02	9:59:30	SC40	SC		M	H					941	3-28
Belvedere	COEI	14 Jul 02	9:59:40	NE42	NE	0	M	H		P		ARFO	942	3-28
Belvedere	COEI	14 Jul 02	10:00:22	SC44	SC		H	H					943	3-28
Belvedere	COEI	14 Jul 02	10:00:52	NE46	NE	0	L	H		P		ARFO	944	3-28
Belvedere	GLGU	14 Jul 02	10:01:58		EE						1	ARFO	945	3-28
Belvedere	COEI	14 Jul 02	10:05:28	SC48	SC		L	M					946	3-28
Belvedere	COEI	14 Jul 02	10:06:25	NE50	NE	0	M	M		P		ARFO	947	3-28
Belvedere	COEI	14 Jul 02	10:07:10	NE52	NE	0	N	M	V40	P		ARFO	948	3-28
Belvedere	COEI	14 Jul 02	10:07:40	NE54	NE	0	L	H		P		ARFO	949	3-28
Belvedere	COEI	14 Jul 02	10:07:50	NE56	NE	0	H	H		P		ARFO	950	3-28
Belvedere	COEI	14 Jul 02	10:10:00	NE58	NE	0	L	M		P		ARFO	951	3-28
Belvedere	ARFO	14 Jul 02	8:35:18		AFT								1461	
Belvedere	ARFO	14 Jul 02	9:26:18		AFT								1462	3-27
Cross	COEI	15 Jul 02	9:02:44	NE602	NE	Y	L	M					1	5-2
Cross	COEI	15 Jul 02	9:03:44	SC604	SC		N	M					2	5-2
Cross	COEI	15 Jul 02	9:05:27	SC606	SC		N	M					3	5-2
Cross	COEI	15 Jul 02	9:05:48	SC608	SC		L	M					4	5-2
Cross	COEI	15 Jul 02	9:07:03	NE610	NE	0	L	M		P		ARFO/AVIAN	5	5-2
Cross	COEI	15 Jul 02	9:07:41	SC612	SC		N	M	V02				6	5-2
Cross	COEI	15 Jul 02	9:09:12	NE614	NE	0	L	H	V02	P		ARFO/AVIAN	7	5-2
Cross	COEI	15 Jul 02	9:09:12	SC616	SC								8	5-2
Cross	COEI	15 Jul 02	9:13:02	NE618	NE	0	N	H	V02	P		ARFO/AVIAN	9	5-2
Cross	COEI	15 Jul 02	9:20:42	NE620	NE	3	H	H					10	5-2
Cross	COEI	15 Jul 02	9:21:29	NE622	NE	0	H	H		P		ARFO/AVIAN	11	5-2
Cross	POBE	15 Jul 02	9:22:24		PBB								12	5-2
Cross	COEI	15 Jul 02	9:23:18	SC624	SC		L	H	V02				13	5-2
Cross	COEI	15 Jul 02	9:24:30	SC626	SC		L	H	V02				14	5-2
Cross	POBE	15 Jul 02	9:25:52		PBB								15	5-2
Cross	COEI	15 Jul 02	9:26:27	NE628	NE	0	M	H		P		ARFO/AVIAN	16	5-2
Cross	COEI	15 Jul 02	9:28:39	NE630	NE	0	N	H	E60	P		ARFO/AVIAN	17	5-2
Cross	COEI	15 Jul 02	9:28:39	NE632	NE	0	N	H	E60	P		ARFO/AVIAN	18	5-2
Cross	COEI	15 Jul 02	9:28:39	NE634	NE	0	N	H	E60	P		ARFO/AVIAN	19	5-2
Cross	COEI	15 Jul 02	9:28:39	NE636	NE	0	N	H	E60	P		ARFO/AVIAN	20	5-2
Cross	COEI	15 Jul 02	9:28:39	SC638	SC		N	H	E60				21	5-2
Cross	COEI	15 Jul 02	9:28:39	SC640	SC		N	H	E60				22	5-2
Cross	COEI	15 Jul 02	9:28:39	SC642	SC		N	H	E60				23	5-2
Cross	COEI	15 Jul 02	9:29:40	SC644	SC		L	H					24	5-2
Cross	COEI	15 Jul 02	9:30:11	SC646	SC		L	M					25	5-2
Cross	COEI	15 Jul 02	9:30:15	NE648	NE	0	M	H		P			26	5-2
Cross	COEI	15 Jul 02	9:30:44	SC650	SC		M	H					27	5-2

Island	Species	Date	Time	Nest_ID	Sight_Type	Eggs_Live	Drift	Elev	Veg	Pred	Pred_Egg	Pred_Type	Rec_No	Bk-No
Cross	COEI	15 Jul 02	9:30:44	SC652	SC		M	H					28	5-2
Cross	COEI	15 Jul 02	9:30:44	SC654	SC		M	H					29	5-2
Cross	COEI	15 Jul 02	9:30:44	SC656	SC		M	H					30	5-2
Cross	COEI	15 Jul 02	9:31:35	NE658	NE	0	M	H	V02	P			31	5-3
Cross	COEI	15 Jul 02	9:32:10	SC660	SC		L	H					32	5-3
Cross	COEI	15 Jul 02	9:34:30	NE662	NE	0	M	H	V60	P		ARFO/AVIAN	33	5-3
Cross	COEI	15 Jul 02	9:34:30	NE664	NE	0	M	H	V60	P		ARFO/AVIAN	34	5-3
Cross	COEI	15 Jul 02	9:34:30	SC666	SC		M	H	V60			ARFO/AVIAN	35	5-3
Cross	COEI	15 Jul 02	9:35:02	SC668	SC		L	H					36	5-3
Cross	COEI	15 Jul 02	9:35:36	NE670	NE	0	M	H		P		ARFO	37	5-3
Cross	COEI	15 Jul 02	9:36:00	SC672	SC		L	H					38	5-3
Cross	COEI	15 Jul 02	9:41:27	NE674	NE	0	N	L	V70	P		ARFO	39	5-3
Cross	COEI	15 Jul 02	9:43:05	SC676	SC		M	H					40	5-3
Cross	COEI	15 Jul 02	9:43:05	SC678	SC		M	H					41	5-3
Cross	COEI	15 Jul 02	9:44:50	NE680	NE	0	M	H		P		ARFO/AVIAN	42	5-3
Cross	COEI	15 Jul 02	9:45:24	SC682	SC		M	H					43	5-3
Cross	COEI	15 Jul 02	9:45:43	SC684	SC		M	H					44	5-3
Cross	COEI	15 Jul 02	9:46:09	SC686	SC		M	H					45	5-3
Cross	COEI	15 Jul 02	9:46:38	SC688	SC		M	H					46	5-3
Cross	COEI	15 Jul 02	9:47:37	SC690	SC		M	H					47	5-3
Cross	GLGU	15 Jul 02	10:00:39	NE692	NE	0	M	M		P		ARFO/AVIAN	48	5-3
Cross	COEI	15 Jul 02	10:09:17	NE694	NE	0	N	H		P		ARFO/AVIAN	49	5-3
Cross	COEI	15 Jul 02	10:10:02	SC696	SC		M	H					50	5-3
Cross	GLGU	15 Jul 02	10:10:53	SC698	SC		M	H					51	5-3
Cross	COEI	15 Jul 02	10:14:12	SC700	SC		M	H	V15				52	5-3
Cross	ARFO	15 Jul 02	10:15:00	AF									53	5-3
Cross	COEI	15 Jul 02	10:16:19	SC702	SC		M	H					54	5-3
Cross	COEI	15 Jul 02	10:17:03	SC704	SC		L	H					55	5-3
Cross	COEI	15 Jul 02	10:18:18	SC706	SC		M	H					56	5-3
Cross	COEI	15 Jul 02	10:18:18	NE708	NE	0	M	H		P		ARFO/AVIAN	57	5-3
Cross	COEI	15 Jul 02	10:19:08	NE710	NE	0	M	H		P		ARFO/AVIAN	58	5-3
Cross	COEI	15 Jul 02	10:19:40	NE712	NE	0	M	H		P		ARFO/AVIAN	59	5-3
Cross	COEI	15 Jul 02	10:19:40	NE714	NE	0	M	H		P		ARFO/AVIAN	60	5-3
Cross	COEI	15 Jul 02	10:21:10	SC716	SC		M	H					61	5-4
Cross	GLGU	15 Jul 02	10:21:10	NE718	NE	H	M	H					62	5-4
Cross	COEI	15 Jul 02	10:21:10	NE720	NE	0	L	H		P		ARFO/AVIAN	63	5-4
Cross	GLGU	15 Jul 02	10:22:40	NE722	NE	0	L	H		P		ARFO/AVIAN	64	5-4
Cross	COEI	15 Jul 02	10:24:07	SC724	SC		L	H					65	5-4
Cross	COEI	15 Jul 02	10:24:25	SC726	SC		L	H					66	5-4
Cross	COEI	15 Jul 02	10:25:07	NE728	NE	4	M	H					67	5-4
Cross	COEI	15 Jul 02	10:25:07	NE730	NE	0	M	H		P		ARFO/AVIAN	68	5-4
Cross	COEI	15 Jul 02	10:25:36	SC732	SC		L	H					69	5-4
Cross	COEI	15 Jul 02	10:26:28	SC734	SC		L	H					70	5-4
Cross	COEI	15 Jul 02	10:26:46	NE736	NE	0	M	H		P		ARFO/AVIAN	71	5-4
Cross	COEI	15 Jul 02	10:27:31	NE738	NE	0	L	H		P		ARFO/AVIAN	72	5-4
Cross	COEI	15 Jul 02	10:28:09	NE740	NE	0	L	H		P		ARFO/AVIAN	73	5-4
Cross	COEI	15 Jul 02	10:28:34	SC742	SC		L	H					74	5-4
Cross	COEI	15 Jul 02	10:29:38	NE744	NE	0	N	H		P		ARFO/AVIAN	75	5-4
Cross	COEI	15 Jul 02	10:30:12	SC746	SC		M	H					76	5-4
Cross	COEI	15 Jul 02	10:33:28	SC748	SC		L	H					77	5-4
Cross	COEI	15 Jul 02	10:34:05	NE750	NE	2	L	H					78	5-4
Cross	ARFO	15 Jul 02	10:35:00	AF									79	5-4
Cross	COEI	15 Jul 02	10:35:38	SC752	SC		L	L					80	5-4
Cross	COEI	15 Jul 02	10:35:38	SC754	SC		L	L					81	5-4
Cross	COEI	15 Jul 02	10:35:38	SC756	SC		L	L					82	5-4
Cross	COEI	15 Jul 02	10:36:21	NE758	NE	4	H	M					83	5-4
Cross	COEI	15 Jul 02	8:16:33	NE2	NE	0	M	M		P		ARFO	1161	3-37
Cross	COEI	15 Jul 02	8:18:08	SC4	SC		M	M					1162	3-37
Cross	COEI	15 Jul 02	8:19:17	NE6	NE	0	M	M		P		ARFO	1163	3-37
Cross	COEI	15 Jul 02	8:19:17	NE8	NE	0	M	M		P		ARFO	1164	3-37
Cross	GLGU	15 Jul 02	8:20:03	NE10	NE	0	M	M		P		ARFO	1165	3-37
Cross	COEI	15 Jul 02	8:20:40	NE12	NE	0	M	H		P		ARFO	1166	3-37
Cross	GLGU	15 Jul 02	8:20:40	NE14	NE	0	M	H		P		ARFO	1167	3-37
Cross	COEI	15 Jul 02	8:21:36	NE16	NE	0	M	H		P		ARFO	1168	3-37
Cross	COEI	15 Jul 02	8:21:58	NE18	NE	0	M	H		P		ARFO	1169	3-37
Cross	COEI	15 Jul 02	8:22:41	SC20	SC		L	H					1170	3-37
Cross	COEI	15 Jul 02	8:23:05	NE22	NE	0	L	H		P		ARFO	1171	3-37
Cross	COEI	15 Jul 02	8:25:25	SC24	SC		M	M					1172	3-37
Cross	COEI	15 Jul 02	8:27:21	SC26	SC		L	M					1173	3-37

Island	Species	Date	Time	Nest_ID	Sight_Type	Eggs_Live	Drift	Elev	Veg	Pred	Pred_Egg	Pred_Type	Rec_No	Bk-No
Cross	COEI	15 Jul 02	8:27:30	SC28	SC		L	M					1174	3-37
Cross	COEI	15 Jul 02	8:28:00	SC30	SC		M	H					1175	3-37
Cross	COEI	15 Jul 02	8:29:30	SC32	SC		L	M					1176	3-37
Cross	COEI	15 Jul 02	8:35:50	SC34	SC		L	M					1177	3-37
Cross	GLGU	15 Jul 02	8:36:30	NE36	NE	0	L	M		P		ARFO	1178	3-37
Cross	COEI	15 Jul 02	8:37:17	SC38	SC		L	M					1179	3-37
Cross	COEI	15 Jul 02	8:38:08	SC40	SC		L	M					1180	3-37
Cross	COEI	15 Jul 02	8:38:20	SC42	SC		M	M					1181	3-37
Cross	COEI	15 Jul 02	8:39:55	SC44	SC		L	M					1182	3-37
Cross	COEI	15 Jul 02	8:43:34	SC46	SC		L	M					1183	3-37
Cross	COEI	15 Jul 02	8:44:22	NE48	NE	0	L	M		P		ARFO	1184	3-37
Cross	COEI	15 Jul 02	8:48:14	SC50	SC		L	M					1185	3-37
Cross	COEI	15 Jul 02	8:49:33	SC52	SC		L	M					1186	3-37
Cross	COEI	15 Jul 02	8:50:16	SC54	SC		L	M					1187	3-37
Cross	COEI	15 Jul 02	8:53:50	NE56	NE	0	L	M		P		ARFO	1188	3-37
Cross	COEI	15 Jul 02	8:56:10	NE58	NE	0	L	M		P		ARFO	1189	3-37
Cross	COEI	15 Jul 02	8:56:38	NE60	NE	0	M	M		P		ARFO	1190	3-38
Cross	COEI	15 Jul 02	8:57:07	SC62	SC		M	M					1191	3-38
Cross	COEI	15 Jul 02	8:58:08	NE64	NE	0	L	M		P		ARFO	1192	3-38
Cross	COEI	15 Jul 02	8:58:20	SC66	SC		M	M					1193	3-38
Cross	COEI	15 Jul 02	8:58:40	NE68	NE	Y	N	L	V02				1194	3-38
Cross	COEI	15 Jul 02	8:59:04	SC70	SC		L	M					1195	3-38
Cross	COEI	15 Jul 02	8:59:30	SC72	SC		L	M					1196	3-38
Cross	COEI	15 Jul 02	9:00:30	NE74	NE	0	L	M		P		ARFO	1197	3-38
Cross	COEI	15 Jul 02	9:01:12	NE76	NE	0	L	M		P		ARFO	1198	3-38
Cross	COEI	15 Jul 02	9:01:50	NE78	NE	0	L	M		P		ARFO	1199	3-38
Cross	COEI	15 Jul 02	9:02:16	SC80	SC		L	H					1200	3-38
Cross	COEI	15 Jul 02	9:02:52	SC82	SC		L	M					1201	3-38
Cross	COEI	15 Jul 02	9:03:17	SC84	SC		L	M					1202	3-38
Cross	COEI	15 Jul 02	9:05:30	NE86	NE	0	L	L		P		ARFO	1203	3-38
Cross	COEI	15 Jul 02	9:18:11	NE88	NE	0	L	M		P		ARFO	1204	3-38
Cross	COEI	15 Jul 02	9:19:34	NE90	NE	0	L	M		P		ARFO	1205	3-38
Cross	COEI	15 Jul 02	9:19:58	SC92	SC		L	M					1206	3-38
Cross	COEI	15 Jul 02	9:22:19	NE94	NE	0	L	H		P		ARFO	1207	3-38
Cross	COEI	15 Jul 02	9:24:50	NE96	NE	0	L	M		P		ARFO	1208	3-38
Cross	COEI	15 Jul 02	9:31:24	SC98	SC		M	M					1209	3-38
Cross	COEI	15 Jul 02	9:31:24	SC100	SC		M	M					1210	3-38
Cross	COEI	15 Jul 02	9:32:32	NE102	NE	0	L	M		P		ARFO	1211	3-38
Cross	COEI	15 Jul 02	9:35:26	NE104	NE	4	L	M					1212	3-38
Cross	COEI	15 Jul 02	9:36:59	SC106	SC		L	M					1213	3-38
Cross	COEI	15 Jul 02	9:37:00	SC108	SC		L	M					1214	3-38
Cross	COEI	15 Jul 02	9:37:00	SC110	SC		L	M					1215	3-38
Cross	COEI	15 Jul 02	9:39:41	NE112	NE	0	L	L		P		ARFO	1216	3-38
Cross	COEI	15 Jul 02	9:39:41	NE114	NE	0	L	L		P		ARFO	1217	3-38
Cross	COEI	15 Jul 02	9:40:38	SC116	SC		L	M					1218	3-38
Cross	COEI	15 Jul 02	9:41:39	NE118	NE	0	M	M		P		ARFO	1219	3-38
Cross	COEI	15 Jul 02	9:41:39	NE120	NE	0	M	M		P		ARFO	1220	3-38
Cross	COEI	15 Jul 02	9:41:39	NE122	NE	0	M	M		P		ARFO	1221	3-38
Cross	COEI	15 Jul 02	9:44:24	SC124	SC		L	M					1222	3-38
Cross	COEI	15 Jul 02	9:44:47	SC126	SC		L	M					1223	3-39
Cross	COEI	15 Jul 02	9:45:20	SC128	SC		L	M					1224	3-39
Cross	COEI	15 Jul 02	9:46:34	SC130	SC		L	M					1225	3-39
Cross	COEI	15 Jul 02	9:49:00	SC132	SC		L	H					1226	3-39
Cross	COEI	15 Jul 02	9:49:46	SC134	SC		L	H					1227	3-39
Cross	COEI	15 Jul 02	10:03:10	SC136	SC		L	H					1228	3-39
Cross	COEI	15 Jul 02	10:06:35	SC138	SC		L	H					1229	3-39
Cross	COEI	15 Jul 02	10:07:01	SC140	SC		M	H					1230	3-39
Cross	COEI	15 Jul 02	10:07:28	SC142	SC		L	H					1231	3-39
Cross	COEI	15 Jul 02	10:09:51	NE144	NE	0	M	M		P		ARFO	1232	3-39
Cross	COEI	15 Jul 02	10:10:32	SC146	SC		L	H					1233	3-39
Cross	COEI	15 Jul 02	10:10:59	SC148	SC		L	H					1234	3-39
Cross	COEI	15 Jul 02	10:12:04	NE150	NE	0	L	H		P		ARFO	1235	3-39
Cross	COEI	15 Jul 02	10:12:40	NE152	NE	0	L	H		P		ARFO	1236	3-39
Cross	COEI	15 Jul 02	10:14:20	SC154	SC		L	H					1237	3-39
Cross	COEI	15 Jul 02	10:15:14	SC156	SC		L	H					1238	3-39
Cross	COEI	15 Jul 02	10:18:35	SC158	SC		L	M					1239	3-39
Cross	COEI	15 Jul 02	10:18:35	SC160	SC		L	M					1240	3-39
Cross	COEI	15 Jul 02	10:18:35	SC162	SC		L	M					1241	3-39
Cross	COEI	15 Jul 02	10:19:09	NE164	NE	0	L	M		P		ARFO	1242	3-39

Island	Species	Date	Time	Nest_ID	Sight_Type	Eggs_Live	Drift	Elev	Veg	Pred	Pred_Egg	Pred_Type	Rec_No	Bk-No
Cross	COEI	15 Jul 02	10:20:08	NE166	NE	0	L	M		P		ARFO	1243	3-39
Cross	COEI	15 Jul 02	10:20:42	NE168	NE	0	L	M		P		ARFO	1244	3-39
Cross	COEI	15 Jul 02	10:21:18	NE170	NE	0	L	M		P		ARFO	1245	3-39
Cross	COEI	15 Jul 02	10:21:30	NE172	NE	0	L	M		P		ARFO	1246	3-39
Cross	COEI	15 Jul 02	10:22:47	NE174	NE	2	N	L					1247	3-39
Cross	COEI	15 Jul 02	10:24:12	SC176	SC		N	L					1248	3-39
Cross	COEI	15 Jul 02	10:24:12	SC178	SC		N	L					1249	3-39
Cross	COEI	15 Jul 02	10:39:39	NE180	NE	0	N	H		P		ARFO	1250	3-39
Cross	COEI	15 Jul 02	8:03:30	NE01	NE	0	L	M		P		ARFO	1329	4-18
Cross	COEI	15 Jul 02	8:05:09	SC03	SC		L	M					1330	4-18
Cross	COEI	15 Jul 02	8:09:15	SC05	SC		L	M					1331	4-18
Cross	COEI	15 Jul 02	8:09:50	SC07	SC		L	M					1332	4-18
Cross	COEI	15 Jul 02	8:11:15	NE09	SC		L	M		P		ARFO	1333	4-18
Cross	COEI	15 Jul 02	8:13:42										1334	4-18
Cross	COEI	15 Jul 02	8:14:00	NE11	NE	0	H	M		P		ARFO	1335	4-18
Cross	COEI	15 Jul 02	8:15:47	NE13	NE	0	H	M		P		ARFO	1336	4-18
Cross	COEI	15 Jul 02	8:16:08	NE15	NE	0	L	H		P		ARFO	1337	4-18
Cross	COEI	15 Jul 02	8:16:53	NE17	NE	0	H	H		P		ARFO	1338	4-18
Cross	COEI	15 Jul 02	8:17:46	NE19	NE	0	L	H		P		ARFO	1339	4-18
Cross	COEI	15 Jul 02	8:20:32	SC21	SC		M	M					1340	4-18
Cross	COEI	15 Jul 02	8:21:05	NE23	NE	0	M	M		P		ARFO	1341	4-18
Cross	COEI	15 Jul 02	8:21:33	NE25	NE	0	M	M		P		ARFO	1342	4-18
Cross	COEI	15 Jul 02	8:24:03	SC27	SC		M	M					1343	4-18
Cross	COEI	15 Jul 02	8:29:36	SC29	SC		L	M					1344	4-18
Cross	ARTE	15 Jul 02	8:30:59	NE31	NE	1	L	M					1345	4-18
Cross	ARTE	15 Jul 02	8:31:48	SC33	SC		L	M					1346	4-18
Cross	COEI	15 Jul 02	8:33:15	SC35	SC		M	H					1347	4-18
Cross	COEI	15 Jul 02	8:33:52	SC37	SC		M	M					1348	4-18
Cross	COEI	15 Jul 02	8:34:00	NE39	NE	0	M	M		P		ARFO	1349	4-18
Cross	COEI	15 Jul 02	8:34:44	SC41	SC		M	M					1350	4-18
Cross	COEI	15 Jul 02	8:34:55	SC43	SC		M	M					1351	4-18
Cross	ARTE	15 Jul 02	8:41:17	SC45	SC		L	M					1352	4-18
Cross	COEI	15 Jul 02	8:45:55	SC47	SC		L	M					1353	4-18
Cross	COEI	15 Jul 02	8:50:13	SC49	SC		L	M					1354	4-18
Cross	COEI	15 Jul 02	8:51:22	SC51	SC		M	L					1355	4-18
Cross	COEI	15 Jul 02	8:52:28	SC53	SC		L	L					1356	4-18
Cross	COEI	15 Jul 02	8:54:00	SC55	SC		L	L					1357	4-18
Cross	COEI	15 Jul 02	8:54:30	NE57	NE	2	L	L					1358	4-19
Cross	COEI	15 Jul 02	8:55:26	NE59	NE	Y	L	L					1359	4-19
Cross	COEI	15 Jul 02	9:04:03	NE61	NE	0	N	M	V20	P		ARFO	1360	4-19
Cross	COEI	15 Jul 02	9:07:21	SC63	SC		M	M					1361	4-19
Cross	COEI	15 Jul 02	9:07:38	SC65	SC		M	M					1362	4-19
Cross	COEI	15 Jul 02	9:09:56	SC67	SC		L	M					1363	4-19
Cross	COEI	15 Jul 02	9:20:03	SC69	SC		M	M					1364	4-19
Cross	COEI	15 Jul 02	9:22:00	SC71	SC		M	M					1365	4-19
Cross	GLGU	15 Jul 02	9:27:26	NE75	NE	H	L	M					1366	4-19
Cross	COEI	15 Jul 02	9:28:45	NE77	NE	0	L	L		P		ARFO	1367	4-19
Cross	GLGU	15 Jul 02	9:29:28	NE79	NE	1	L	M					1368	4-19
Cross	GLGU	15 Jul 02	9:31:16										1369	4-19
Cross	COEI	15 Jul 02	9:32:31	SC81	SC		N	M	V10				1370	4-19
Cross	COEI	15 Jul 02	9:33:00	NE83	NE	0	N	M		P		ARFO	1371	4-19
Cross	COEI	15 Jul 02	9:33:09	NE85	NE	0	N	M		P		ARFO	1372	4-19
Cross	COEI	15 Jul 02	9:33:54	SC87	SC		N	M					1373	4-19
Cross	COEI	15 Jul 02	9:35:01	SC91	SC		N	M					1374	4-19
Cross	COEI	15 Jul 02	9:35:40	NE93	NE	0	L	M		P		ARFO	1375	4-19
Cross	COEI	15 Jul 02	9:36:00	NE95	NE	0	L	M		P		ARFO	1376	4-19
Cross	COEI	15 Jul 02	9:37:18	NE97	NE	0	L	M		P		ARFO	1377	4-19
Cross	COEI	15 Jul 02	9:38:00	NE99	NE	2	L	M					1378	4-19
Cross	COEI	15 Jul 02	9:39:29	NE101	NE	0	M	M		P		ARFO	1379	4-19
Cross	COEI	15 Jul 02	9:40:04	NE103	NE	0	L	M		P		ARFO	1380	4-19
Cross	COEI	15 Jul 02	9:40:41	NE105	NE	0	M	M		P		ARFO	1381	4-19
Cross	COEI	15 Jul 02	9:41:00	SC107	SC		N	H	V10				1382	4-19
Cross	COEI	15 Jul 02	9:41:00	SC109	SC		N	H	V10				1383	4-19
Cross	COEI	15 Jul 02	9:42:00	NE111	NE	0	M	M		P		ARFO	1384	4-19
Cross	COEI	15 Jul 02	9:45:45	SC113	SC		L	H					1385	4-19
Cross	POBE	15 Jul 02	8:16:33		PBT								1465	3-37
Cross	HUMAN	15 Jul 02	8:37:17		PPT								1466	3-37
Cross	ARFO	15 Jul 02	8:39:55		AFT								1467	3-37
Cross	HUMAN	15 Jul 02	9:01:50		SGS								1468	3-38

Island	Species	Date	Time	Nest_ID	Sight_Type	Eggs_Live	Drift	Elev	Veg	Pred	Pred_Egg	Pred_Type	Rec_No	Bk-No
Cross	COEI	15 Jul 02	9:34:26	SC89	SC		L	M					1470	4-19
Cross	COEI	15 Jul 02	9:46:56	NE115	NE	0	L	M		P			1472	4-20
Cross	COEI	15 Jul 02	9:48:48	SC117	SC		L	M	V40				1473	4-20
Cross	COEI	15 Jul 02	9:49:00	NE119	NE	0	L	M		P			1474	4-20
Cross	COEI	15 Jul 02	9:49:50	SC121	SC		L	M					1475	4-20
Cross	COEI	15 Jul 02	9:50:10	NE123	NE	0	L	M	V20	P			1476	4-20
Cross	GLGU	15 Jul 02	9:50:40										1477	4-20
Cross	COEI	15 Jul 02	9:51:33	SC125	SC		L	M					1478	4-20
Cross	GLGU	15 Jul 02	9:55:42										1479	4-20
Cross	COEI	15 Jul 02	10:10:54	NE127	NE	0	L	M		P		POBE	1480	4-20
Cross	COEI	15 Jul 02	10:17:41	NE129	NE	0	L	M		P		POBE	1481	4-20
Cross	COEI	15 Jul 02	10:18:00	NE131	NE	0	L	L		P		POBE	1482	4-20
Cross	GLGU	15 Jul 02	10:18:49	NE133	NE	0	M	M		P		POBE	1483	4-20
Cross	COEI	15 Jul 02	10:18:49	NE135	NE	0	M	M		P		POBE	1484	4-20
Cross	COEI	15 Jul 02	10:18:49	NE137	NE	0	M	M		P		POBE	1485	4-20
Cross	COEI	15 Jul 02	10:39:17	SC139	SC		N	M					1486	4-20
Cross	RUTU	15 Jul 02	10:43:04		RUTU								1487	4-20
Cross	COEI	15 Jul 02	10:44:54	SC141	SC		N	M					1488	4-20
Duck 1&2	COEI	12 Jul 02	16:59:39	NE2	NE	4	M	L					859	3-25
Duck 1&2	COEI	12 Jul 02	16:59:41	NE4	NE	2	M	L					860	3-25
Duck 1&2	COEI	12 Jul 02	17:01:41	SC6	SC		L	L					861	3-25
Duck 1&2	COEI	12 Jul 02	17:02:10	SC8	SC		L	L					862	3-25
Duck 1&2	COEI	12 Jul 02	17:02:39	NE10	NE	0	M	L		P		GLGU	863	3-25
Duck 1&2	GLGU	12 Jul 02	17:04:02	SC12	SC		N	L					864	3-25
Duck 1&2	COEI	12 Jul 02	17:04:53	NE14	NE	0	M	L		P		GLGU	865	3-25
Duck 1&2	GLGU	12 Jul 02	17:05:30	NE16	NE	H	N	L					866	3-25
Duck 1&2	GLGU	12 Jul 02	17:06:17	NE18	NE	H	M	M					867	3-25
Duck 1&2	COEI	12 Jul 02	17:07:11	NE20	NE	1	M	M					868	3-25
Duck 1&2	GLGU	12 Jul 02	17:08:55	SC22	SC		L	L					869	3-25
Duck 1&2	GLGU	12 Jul 02	17:09:52	NE24	NE	H	N	M					870	3-25
Duck 1&2	COEI	12 Jul 02	17:10:26	NE26	NE	0	N	M		P		GLGU	871	3-25
Duck 1&2	COEI	12 Jul 02	17:11:11	NE28	NE	0	M	M		P		GLGU	872	3-25
Duck 1&2	COEI	12 Jul 02	17:11:23	NE30	NE	Y	M	M					873	3-25
Duck 1&2	COEI	12 Jul 02	17:12:36	SC32	SC		L	L					874	3-25
Duck 1&2	COEI	12 Jul 02	17:13:41	NE34	NE	Y	M	M					875	3-25
Duck 1&2	COEI	12 Jul 02	17:14:11	NE36	NE	2	H	M					876	3-25
Duck 1&2	COEI	12 Jul 02	17:15:51	NE38	NE	1	H	M					877	3-25
Duck 1&2	COEI	12 Jul 02	17:16:36	NE40	NE	0	H	M		P		GLGU	878	3-25
Duck 1&2	COEI	12 Jul 02	17:16:56	NE42	NE	0	M	M		P		GLGU	879	3-25
Duck 1&2	COEI	12 Jul 02	17:17:17	NE44	NE	Y	L	M					880	3-25
Duck 1&2	COEI	12 Jul 02	17:17:17	NE46	NE	Y	L	M					881	3-25
Duck 1&2	COEI	12 Jul 02	17:18:56	NE48	NE	0	M	M		P		GLGU	882	3-25
Duck 1&2	COEI	12 Jul 02	17:19:12	NE50	NE	Y	H	M					883	3-25
Duck 1&2	COEI	12 Jul 02	17:21:16	NE52	NE	Y	L	M					884	3-25
Duck 1&2	COEI	12 Jul 02	17:23:14	NE54	NE	Y	L	H					885	3-25
Duck 1&2	COEI	12 Jul 02	17:23:14	NE56	NE	Y	L	H					886	3-25
Duck 1&2	COEI	12 Jul 02	17:23:14	NE58	NE	Y	L	H					887	3-25
Duck 1&2	COEI	12 Jul 02	17:24:10	NE60	NE	0	L	H		P		GLGU	888	3-25
Duck 1&2	COEI	12 Jul 02	17:25:44	NE62	NE	Y	L	H					889	3-26
Duck 1&2	COEI	12 Jul 02	17:27:19	NE64	NE	Y	L	M					890	3-26
Duck 1&2	COEI	12 Jul 02	17:27:55	NE66	NE	Y	M	H					891	3-26
Duck 1&2	COEI	12 Jul 02	17:29:30	NE68	NE	4	M	H					892	3-26
Duck 1&2	COEI	12 Jul 02	17:29:46	SC70	SC		M	H					893	3-26
Duck 1&2	COEI	12 Jul 02	17:30:11	NE72	NE	1	M	H					894	3-26
Duck 1&2	COEI	12 Jul 02	17:31:00	NE74	NE	Y	L	H					895	3-26
Duck 1&2	COEI	12 Jul 02	17:32:59	NE76	NE	0	M	H		P		GLGU	896	3-26
Duck 1&2	CAGO	12 Jul 02	17:32:59	NE78	NE	0	M	H		P		GLGU	897	3-26
Duck 1&2	GLGU	12 Jul 02	17:36:29	SC80	SC		L	M					898	3-26
Duck 1&2	COEI	12 Jul 02	17:37:10	SC82	SC		M	M					899	3-26
Duck 1&2	GLGU	12 Jul 02	17:40:30	SC84	SC		L	L					900	3-26
Duck 1&2	GLGU	12 Jul 02	17:42:30	NE86	NE	H	L	L					901	3-26
Duck 1&2	COEI	12 Jul 02	17:43:20	NE88	NE	0	N	L		P		GLGU	902	3-26
Duck 1&2	COEI	12 Jul 02	17:25:44										1460	
Endicott	Elymus	10 Jul 02	15:34:54										333	2-52
Endicott	COEI	10 Jul 02	15:41:08	NE1	NE	0	M	H		P		ARFO/GLGU	334	2-52
Endicott	Elymus	10 Jul 02	15:55:10										335	2-52
Endicott	COEI	10 Jul 02	15:58:00	SC3	SC		M	H					336	2-52
Endicott	COEI	10 Jul 02	16:09:08	SC5	SC		M	H					337	2-52
Endicott	COEI	10 Jul 02	16:38:36	SC7	SC		M	H					338	2-52

Island	Species	Date	Time	Nest_ID	Sight_Type	Eggs_Live	Drift	Elev	Veg	Pred	Pred_Egg	Pred_Type	Rec_No	Bk-No
Endicott	COEI	10 Jul 02	16:47:03	SC9	SC		H	H					339	2-52
Endicott	Elymus	10 Jul 02	16:54:51										340	2-52
Endicott	COEI	10 Jul 02	17:43:28	SC11	SC		M	M					341	2-52
Endicott	GLGU	10 Jul 02	18:04:55	NE13	NE	0	N	M		P		U	342	2-52
Endicott	COEI	10 Jul 02	18:23:32	NE15	NE	0	M	H		P		ARFO/GLGU	343	2-52
Endicott	COEI	10 Jul 02	18:25:57	SC17	SC		M	H					344	2-52
Endicott	COEI	10 Jul 02	15:27:00	SC2	SC		H	H					797	3-21
Endicott	COEI	10 Jul 02	15:27:00	SC4	SC		H	H					798	3-21
Endicott	COEI	10 Jul 02	15:31:00	SC6	SC		H	H					799	3-21
Endicott	COEI	10 Jul 02	15:36:00	SC8	SC		H	H					800	3-21
Endicott	COEI	10 Jul 02	15:38:00	SC10	SC		H	H					801	3-21
Endicott	COEI	10 Jul 02	15:38:00	SC12	SC		H	H					802	3-21
Endicott	COEI	10 Jul 02	16:04:00	SC14	SC		H	H					803	3-21
Endicott	COEI	10 Jul 02	16:04:00	SC16	SC		H	H					804	3-21
Endicott	COEI	10 Jul 02	16:06:00	SC18	SC		H	H					805	3-21
Endicott	COEI	10 Jul 02	16:11:00	SC20	SC		M	M					806	3-21
Endicott	ELYMUS	10 Jul 02	16:23:00		Elymus								807	3-21
Endicott	COEI	10 Jul 02	16:32:00	SC22	SC		L	M					808	3-21
Endicott	COEI	10 Jul 02	16:35:00	SC24	SC		L	M					809	3-21
Endicott	COEI	10 Jul 02	16:51:00	SC26	SC		L	L					810	3-21
Endicott	COEI	10 Jul 02	16:57:00	SC28	SC		M	M					811	3-21
Endicott	COEI	10 Jul 02	16:57:00	SC30	SC		M	M					812	3-21
Endicott	COEI	10 Jul 02	17:03:00	SC32	SC		L	H					813	3-21
Endicott	COEI	10 Jul 02	17:11:00	SC34	SC		M	L					814	3-22
Jeanette	COEI	15 Jul 02	15:48:44	NE2	NE	0	M	M		P		AVIAN/POBE	150	5-8
Jeanette	POBE	15 Jul 02	15:51:09		PBT								151	5-8
Jeanette	ARTE	15 Jul 02	15:52:33	SC4	SC		L	M					152	5-8
Jeanette	COEI	15 Jul 02	15:53:06	NE6	NE	0	M	M		P		AVIAN/POBE	153	5-8
Jeanette	COEI	15 Jul 02	15:53:47	NE8	NE	0	M	M		P		AVIAN/POBE	154	5-8
Jeanette	COEI	15 Jul 02	15:54:13	SC10	SC		L	L					155	5-8
Jeanette	COEI	15 Jul 02	15:55:44	NE12	NE	0	M	M		P		AVIAN/POBE	156	5-8
Jeanette	COEI	15 Jul 02	15:57:01	NE14	NE	0	L	M		P		AVIAN/POBE	157	5-8
Jeanette	COEI	15 Jul 02	15:59:05	SC16	SC		L	M					158	5-8
Jeanette	COEI	15 Jul 02	15:59:40	NE18	NE	0	L	M		P		AVIAN/POBE	159	5-8
Jeanette	COEI	15 Jul 02	16:00:47	NE20	NE	0	L	M		P		AVIAN/POBE	160	5-8
Jeanette	COEI	15 Jul 02	16:02:06	NE22	NE	0	L	M		P		POBE	161	5-8
Jeanette	COEI	15 Jul 02	16:02:06	NE24	NE	0	L	M		P		AVIAN/POBE	162	5-8
Jeanette	COEI	15 Jul 02	16:02:42	NE26	NE	0	M	M		P		AVIAN/POBE	163	5-8
Jeanette	COEI	15 Jul 02	16:02:42	NE28	NE	0	M	M		P		AVIAN/POBE	164	5-8
Jeanette	COEI	15 Jul 02	16:03:04	NE30	NE	0	L	M		P		AVIAN/POBE	165	5-8
Jeanette	COEI	15 Jul 02	16:03:40	NE32	NE	0	L	M		P		AVIAN/POBE	166	5-8
Jeanette	COEI	15 Jul 02	16:04:41	NE34	NE	0	M	M		P		AVIAN/POBE	167	5-8
Jeanette	COEI	15 Jul 02	16:05:04	SC36	SC		L	M					168	5-8
Jeanette	COEI	15 Jul 02	16:06:17	NE38	NE	0	M	M		P		AVIAN/POBE	169	5-8
Jeanette	COEI	15 Jul 02	16:06:49	NE40	NE	0	M	M		P			170	5-8
Jeanette	ARTE	15 Jul 02	16:07:21	SC42	SC		L	M					171	5-8
Jeanette	ARTE	15 Jul 02	16:07:21	SC44	SC		L	M					172	5-8
Jeanette	COEI	15 Jul 02	16:07:43	SC46	SC		M	M					173	5-8
Jeanette	ARTE	15 Jul 02	16:08:59	SC48	SC		L	M					174	5-8
Jeanette	COEI	15 Jul 02	14:54:28	SC2	SC		L	L					1251	3-40
Jeanette	COEI	15 Jul 02	14:55:10	NE4	NE	0	L	L		P		POBE	1252	3-40
Jeanette	COEI	15 Jul 02	14:55:27	SC6	SC		L	L					1253	3-40
Jeanette	COEI	15 Jul 02	14:56:26	SC8	SC		L	L					1254	3-40
Jeanette	COEI	15 Jul 02	14:56:40	SC10	SC		L	M					1255	3-40
Jeanette	COEI	15 Jul 02	14:57:30	SC12	SC		L	M					1256	3-40
Jeanette	COEI	15 Jul 02	14:57:50	SC14	SC		L	M					1257	3-40
Jeanette	COEI	15 Jul 02	14:58:10	NE16	NE	0	M	M		P		POBE	1258	3-40
Jeanette	COEI	15 Jul 02	14:58:38	NE18	NE	0	L	M		P		POBE	1259	3-40
Jeanette	COEI	15 Jul 02	14:59:05	SC20	SC		L	M					1260	3-40
Jeanette	COEI	15 Jul 02	14:59:27	NE22	NE	0	M	M		P		POBE	1261	3-40
Jeanette	COEI	15 Jul 02	14:59:45	SC24	SC		M	M					1262	3-40
Jeanette	COEI	15 Jul 02	14:59:45	SC26	SC		M	M					1263	3-40
Jeanette	COEI	15 Jul 02	15:00:09	SC28	SC		M	M					1264	3-40
Jeanette	COEI	15 Jul 02	15:00:58	NE30	NE	0	H	M		P		POBE	1265	3-40
Jeanette	COEI	15 Jul 02	15:00:58	SC32	SC		L	M					1266	3-40
Jeanette	COEI	15 Jul 02	15:00:58	SC34	SC		L	M					1267	3-40
Jeanette	COEI	15 Jul 02	15:01:40	SC36	SC		L	M					1268	3-40
Jeanette	COEI	15 Jul 02	15:02:05	SC38	SC		L	M					1269	3-40
Jeanette	COEI	15 Jul 02	15:02:30	SC40	SC		L	M					1270	3-40

Island	Species	Date	Time	Nest_ID	Sight_Type	Eggs_Live	Drift	Elev	Veg	Pred	Pred_Egg	Pred_Type	Rec_No	Bk-No
Jeanette	COEI	15 Jul 02	15:02:56	SC42	SC		M	H					1271	3-40
Jeanette	COEI	15 Jul 02	15:03:40	NE44	NE	Y	M	H					1272	3-40
Jeanette	COEI	15 Jul 02	15:05:46	NE46	NE	0	L	M		P		POBE	1273	3-40
Jeanette	COEI	15 Jul 02	15:06:30	SC48	SC		M	H					1274	3-40
Jeanette	COEI	15 Jul 02	15:07:00	SC50	SC		H	H					1275	3-40
Jeanette	COEI	15 Jul 02	15:09:27	NE52	NE	0	M	H		P		POBE	1276	3-40
Jeanette	COEI	15 Jul 02	15:10:21	SC54	SC		L	H					1277	3-40
Jeanette	COEI	15 Jul 02	15:11:52	SC56	SC		M	M					1278	3-40
Jeanette	COEI	15 Jul 02	15:11:52	SC58	SC		M	M					1279	3-40
Jeanette	COEI	15 Jul 02	15:12:30	SC60	SC		M	M					1280	3-40
Jeanette	COEI	15 Jul 02	15:13:30	SC62	SC		L	M					1281	3-40
Jeanette	COEI	15 Jul 02	15:17:21	SC64	SC		L	M					1282	3-40
Jeanette	COEI	15 Jul 02	15:17:21	SC66	SC		L	M					1283	3-40
Jeanette	COEI	15 Jul 02	15:23:43	SC68	SC		L	M					1284	3-41
Jeanette	GLGU	15 Jul 02	15:31:11	NE70	NE	0	N	M		P		POBE	1285	3-41
Karluk	COEI	15 Jul 02	12:55:54	SC2	SC		L	L					121	5-7
Karluk	COEI	15 Jul 02	12:58:43	SC4	SC		H	M					122	5-7
Karluk	COEI	15 Jul 02	12:59:16	NE6	NE	0	M	M		P		AVIAN/POBE	123	5-7
Karluk	COEI	15 Jul 02	12:59:51	NE8	NE	0	H	M		P		AVIAN/POBE	124	5-7
Karluk	COEI	15 Jul 02	13:00:05	NE10	NE	0	M	M		P		AVIAN/POBE	125	5-7
Karluk	COEI	15 Jul 02	13:01:07	NE12	NE	H	M	M					126	5-7
Karluk	COEI	15 Jul 02	13:01:32	SC14	SC		M	M					127	5-7
Karluk	COEI	15 Jul 02	13:01:52	SC16	SC		L	M					128	5-7
Karluk	COEI	15 Jul 02	13:02:14	NE18	NE	0	M	M		P			129	5-7
Karluk	COEI	15 Jul 02	13:02:48	SC20	SC		M	M					130	5-7
Karluk	COEI	15 Jul 02	13:03:09	SC22	SC		M	M					131	5-7
Karluk	COEI	15 Jul 02	13:03:32	SC24	SC		L	M					132	5-7
Karluk	COEI	15 Jul 02	13:03:51	NE26	NE	0	M	L		P		AVIAN/POBE	133	5-7
Karluk	COEI	15 Jul 02	13:04:20	NE28	NE	0	M	M		P		AVIAN/POBE	134	5-7
Karluk	COEI	15 Jul 02	13:05:01	SC30	SC		H	M					135	5-7
Karluk	GLGU	15 Jul 02	13:05:32	SC32	SC		H	M					136	5-7
Karluk	COEI	15 Jul 02	13:06:42	SC34	SC		M	M					137	5-7
Karluk	COEI	15 Jul 02	13:07:16										138	5-7
Karluk	COEI	15 Jul 02	13:09:09	SC36	SC		H	M					139	5-7
Karluk	ARTE	15 Jul 02	13:09:41	SC38	SC		M	M					140	5-7
Karluk	ARTE	15 Jul 02	13:10:38	SC40	SC		L	M					141	5-7
Karluk	ARTE	15 Jul 02	13:10:38	SC42	SC		L	M					142	5-7
Karluk	POBE	15 Jul 02	13:13:13		PBT								143	5-7
Karluk	COEI	15 Jul 02	13:13:54	SC44	SC		M	M					144	5-7
Karluk	KIEI	15 Jul 02	13:16:00										145	5-7
Karluk	COEI	15 Jul 02	13:20:24	SC46	SC		L	M					146	5-7
Karluk	COEI	15 Jul 02	13:21:22	NE48	NE	0	L	M		P		AVIAN/POBE	147	5-7
Karluk	COEI	15 Jul 02	13:21:50	SC50	SC		L	M					148	5-7
Karluk	COEI	15 Jul 02	13:22:45	SC52	SC		L	M					149	5-7
Lion Point	COEI	15 Jul 02	16:53:01	SC602	SC		L	M					175	5-9
Lion Point	COEI	15 Jul 02	16:53:45	SC604	SC		M	M					176	5-9
Lion Point	COEI	15 Jul 02	16:54:16	SC606	SC		M	M					177	5-9
Lion Point	COEI	15 Jul 02	16:54:50	SC608	SC		M	M					178	5-9
Lion Point	COEI	15 Jul 02	16:55:30	SC610	SC		M	M					179	5-9
Lion Point	COEI	15 Jul 02	16:55:48	SC612	SC		H	M					180	5-9
Lion Point	COEI	15 Jul 02	16:56:55	NE614	NE	0	L	M		P		ARFO/GLGU	181	5-9
Lion Point	COEI	15 Jul 02	16:59:39	NE616	NE	0	L	M		P		ARFO/GLGU	182	5-9
Lion Point	COEI	15 Jul 02	17:00:12	SC618	SC		L	M					183	5-9
Lion Point	COEI	15 Jul 02	17:01:04	SC620	SC		L	M					184	5-9
Lion Point	COEI	15 Jul 02	17:01:20	SC622	SC		L	M					185	5-9
Lion Point	COEI	15 Jul 02	17:01:38	SC624	SC		L	M					186	5-9
Lion Point	COEI	15 Jul 02	17:02:20	NE626	NE	0	M	M		P		ARFO/GLGU	187	5-9
Lion Point	COEI	15 Jul 02	17:02:36	NE628	NE	0	M	M		P		ARFO/GLGU	188	5-9
Lion Point	COEI	15 Jul 02	17:03:22	NE630	NE	0	M	M		P		ARFO/GLGU	189	5-9
Lion Point	COEI	15 Jul 02	17:03:55	NE632	NE	0	M	M		P		ARFO/GLGU	190	5-9
Lion Point	COEI	15 Jul 02	17:03:55	SC634	SC		M	M					191	5-9
Lion Point	COEI	15 Jul 02	17:04:32	SC636	SC		M	M					192	5-9
Lion Point	COEI	15 Jul 02	17:05:11	NE638	NE	0	M	M		P		ARFO/GLGU	193	5-9
Lion Point	COEI	15 Jul 02	17:05:37	SC640	SC		M	M					194	5-9
Lion Point	COEI	15 Jul 02	17:05:50	NE642	NE	0	M	M		P		ARFO/GLGU	195	5-9
Lion Point	COEI	15 Jul 02	17:06:15	NE644	NE	0	M	M		P		ARFO/GLGU	196	5-9
Lion Point	COEI	15 Jul 02	17:06:31	NE646	NE	0	L	M		P		ARFO/GLGU	197	5-9
Lion Point	COEI	15 Jul 02	17:07:11	NE648	NE	0	L	M		P		ARFO/GLGU	198	5-9
Lion Point	COEI	15 Jul 02	17:07:29	SC650	SC		M	M					199	5-9

Island	Species	Date	Time	Nest_ID	Sight_Type	Eggs_Live	Drift	Elev	Veg	Pred	Pred_Egg	Pred_Type	Rec_No	Bk-No
Lion Point	COEI	15 Jul 02	17:07:50	SC652	SC		M	M					200	5-9
Lion Point	COEI	15 Jul 02	17:08:11	NE654	NE	0	L	M		P		ARFO/GLGU	201	5-9
Lion Point	COEI	15 Jul 02	17:08:42	SC656	SC		M	M					202	5-9
Lion Point	COEI	15 Jul 02	17:09:02	NE658	NE	0	M	M		P		ARFO/GLGU	203	5-9
Lion Point	COEI	15 Jul 02	17:09:31	SC660	SC		M	M					204	5-10
Lion Point	COEI	15 Jul 02	17:10:02	SC662	SC		M	M					205	5-10
Lion Point	COEI	15 Jul 02	17:10:18	NE664	NE	0	M	M		P		ARFO/GLGU	206	5-10
Lion Point	COEI	15 Jul 02	17:10:47	NE666	NE	0	M	M		P		ARFO/GLGU	207	5-10
Lion Point	COEI	15 Jul 02	17:11:02	SC668	SC		M	M					208	5-10
Lion Point	COEI	15 Jul 02	17:11:18	NE670	NE	0	L	M		P		ARFO/GLGU	209	5-10
Lion Point	COEI	15 Jul 02	17:11:35	SC672	SC		M	M					210	5-10
Lion Point	GLGU	15 Jul 02	17:12:27	SC674	SC		L	M					211	5-10
Lion Point	COEI	15 Jul 02	17:12:50	SC676	SC		L	M					212	5-10
Lion Point	COEI	15 Jul 02	17:13:39	SC678	SC		L	M					213	5-10
Lion Point	COEI	15 Jul 02	17:14:04	NE680	NE	0	M	M		P		ARFO/GLGU	214	5-10
Lion Point	COEI	15 Jul 02	17:14:28	NE682	NE	0	L	M		P		ARFO/GLGU	215	5-10
Lion Point	COEI	15 Jul 02	17:15:01	NE684	NE	0	M	M		P		ARFO/GLGU	216	5-10
Lion Point	COEI	15 Jul 02	17:15:29	SC686	SC		L	M					217	5-10
Lion Point	COEI	15 Jul 02	17:16:18	NE688	NE	0	L	M		P		ARFO/GLGU	218	5-10
Lion Point	COEI	15 Jul 02	17:16:48	SC690	SC		L	M					219	5-10
Lion Point	COEI	15 Jul 02	17:17:20	NE692	NE	0	M	M		P		ARFO/GLGU	220	5-10
Lion Point	COEI	15 Jul 02	17:17:44	SC694	SC		M	M					221	5-10
Lion Point	COEI	15 Jul 02	17:17:58	NE696	NE	0	L	M		P		ARFO/GLGU	222	5-10
Lion Point	COEI	15 Jul 02	17:18:52	SC698	SC		L	M					223	5-10
Lion Point	COEI	15 Jul 02	17:19:42	NE700	NE	Y	M	M					224	5-10
Lion Point	COEI	15 Jul 02	16:53:34	SC2	SC		L	L					1286	3-41
Lion Point	COEI	15 Jul 02	16:53:50	SC4	SC		M	L					1287	3-41
Lion Point	COEI	15 Jul 02	16:54:09	SC6	SC		M	L					1288	3-41
Lion Point	COEI	15 Jul 02	16:54:29	SC8	SC		M	L					1289	3-41
Lion Point	COEI	15 Jul 02	16:54:50	NE10	NE	0	M	L		P		POBE	1290	3-41
Lion Point	COEI	15 Jul 02	16:55:43	SC12	SC		L	M					1291	3-41
Lion Point	COEI	15 Jul 02	16:56:04	SC14	SC		L	M					1292	3-41
Lion Point	COEI	15 Jul 02	16:58:50	SC16	SC		L	M					1293	3-41
Lion Point	COEI	15 Jul 02	16:59:30	NE18	NE	0	L	M		P		POBE	1294	3-41
Lion Point	COEI	15 Jul 02	17:01:18	NE20	NE	0	L	M		P		POBE	1295	3-41
Lion Point	COEI	15 Jul 02	17:01:35	NE22	NE	0	L	M		P		POBE	1296	3-41
Lion Point	COEI	15 Jul 02	17:01:53	NE24	NE	0	M	M		P		POBE	1297	3-41
Lion Point	COEI	15 Jul 02	17:02:39	SC26	SC		M	H					1298	3-41
Lion Point	COEI	15 Jul 02	17:02:59	NE28	NE	0	L	H		P		ARFO	1299	3-41
Lion Point	GLGU	15 Jul 02	17:03:27	NE30	NE	0	M	H		P		ARFO	1300	3-41
Lion Point	COEI	15 Jul 02	17:04:33	NE32	NE	0	L	M		P		ARFO	1301	3-41
Lion Point	COEI	15 Jul 02	17:05:21	NE34	NE	0	H	H		P		ARFO	1302	3-41
Lion Point	COEI	15 Jul 02	17:06:16	SC36	SC		L	H					1303	3-41
Lion Point	COEI	15 Jul 02	17:06:47	SC38	SC		L	H					1304	3-41
Lion Point	GLGU	15 Jul 02	17:07:18	NE40	NE	0	H	H		P		ARFO	1305	3-41
Lion Point	COEI	15 Jul 02	17:08:12	NE42	NE	0	H	H		P		ARFO	1306	3-41
Lion Point	COEI	15 Jul 02	17:08:50	NE44	NE	0	H	H		P		ARFO	1307	3-41
Lion Point	COEI	15 Jul 02	17:09:05	NE46	NE	0	H	H		P		ARFO	1308	3-41
Lion Point	COEI	15 Jul 02	17:09:35	NE48	NE	0	H	H		P		ARFO	1309	3-41
Lion Point	COEI	15 Jul 02	17:10:30	SC50	SC		M	H					1310	3-42
Lion Point	COEI	15 Jul 02	17:11:00	SC52	SC		M	H					1311	3-42
Lion Point	COEI	15 Jul 02	17:11:00	SC54	SC		M	H					1312	3-42
Lion Point	COEI	15 Jul 02	17:11:26	SC56	SC		L	H					1313	3-42
Lion Point	COEI	15 Jul 02	17:11:30	NE58	NE	0	M	H		P		ARFO	1314	3-42
Lion Point	COEI	15 Jul 02	17:12:10	SC60	SC		L	H					1315	3-42
Lion Point	COEI	15 Jul 02	17:12:40	NE62	NE	0	H	H		P		ARFO	1316	3-42
Lion Point	COEI	15 Jul 02	17:13:19	SC64	SC		H	H					1317	3-42
Lion Point	COEI	15 Jul 02	17:13:19	SC66	SC		H	H					1318	3-42
Lion Point	COEI	15 Jul 02	17:13:20	NE68	NE	0	H	H		P		ARFO	1319	3-42
Lion Point	COEI	15 Jul 02	17:14:05	NE70	NE	0	H	H		P		ARFO	1320	3-42
Lion Point	COEI	15 Jul 02	17:14:26	NE72	NE	0	H	H		P		ARFO	1321	3-42
Lion Point	COEI	15 Jul 02	17:14:50	SC74	SC		M	H					1322	3-42
Lion Point	COEI	15 Jul 02	17:15:22	NE76	NE	0	H	H		P		ARFO	1323	3-42
Lion Point	COEI	15 Jul 02	17:15:22	NE78	NE	0	H	H		P		ARFO	1324	3-42
Lion Point	COEI	15 Jul 02	17:15:22	NE80	NE	0	H	H		P		ARFO	1325	3-42
Lion Point	COEI	15 Jul 02	17:18:55	SC82	SC		L	M					1326	3-42
Lion Point	COEI	15 Jul 02	17:20:19	NE84	NE	0	L	M		P		ARFO	1327	3-42
Lion Point	COEI	15 Jul 02	17:20:54	SC86	SC		L	M					1328	3-42
Lion Point	COEI	15 Jul 02	16:53:39	NE1	NE	0	L	M		P		ARFO	1421	4-23

Island	Species	Date	Time	Nest_ID	Sight_Type	Eggs_Live	Drift	Elev	Veg	Pred	Pred_Egg	Pred_Type	Rec_No	Bk-No
Lion Point	COEI	15 Jul 02	16:54:19	SC3	SC		L	M					1422	4-23
Lion Point	COEI	15 Jul 02	16:54:35	NE5	NE	0	L	M		P		ARFO	1423	4-23
Lion Point	COEI	15 Jul 02	16:55:38	NE7	NE	0	L	M		P		ARFO	1424	4-23
Lion Point	COEI	15 Jul 02	16:58:59	SC9	SC		L	M					1425	4-23
Lion Point	COEI	15 Jul 02	16:59:48	SC11	SC		L	M					1426	4-23
Lion Point	COEI	15 Jul 02	17:00:15	SC13	SC		L	M					1427	4-23
Lion Point	COEI	15 Jul 02	17:00:29	NE15	NE	0	L	M		P		ARFO	1428	4-23
Lion Point	COEI	15 Jul 02	17:00:41	SC17	SC		L	M					1429	4-23
Lion Point	COEI	15 Jul 02	17:00:58	SC19	SC		L	M					1430	4-23
Lion Point	COEI	15 Jul 02	17:01:17	NE21	NE	0	L	M		P		ARFO	1431	4-23
Lion Point	COEI	15 Jul 02	17:01:41	SC23	SC		L	M					1432	4-23
Lion Point	COEI	15 Jul 02	17:02:44	NE25	NE	0	L	M		P		ARFO	1433	4-23
Lion Point	COEI	15 Jul 02	17:03:10	NE27	NE	0	L	M		P		ARFO	1434	4-23
Lion Point	COEI	15 Jul 02	17:04:11	NE29	NE	0	M	H		P		ARFO	1435	4-23
Lion Point	COEI	15 Jul 02	17:04:31	SC31	SC		L	M					1436	4-23
Lion Point	COEI	15 Jul 02	17:05:02	NE33	NE	0	M	H		P		GLGU	1437	4-23
Lion Point	COEI	15 Jul 02	17:06:00	SC35	SC		M	H					1438	4-23
Lion Point	POBE	15 Jul 02	17:06:02		PBT								1439	4-23
Lion Point	COEI	15 Jul 02	17:06:18	NE37	NE	0	M	M		P		ARFO	1440	4-23
Lion Point	COEI	15 Jul 02	17:06:45	SC39	SC		M	M					1441	4-23
Lion Point	COEI	15 Jul 02	17:07:00	SC41	SC		L	H					1442	4-23
Lion Point	COEI	15 Jul 02	17:07:39	SC43	SC		M	H					1443	4-23
Lion Point	COEI	15 Jul 02	17:08:27	NE45	NE	0	M	M		P		GLGU	1444	4-23
Lion Point	COEI	15 Jul 02	17:09:07	SC47	SC		M	M					1445	4-23
Lion Point	COEI	15 Jul 02	17:09:30	SC49	SC		M	H					1446	4-23
Lion Point	COEI	15 Jul 02	17:09:55	SC51	SC		M	H					1447	4-23
Lion Point	COEI	15 Jul 02	17:10:11	NE53	NE	0	M	H		P		ARFO	1448	4-23
Lion Point	COEI	15 Jul 02	17:10:28	SC55	SC		M	H					1449	4-23
Lion Point	COEI	15 Jul 02	17:11:42	NE57	NE	0	H	H		P		ARFO	1450	4-24
Lion Point	COEI	15 Jul 02	17:13:13	NE59	NE	0	M	H		P		ARFO	1451	4-24
Lion Point	COEI	15 Jul 02	17:15:03	NE61	NE	0	M	H		P		ARFO	1452	4-24
Lion Point	COEI	15 Jul 02	17:15:44	NE63	NE	0	L	M		P		ARFO	1453	4-24
Lion Point	COEI	15 Jul 02	17:16:07	NE65	NE	0	M	M		P		ARFO	1454	4-24
Lion Point	COEI	15 Jul 02	17:17:55	NE67	NE	0	M	H		P		ARFO	1455	4-24
Lion Point	COEI	15 Jul 02	17:18:56	NE69	NE	0	M	M		P		ARFO	1456	4-24
Lion Point	GLGU	15 Jul 02	17:19:18	NE71	NE	0	N	H	V05	P		ARFO	1457	4-24
Lion Point	COEI	15 Jul 02	17:20:07	NE73	NE	0	L	H	V05	P		ARFO	1458	4-24
Lion Point	COEI	15 Jul 02	17:20:56	NE75	NE	0	L	H		P		ARFO	1459	4-24
Lion Point	ARFO	15 Jul 02	17:02:39										1469	3-41
Narwhal	COEI	14 Jul 02	14:06:09	SC1	SC		L	M					640	4-14
Narwhal	COEI	14 Jul 02	14:07:14	SC3	SC		L	L					641	4-14
Narwhal	COEI	14 Jul 02	14:07:47	SC5	SC		L	L					642	4-14
Narwhal	COEI	14 Jul 02	14:10:05	SC7	SC		L	L					643	4-14
Narwhal	COEI	14 Jul 02	14:10:46	SC9	SC		M	L					644	4-14
Narwhal	COEI	14 Jul 02	14:12:30	NE11	NE	0	L	M		P		POBE	645	4-14
Narwhal	COEI	14 Jul 02	14:13:13	SC13	SC		L	M					646	4-14
Narwhal	COEI	14 Jul 02	14:13:32	SC15	SC		M	M					647	4-14
Narwhal	COEI	14 Jul 02	14:14:04	SC17	SC		M	M					648	4-14
Narwhal	COEI	14 Jul 02	14:18:53	SC19	SC		L	M					649	4-14
Narwhal	COEI	14 Jul 02	14:18:53	SC21	SC		L	M					650	4-14
Narwhal	COEI	14 Jul 02	14:19:54	NE23	NE	0	M	M		P		POBE	651	4-14
Narwhal	COEI	14 Jul 02	14:22:38	NE25	NE	0	M	M		P		POBE	652	4-14
Narwhal	COEI	14 Jul 02	14:23:21	NE27	NE	0	M	M		P		POBE	653	4-14
Narwhal	COEI	14 Jul 02	14:23:44	SC29	SC		M	M					654	4-14
Narwhal	COEI	14 Jul 02	14:24:44	SC31	SC		M	M					655	4-14
Narwhal	COEI	14 Jul 02	14:31:55	SC33	SC		L	M					656	4-14
Narwhal	COEI	14 Jul 02	14:34:07	SC35	SC		L	M					657	4-14
Narwhal	GLGU	14 Jul 02	14:36:04	NE37	NE	0	N	M	V30	P		POBE	658	4-14
Narwhal	COEI	14 Jul 02	14:37:29	NE39	NE	0	L	L		P		GLGU	659	4-14
Narwhal	COEI	14 Jul 02	14:38:38	SC41	SC		L	L					660	4-14
Narwhal	COEI	14 Jul 02	14:39:25	SC43	SC		L	M					661	4-14
Narwhal	COEI	14 Jul 02	14:40:07	SC45	SC		L	M					662	4-14
Narwhal	COEI	14 Jul 02	14:40:38	SC47	SC		L	M					663	4-14
Narwhal	COEI	14 Jul 02	14:41:03	NE49	NE	0	M	M		P		POBE	664	4-14
Narwhal	COEI	14 Jul 02	14:41:30	SC51	SC		L	M					665	4-14
Narwhal	COEI	14 Jul 02	14:41:59	NE53	NE	0	M	M		P		POBE	666	4-14
Narwhal	COEI	14 Jul 02	14:42:21	SC55	SC		L	M					667	4-14
Narwhal	COEI	14 Jul 02	14:43:04	SC57	SC		L	L					668	4-14
Narwhal	COEI	14 Jul 02	14:43:48	NE59	NE	0	M	H		P		POBE	669	4-15

Island	Species	Date	Time	Nest_ID	Sight_Type	Eggs_Live	Drift	Elev	Veg	Pred	Pred_Egg	Pred_Type	Rec_No	Bk-No
Narwhal	COEI	14 Jul 02	14:44:43	NE61	NE	0	L	L		P		POBE	670	4-15
Narwhal	COEI	14 Jul 02	14:45:15	NE63	NE	0	L	L		P		POBE	671	4-15
Narwhal	COEI	14 Jul 02	14:45:49	SC65	SC		L	M					672	4-15
Narwhal	COEI	14 Jul 02	14:46:54	SC67	SC		H	M					673	4-15
Narwhal	COEI	14 Jul 02	14:47:17	SC69	SC		H	M					674	4-15
Narwhal	COEI	14 Jul 02	14:54:30	SC71	SC		L	M					675	4-15
Narwhal	COEI	14 Jul 02	14:57:42	NE73	NE	0	M	M		P		POBE	676	4-15
Narwhal	COEI	14 Jul 02	14:58:08	NE75	NE	0	M	M		P		POBE	677	4-15
Narwhal	COEI	14 Jul 02	14:59:13	SC77	SC		L	M					678	4-15
Narwhal	COEI	14 Jul 02	15:00:16	SC79	SC		L	M					679	4-15
Narwhal	COEI	14 Jul 02	15:01:20	NE81	NE	0	M	M		P		POBE	680	4-15
Narwhal	COEI	14 Jul 02	15:04:29	SC83	SC		M	H					681	4-15
Narwhal	COEI	14 Jul 02	15:05:19	SC85	SC		L	L					682	4-15
Narwhal	COEI	14 Jul 02	15:05:30	SC87	SC		N	M					683	4-15
Narwhal	COEI	14 Jul 02	15:06:24	NE89	NE	0	H	H		P		POBE	684	4-15
Narwhal	COEI	14 Jul 02	15:06:35	SC91	SC		H	H					685	4-15
Narwhal	COEI	14 Jul 02	15:06:59	NE93	NE	0	M	H		P		POBE	686	4-15
Narwhal	COEI	14 Jul 02	15:07:33	SC95	SC		M	H					687	4-15
Narwhal	COEI	14 Jul 02	15:07:55	SC97	SC		M	H					688	4-15
Narwhal	COEI	14 Jul 02	15:07:59	NE99	NE	0	H	H		P		POBE	689	4-15
Narwhal	COEI	14 Jul 02	15:08:15	SC101	SC		L	M					690	4-15
Narwhal	COEI	14 Jul 02	15:09:16	SC103	SC		L	M					691	4-15
Narwhal	COEI	14 Jul 02	15:11:33	NE105	NE	0	L	L		P		POBE	692	4-15
Narwhal	COEI	14 Jul 02	15:12:05	SC107	SC		M	H					693	4-15
Narwhal	COEI	14 Jul 02	15:12:53	SC109	SC		M	H					694	4-15
Narwhal	COEI	14 Jul 02	15:13:06	NE111	NE	0	M	H		P		POBE	695	4-15
Narwhal	COEI	14 Jul 02	15:13:44	SC113	SC		M	H					696	4-15
Narwhal	COEI	14 Jul 02	15:14:15	SC115	SC		M	H					697	4-15
Narwhal	COEI	14 Jul 02	15:14:30	NE117	NE	0	M	L		P		POBE	698	4-15
Narwhal	COEI	14 Jul 02	15:15:57	SC119	SC		L	L					699	4-16
Narwhal	COEI	14 Jul 02	15:16:21	NE121	NE	0	M	H		P		POBE	700	4-16
Narwhal	COEI	14 Jul 02	15:17:26	NE123	NE	0	M	H		P		POBE	701	4-16
Narwhal	COEI	14 Jul 02	15:18:05	NE125	NE	0	M	H		P		POBE	702	4-16
Narwhal	COEI	14 Jul 02	15:18:54	NE127	NE	0	H	H		P		POBE	703	4-16
Narwhal	COEI	14 Jul 02	15:19:38	NE129	NE	0	M	H	V02	P		POBE	704	4-16
Narwhal	COEI	14 Jul 02	15:20:20	NE131	NE	0	M	H		P		POBE	705	4-16
Narwhal	COEI	14 Jul 02	15:21:03	NE133	NE	0	H	H		P		POBE	706	4-16
Narwhal	COEI	14 Jul 02	15:21:10	NE135	NE	0	H	H		P		POBE	707	4-16
Narwhal	COEI	14 Jul 02	15:21:28	NE137	NE	0	H	M		P		POBE	708	4-16
Narwhal	COEI	14 Jul 02	15:24:40	SC139	SC		L	M					709	4-16
Narwhal	COEI	14 Jul 02	15:25:10	NE141	NE	0	M	M		P		POBE	710	4-16
Narwhal	COEI	14 Jul 02	15:25:50	NE143	NE	0	N	H	V05	P		POBE	711	4-16
Narwhal	COEI	14 Jul 02	15:27:11	NE145	NE	0	N	M		P		POBE	712	4-16
Narwhal	COEI	14 Jul 02	15:27:47	NE147	NE	0	L	M		P		POBE	713	4-16
Narwhal	COEI	14 Jul 02	15:28:32	NE149	NE	0	L	M		P		POBE	714	4-16
Narwhal	COEI	14 Jul 02	15:30:03	SC151	SC		L	M					715	4-16
Narwhal	COEI	14 Jul 02	15:30:57	SC153	SC		L	M					716	4-16
Narwhal	COEI	14 Jul 02	15:31:18	NE155	NE	0	M	M		P		POBE	717	4-16
Narwhal	COEI	14 Jul 02	15:31:59	NE157	NE	0	M	M		P		POBE	718	4-16
Narwhal	COEI	14 Jul 02	15:31:59	NE159	NE	0	M	M		P		POBE	719	4-16
Narwhal	COEI	14 Jul 02	15:32:22	SC161	SC		L	M					720	4-16
Narwhal	COEI	14 Jul 02	15:32:46		EE								721	4-16
Narwhal	COEI	14 Jul 02	15:33:13	SC163	SC		L	H					722	4-16
Narwhal	COEI	14 Jul 02	15:33:13	SC165	SC		L	H					723	4-16
Narwhal	COEI	14 Jul 02	15:33:20	SC167	SC		L	M					724	4-16
Narwhal	COEI	14 Jul 02	15:34:18	NE169	NE	0	L	M		P		POBE	725	4-16
Narwhal	COEI	14 Jul 02	15:34:45	SC171	SC		M	H					726	4-16
Narwhal	COEI	14 Jul 02	15:34:45	SC173	SC		M	H					727	4-16
Narwhal	COEI	14 Jul 02	15:34:45	SC175	SC		M	H					728	4-16
Narwhal	COEI	14 Jul 02	15:35:31	NE177	NE	0	L	H	V05	P		POBE	729	4-17
Narwhal	COEI	14 Jul 02	15:36:12	SC179	SC		L	M					730	4-17
Narwhal	COEI	14 Jul 02	15:37:03	SC181	SC		L	H					731	4-17
Narwhal	COEI	14 Jul 02	15:38:25	SC183	SC		L	M					732	4-17
Narwhal	COEI	14 Jul 02	15:38:56	SC185	SC		L	M					733	4-17
Narwhal	COEI	14 Jul 02	15:39:20	SC187	SC		L	M					734	4-17
Narwhal	COEI	14 Jul 02	15:40:22	SC189	SC		L	M					735	4-17
Narwhal	COEI	14 Jul 02	15:41:06	SC191	SC		L	M					736	4-17
Narwhal	COEI	14 Jul 02	15:42:06	SC193	SC		L	M					737	4-17
Narwhal	COEI	14 Jul 02	15:42:44	SC195	SC		L	M					738	4-17

Island	Species	Date	Time	Nest_ID	Sight_Type	Eggs_Live	Drift	Elev	Veg	Pred	Pred_Egg	Pred_Type	Rec_No	Bk-No
Narwhal	COEI	14 Jul 02	15:43:31	NE197	NE	0	L	M		P		POBE	739	4-17
Narwhal	COEI	14 Jul 02	15:44:04	SC199	SC		L	M					740	4-17
Narwhal	COEI	14 Jul 02	15:44:19	SC201	SC		L	M					741	4-17
Narwhal	COEI	14 Jul 02	15:45:20	SC203	SC		M	M					742	4-17
Narwhal	COEI	14 Jul 02	15:45:46	NE205	NE	0	M	M		P		POBE	743	4-17
Narwhal	COEI	14 Jul 02	15:46:07	NE207	NE	0	L	M		P		POBE	744	4-17
Narwhal	COEI	14 Jul 02	15:47:36	SC209	SC		L	M					745	4-17
Narwhal	COEI	14 Jul 02	15:49:44	SC211	SC		L	M					746	4-17
Narwhal	COEI	14 Jul 02	13:55:00	SC2	SC		L	L					1036	3-32
Narwhal	COEI	14 Jul 02	13:56:40	NE4	NE	0	L	L		P		POBE	1037	3-32
Narwhal	COEI	14 Jul 02	14:03:47	SC6	SC		L	L					1038	3-32
Narwhal	COEI	14 Jul 02	14:06:23	SC8	SC		L	L					1039	3-32
Narwhal	COEI	14 Jul 02	14:08:22	SC10	SC		L	L					1040	3-32
Narwhal	COEI	14 Jul 02	14:08:42	SC12	SC		L	L					1041	3-32
Narwhal	COEI	14 Jul 02	14:08:56	SC14	SC		L	M					1042	3-32
Narwhal	COEI	14 Jul 02	14:09:21	NE16	NE	0	M	H		P		POBE	1043	3-32
Narwhal	COEI	14 Jul 02	14:09:42	SC18	SC		L	M					1044	3-32
Narwhal	COEI	14 Jul 02	14:09:55	NE20	NE	0	M	H		P		POBE	1045	3-32
Narwhal	COEI	14 Jul 02	14:10:56	SC22	SC		L	M					1046	3-32
Narwhal	COEI	14 Jul 02	14:11:24	NE24	NE	0	M	M		P		POBE	1047	3-32
Narwhal	COEI	14 Jul 02	14:14:36	SC26	SC		H	H					1048	3-32
Narwhal	COEI	14 Jul 02	14:15:00	SC28	SC		M	H					1049	3-32
Narwhal	COEI	14 Jul 02	14:15:18	SC30	SC		L	H					1050	3-32
Narwhal	GLGU	14 Jul 02	14:15:43	NE32	NE	0	H	H		P		POBE	1051	3-32
Narwhal	COEI	14 Jul 02	14:16:32	SC34	SC		L	M					1052	3-32
Narwhal	COEI	14 Jul 02	14:16:40	SC36	SC		M	M					1053	3-32
Narwhal	COEI	14 Jul 02	14:17:10	SC38	SC		L	H					1054	3-32
Narwhal	COEI	14 Jul 02	14:17:10	SC40	SC		L	M					1055	3-32
Narwhal	COEI	14 Jul 02	14:19:30	SC42	SC		L	M					1056	3-32
Narwhal	COEI	14 Jul 02	14:21:20	NE44	NE	0	M	M		P		POBE	1057	3-32
Narwhal	COEI	14 Jul 02	14:21:56	SC46	SC		L	M					1058	3-32
Narwhal	COEI	14 Jul 02	14:23:26	NE48	NE	0	L	M		P		POBE	1059	3-32
Narwhal	COEI	14 Jul 02	14:24:00	NE50	NE	0	L	H		P		POBE	1060	3-32
Narwhal	COEI	14 Jul 02	14:31:35	SC52	SC		L	L					1061	3-32
Narwhal	COEI	14 Jul 02	14:32:16	SC54	SC		L	L					1062	3-32
Narwhal	COEI	14 Jul 02	14:32:50	SC56	SC		L	L					1063	3-32
Narwhal	COEI	14 Jul 02	14:35:11	SC58	SC		M	L					1064	3-32
Narwhal	COEI	14 Jul 02	14:36:29	NE60	NE	0	H	M		P		POBE	1065	3-33
Narwhal	COEI	14 Jul 02	14:37:01	NE62	NE	0	H	M		P		POBE	1066	3-33
Narwhal	COEI	14 Jul 02	14:37:44	NE64	NE	2	H	M					1067	3-33
Narwhal	COEI	14 Jul 02	14:38:01	NE66	NE	0	H	M		P		POBE	1068	3-33
Narwhal	COEI	14 Jul 02	14:40:31	NE68	NE	0	M	M		P		POBE	1069	
Narwhal	COEI	14 Jul 02	14:41:04	SC70	SC		L	M					1070	3-33
Narwhal	COEI	14 Jul 02	14:41:48	SC72	SC		L	M					1071	3-33
Narwhal	COEI	14 Jul 02	14:42:17	NE74	NE	0	M	M		P		POBE	1072	3-33
Narwhal	COEI	14 Jul 02	14:43:17	NE76	NE	0	L	M		P		POBE	1073	3-33
Narwhal	COEI	14 Jul 02	14:43:46	NE78	NE	0	M	H		P		POBE	1074	3-33
Narwhal	COEI	14 Jul 02	14:46:11	SC80	SC		M	L					1075	3-33
Narwhal	COEI	14 Jul 02	14:51:24	SC82	SC		L	L					1076	3-33
Narwhal	COEI	14 Jul 02	14:51:50	SC84	SC		M	M					1077	3-33
Narwhal	COEI	14 Jul 02	14:53:00	NE86	NE	0	L	M		P		POBE	1078	3-33
Narwhal	COEI	14 Jul 02	14:53:32	SC88	SC		L	M					1079	3-33
Narwhal	COEI	14 Jul 02	14:54:11	SC90	SC		H	M					1080	3-33
Narwhal	COEI	14 Jul 02	14:54:53	SC92	SC		M	M					1081	3-33
Narwhal	COEI	14 Jul 02	14:55:10	SC94	SC		L	M					1082	3-33
Narwhal	COEI	14 Jul 02	14:55:20	NE96	NE	0	L	M		P		POBE	1083	3-33
Narwhal	COEI	14 Jul 02	14:55:20	SC98	SC		L	M					1084	3-33
Narwhal	COEI	14 Jul 02	14:58:06	SC100	SC		M	M					1085	3-33
Narwhal	COEI	14 Jul 02	14:58:20	SC102	SC		L	M					1086	3-33
Narwhal	COEI	14 Jul 02	14:58:55	NE104	NE	0	M	M		P		POBE	1087	3-33
Narwhal	COEI	14 Jul 02	15:00:25	SC106	SC		M	M					1088	3-33
Narwhal	COEI	14 Jul 02	15:01:56	NE108	NE	0	L	L		P		POBE	1089	3-33
Narwhal	COEI	14 Jul 02	15:03:30	NE110	NE	0	M	L		P		POBE	1090	3-33
Narwhal	COEI	14 Jul 02	15:03:38	NE112	NE	0	M	L		P		POBE	1091	3-33
Narwhal	COEI	14 Jul 02	15:04:30	NE114	NE	0	M	L		P		POBE	1092	3-33
Narwhal	COEI	14 Jul 02	15:04:30	NE116	NE	0	M	L		P		POBE	1093	3-33
Narwhal	COEI	14 Jul 02	15:05:20	NE118	NE	0	L	L		P		POBE	1094	3-33
Narwhal	COEI	14 Jul 02	15:08:57	SC120	SC		L	H					1095	3-34
Narwhal	COEI	14 Jul 02	15:11:34	NE122	NE	0	B	H		P		POBE	1096	3-34

Island	Species	Date	Time	Nest_ID	Sight_Type	Eggs_Live	Drift	Elev	Veg	Pred	Pred_Egg	Pred_Type	Rec_No	Bk-No
Narwhal	COEI	14 Jul 02	15:13:11	NE124	NE	0	B	H		P		POBE	1097	3-34
Narwhal	COEI	14 Jul 02	15:13:11	NE126	NE	0	B	H		P		POBE	1098	3-34
Narwhal	COEI	14 Jul 02	15:13:11	NE128	NE	0	L	H		P		POBE	1099	3-34
Narwhal	COEI	14 Jul 02	15:13:11	NE130	NE	0	L	H		P		POBE	1100	3-34
Narwhal	COEI	14 Jul 02	15:14:37	NE132	NE	0	L	H		P		POBE	1101	3-34
Narwhal	COEI	14 Jul 02	15:15:06	NE134	NE	0	M	H		P		POBE	1102	3-34
Narwhal	COEI	14 Jul 02	15:16:22	NE136	NE	0	M	H		P		POBE	1103	3-34
Narwhal	COEI	14 Jul 02	15:16:42	NE138	NE	0	M	H		P		POBE	1104	3-34
Narwhal	COEI	14 Jul 02	15:17:00	SC140	SC		L	H					1105	3-34
Narwhal	COEI	14 Jul 02	15:17:00	SC142	SC		L	H					1106	3-34
Narwhal	COEI	14 Jul 02	15:17:16	SC144	SC		M	H					1107	3-34
Narwhal	COEI	14 Jul 02	15:17:38	SC146	SC		M	H					1108	3-34
Narwhal	COEI	14 Jul 02	15:18:07	SC148	SC		M	H					1109	3-34
Narwhal	COEI	14 Jul 02	15:18:50	NE150	NE	0	B	H		P		POBE	1110	3-34
Narwhal	COEI	14 Jul 02	15:19:04	NE152	NE	0	L	H		P		POBE	1111	3-34
Narwhal	COEI	14 Jul 02	15:19:10	SC154	SC		M	H					1112	3-34
Narwhal	COEI	14 Jul 02	15:19:20	NE156	NE	0	N	H		P		POBE	1113	3-34
Narwhal	COEI	14 Jul 02	15:20:04	NE158	NE	0	L	M		P		POBE	1114	3-34
Narwhal	COEI	14 Jul 02	15:20:04	SC160	SC		L	H					1115	3-34
Narwhal	COEI	14 Jul 02	15:21:10	NE162	NE	0	M	H		P		POBE	1116	3-34
Narwhal	COEI	14 Jul 02	15:21:10	NE164	NE	0	M	H		P		POBE	1117	3-34
Narwhal	COEI	14 Jul 02	15:21:44	SC166	SC		L	H					1118	3-34
Narwhal	COEI	14 Jul 02	15:21:45	SC168	SC		L	H					1119	3-34
Narwhal	COEI	14 Jul 02	15:22:30	SC170	SC		H	M					1120	3-34
Narwhal	COEI	14 Jul 02	15:23:40	SC172	SC		L	M					1121	3-34
Narwhal	COEI	14 Jul 02	15:24:17	SC174	SC		M	M					1122	3-34
Narwhal	COEI	14 Jul 02	15:24:46	SC176	SC		L	M					1123	3-34
Narwhal	COEI	14 Jul 02	15:25:26	SC178	SC		L	M					1124	3-34
Narwhal	COEI	14 Jul 02	15:26:27	SC180	SC		M	M					1125	3-35
Narwhal	COEI	14 Jul 02	15:26:27	NE182	NE	0	H	M		P		POBE	1126	3-35
Narwhal	COEI	14 Jul 02	15:27:10	SC184	SC		M	M					1127	3-35
Narwhal	COEI	14 Jul 02	15:27:35	SC186	SC		M	M					1128	3-35
Narwhal	COEI	14 Jul 02	15:27:35	SC188	SC		M	M					1129	3-35
Narwhal	COEI	14 Jul 02	15:27:59	SC190	SC		M	H					1130	3-35
Narwhal	COEI	14 Jul 02	15:29:45	SC192	SC		L	H					1131	3-35
Narwhal	COEI	14 Jul 02	15:29:48	SC194	SC		M	H					1132	3-35
Narwhal	COEI	14 Jul 02	15:30:29	NE196	NE	0	L	H		P		POBE	1133	3-35
Narwhal	COEI	14 Jul 02	15:31:29	NE198	NE	0	M	H		P		POBE	1134	3-35
Narwhal	COEI	14 Jul 02	15:32:53	SC200	SC		M	H					1135	3-35
Narwhal	COEI	14 Jul 02	15:33:08	NE202	NE	0	M	H		P		POBE	1136	3-35
Narwhal	COEI	14 Jul 02	15:34:32	SC204	SC		L	M					1137	3-35
Narwhal	COEI	14 Jul 02	15:35:38	NE206	NE	0	M	H		P		POBE	1138	3-35
Narwhal	COEI	14 Jul 02	15:36:01	SC208	SC		L	M					1139	3-35
Narwhal	COEI	14 Jul 02	15:36:36	NE210	NE	0	M	H		P		POBE	1140	3-35
Narwhal	COEI	14 Jul 02	15:37:15	SC212	SC		M	H					1141	3-35
Narwhal	COEI	14 Jul 02	15:37:40	SC214	SC		N	M					1142	3-35
Narwhal	COEI	14 Jul 02	15:38:25	NE216	NE	0	L	H		P		POBE	1143	3-35
Narwhal	COEI	14 Jul 02	15:39:15	NE218	NE	0	N	L		P		POBE	1144	3-35
Narwhal	COEI	14 Jul 02	15:39:39	SC220	SC		L	M					1145	3-35
Narwhal	COEI	14 Jul 02	15:40:52	NE222	NE	0	L	H		P		POBE	1146	3-35
Narwhal	COEI	14 Jul 02	15:41:23	SC224	SC		L	H					1147	3-35
Narwhal	COEI	14 Jul 02	15:41:53	SC226	SC		M	M					1148	3-35
Narwhal	COEI	14 Jul 02	15:42:15	SC228	SC		L	M					1149	3-35
Narwhal	COEI	14 Jul 02	15:42:15	SC230	SC		L	M					1150	3-35
Narwhal	COEI	14 Jul 02	15:42:42	SC232	SC		L	M					1151	3-35
Narwhal	COEI	14 Jul 02	15:43:29	SC234	SC		M	M					1152	3-35
Narwhal	COEI	14 Jul 02	15:43:53	NE236	NE	0	L	M		P		POBE	1153	3-35
Narwhal	COEI	14 Jul 02	15:44:29	SC238	SC		L	M					1154	3-35
Narwhal	COEI	14 Jul 02	15:46:25	SC240	SC		M	M					1155	3-35
Narwhal	COEI	14 Jul 02	15:47:08	SC242	SC		L	M					1156	3-36
Narwhal	COEI	14 Jul 02	15:47:23	NE244	NE	0	L	M		P		GLGU	1157	3-36
Narwhal	COEI	14 Jul 02	15:48:55	SC246	SC		L	M					1158	3-36
Narwhal	COEI	14 Jul 02	15:49:50	SC248	SC		L	M					1159	3-36
Narwhal	COEI	14 Jul 02	15:52:00	NE250	NE	0	L	M		P		POBE	1160	3-36
Narwhal	POBE	14 Jul 02	13:55:00		PBT								1464	3-32
Niakuk #A	GLGU	9 Jul 02	23:20:06	SC1	SC		L	L					286	2-50
Niakuk #A	GLGU	9 Jul 02	23:21:47	NE3	NE	H	N	L					287	2-50
Niakuk #A	GLGU	9 Jul 02	23:22:55	NE5	NE	2	L	L					288	2-50
Niakuk #A	GLGU	9 Jul 02	23:24:30	NE7	NE	1	N	L					289	2-50

Island	Species	Date	Time	Nest_ID	Sight_Type	Eggs_Live	Drift	Elev	Veg	Pred	Pred_Egg	Pred_Type	Rec_No	Bk-No
Niakuk #A	COEI	9 Jul 02	23:24:42	NE9	NE	Y	L	L					290	2-50
Niakuk #A	GLGU	9 Jul 02	23:25:46	SC11	SC		N	L					291	2-50
Niakuk #A	GLGU	9 Jul 02	23:26:47	SC13	SC		N	L					292	2-50
Niakuk #A	GLGU	9 Jul 02	23:27:28	SC15	SC		N	L					293	2-50
Niakuk #A	GLGU	9 Jul 02	23:27:48	NE17	NE	3	N	L					294	2-50
Niakuk #A	GLGU	9 Jul 02	23:28:46	SC19	SC		N	L					295	2-50
Niakuk #A	GLGU	9 Jul 02	23:28:50	SC21	SC		N	L					296	2-50
Niakuk #A	GLGU	9 Jul 02	23:29:46	SC23	SC		L	L					297	2-50
Niakuk #A	GLGU	9 Jul 02	23:30:34	SC25	SC		N	L					298	2-50
Niakuk #A	GLGU	9 Jul 02	23:31:01	SC27	SC		N	L					299	2-50
Niakuk #A	GLGU	9 Jul 02	23:32:37	SC29	SC		L	L					300	2-50
Niakuk #A	GLGU	9 Jul 02	23:34:34	SC31	SC		N	L					301	2-50
Niakuk #A	GLGU	9 Jul 02	23:36:24	NE33	NE	0	L	L		P		GLGU	302	2-50
Niakuk #A	GLGU	9 Jul 02	23:37:49	NE35	NE	0	N	L		P		GLGU	303	2-51
Niakuk #A	COEI	9 Jul 02	23:39:10	NE37	NE	0	L	L		P		GLGU	304	2-51
Niakuk #A	COEI	9 Jul 02	23:40:34	NE39	NE	0	L	L		P		GLGU	305	2-51
Niakuk #A	GLGU	9 Jul 02	23:41:01	NE41	NE	3	M	L					306	2-51
Niakuk #A	GLGU	9 Jul 02	23:43:09	SC43	SC		N	L					307	2-51
Niakuk #A	GLGU	9 Jul 02	23:44:03	SC45	SC		N	L					308	2-51
Niakuk #A	COEI	9 Jul 02	23:44:37	NE47	NE	0	N	L		P		GLGU	309	2-51
Niakuk #A	GLGU	9 Jul 02	23:45:50	NE49	NE	H	N	L					310	2-51
Niakuk #A	GLGU	9 Jul 02	23:47:02	SC51	SC		N	L					311	2-51
Niakuk #A	COEI	9 Jul 02	23:47:28	NE53	NE	0	N	L		P		GLGU	312	2-51
Niakuk #A	COEI	9 Jul 02	23:47:28	NE55	NE	0	N	L		P		GLGU	313	2-51
Niakuk #A	GLGU	9 Jul 02	23:48:21	NE57	NE	H	N	L					314	2-51
Niakuk #A	GLGU	9 Jul 02	23:49:30	SC59	SC		N	L					315	2-51
Niakuk #A	GLGU	9 Jul 02	23:50:04	SC61	SC		N	L					316	2-51
Niakuk #A	COEI	9 Jul 02	23:50:33	SC63	SC		L	L					317	2-51
Niakuk #A	COEI	9 Jul 02	23:51:03	SC65	SC		L	L					318	2-51
Niakuk #A	GLGU	9 Jul 02	23:51:45	NE67	NE	H	N	L					319	2-51
Niakuk #A	COEI	9 Jul 02	23:52:10	NE69	NE	0	L	L		P		GLGU	320	2-51
Niakuk #A	COEI	9 Jul 02	23:52:37	NE71	NE	0	L	L		P		GLGU	321	2-51
Niakuk #A	COEI	9 Jul 02	23:53:07	NE73	NE	0	L	L		P		GLGU	322	2-51
Niakuk #A	COEI	9 Jul 02	23:53:51	NE75	NE	0	L	L		P		GLGU	323	2-51
Niakuk #A	COEI	9 Jul 02	23:54:17	NE77	NE	3	L	L					324	2-51
Niakuk #A	COEI	9 Jul 02	23:54:37	NE79	NE	0	M	L		P		GLGU	325	2-51
Niakuk #A	COEI	9 Jul 02	23:55:08	SC81	SC		L	L					326	2-51
Niakuk #A	COEI	9 Jul 02	23:55:38	NE83	NE	0	L	L		P		GLGU	327	2-51
Niakuk #A	COEI	9 Jul 02	23:55:53	NE85	NE	0	L	L		P		GLGU	328	2-51
Niakuk #A	GLGU	9 Jul 02	23:56:50	SC87	SC		N	L					329	2-51
Niakuk #A	GLGU	9 Jul 02	23:57:12	NE89	NE	H	N	L					330	2-51
Niakuk #A	GLGU	9 Jul 02	23:57:31	SC91	SC		N	L					331	2-51
Niakuk #A	GLGU	9 Jul 02	23:57:40	NE93	NE	H	N	L					332	2-51
Niakuk #A	COEI	9 Jul 02	23:20:00	NE2	NE	0	L	M		P		GLGU	768	3-20
Niakuk #A	COEI	9 Jul 02	23:20:00	SC4	SC		L	M					769	3-20
Niakuk #A	COEI	9 Jul 02	23:23:00	NE6	NE	Y	M	M					770	3-20
Niakuk #A	GLGU	9 Jul 02	23:23:00	NE8	NE	H	M	M					771	3-20
Niakuk #A	COEI	9 Jul 02	23:26:00	NE10	NE	2	L	M					772	3-20
Niakuk #A	COEI	9 Jul 02	23:26:00	NE12	NE	0	M	M		P		GLGU	773	3-20
Niakuk #A	COEI	9 Jul 02	23:27:00	NE14	NE	0	L	M		P		GLGU	774	3-20
Niakuk #A	GLGU	9 Jul 02	23:28:00	NE16	NE	H	M	H					775	3-20
Niakuk #A	GLGU	9 Jul 02	23:28:00	NE18	NE	H	N	H					776	3-20
Niakuk #A	GLGU	9 Jul 02	23:31:00	SC20	SC		N	M					777	3-20
Niakuk #A	GLGU	9 Jul 02	23:32:00	NE22	NE	H	L	M					778	3-20
Niakuk #A	GLGU	9 Jul 02	23:33:00	NE24	NE	0	L	H		P		GLGU	779	3-20
Niakuk #A	GLGU	9 Jul 02	23:33:00	NE26	NE	0	L	H		P		GLGU	780	3-20
Niakuk #A	GLGU	9 Jul 02	23:35:00	NE28	NE	H	N	L					781	3-20
Niakuk #A	COEI	9 Jul 02	23:36:00	SC30	SC		L	M					782	3-20
Niakuk #A	GLGU	9 Jul 02	23:37:00	NE32	NE	H	N	H					783	3-20
Niakuk #A	GLGU	9 Jul 02	23:38:00	NE34	NE	H	L	M					784	3-20
Niakuk #A	COEI	9 Jul 02	23:39:00	SC36	SC		L	M					785	3-20
Niakuk #A	COEI	9 Jul 02	23:40:00	SC38	SC		L	H					786	3-20
Niakuk #A	GLGU	9 Jul 02	23:41:00	NE40	NE	H	L	H					787	3-20
Niakuk #A	COEI	9 Jul 02	23:41:00	NE42	NE	Y	M	H					788	3-20
Niakuk #A	COEI	9 Jul 02	23:41:00	NE44	NE	Y	M	H					789	3-20
Niakuk #A	COEI	9 Jul 02	23:42:00	NE46	NE	0	M	H		P		GLGU	790	3-20
Niakuk #A	COEI	9 Jul 02	23:42:00	NE48	NE	0	M	H		P		GLGU	791	3-20
Niakuk #A	COEI	9 Jul 02	23:42:00	NE50	NE	0	M	H		P		GLGU	792	3-20
Niakuk #A	GLGU	9 Jul 02	23:46:00	NE52	NE	H	N	L					793	3-20

Island	Species	Date	Time	Nest_ID	Sight_Type	Eggs_Live	Drift	Elev	Veg	Pred	Pred_Egg	Pred_Type	Rec_No	Bk-No
Niakuk 4-6	COEI	9 Jul 02	22:05:00	NE46	NE	Y	L	L					248	3-18
Niakuk 4-6	COEI	9 Jul 02	22:05:00	NE48	NE	Y	L	L					249	3-18
Niakuk 4-6	COEI	9 Jul 02	22:12:00	NE50	NE	H	L	L					250	3-18
Niakuk 4-6	COEI	9 Jul 02	22:14:00	NE52	NE	Y	L	M					251	3-18
Niakuk 4-6	COEI	9 Jul 02	22:14:00	NE54	NE	Y	L	M					252	3-18
Niakuk 4-6	COEI	9 Jul 02	21:30:45	NE1	NE	Y	L	L					253	2-49
Niakuk 4-6	COEI	9 Jul 02	21:33:47	NE3	NE	0	L	L		P		GLGU	254	2-49
Niakuk 4-6	COEI	9 Jul 02	21:36:30	NE5	NE	4	L	L					255	2-49
Niakuk 4-6	COEI	9 Jul 02	21:36:30	NE7	NE	7	L	L					256	2-49
Niakuk 4-6	COEI	9 Jul 02	21:37:37	NE9	NE	0	L	L		P		GLGU	257	2-49
Niakuk 4-6	COEI	9 Jul 02	21:38:30	SC11	SC		L	L					258	2-49
Niakuk 4-6	COEI	9 Jul 02	21:45:07	NE13	NE	0	M	L		P		GLGU	259	2-49
Niakuk 4-6	COEI	9 Jul 02	21:47:01	SC15	SC		L	L					260	2-49
Niakuk 4-6	COEI	9 Jul 02	21:48:32	SC17	SC		L	L					261	2-49
No Name	COEI	15 Jul 02	11:19:09	SC2	SC		L	M					84	5-5
No Name	COEI	15 Jul 02	11:20:05	NE4	NE	0	M	M		P		AVIAN/POBE	85	5-5
No Name	COEI	15 Jul 02	11:23:31	NE6	NE	2	H	M					86	5-5
No Name	COEI	15 Jul 02	11:23:49	NE8	NE	0	M	M		P		AVIAN/POBE	87	5-5
No Name	COEI	15 Jul 02	11:24:41	NE10	NE	0	L	M		P			88	5-5
No Name	COEI	15 Jul 02	11:25:41	NE12	NE	0	M	M		P			89	5-5
No Name	COEI	15 Jul 02	11:26:36	NE14	NE	0	M	M		P			90	5-5
No Name	COEI	15 Jul 02	11:28:14	NE16	NE	H	M	M					91	5-5
No Name	COEI	15 Jul 02	11:28:40	NE18	NE	5	M	M					92	5-5
No Name	COEI	15 Jul 02	11:28:40	NE20	NE	2	M	M					93	5-5
No Name	COEI	15 Jul 02	11:29:02	NE22	NE	0	M	M		P		AVIAN/POBE	94	5-5
No Name	COEI	15 Jul 02	11:29:54	SC24	SC		M	M					95	5-5
No Name	COEI	15 Jul 02	11:30:43	NE26	NE	0	L	M		P		AVIAN/POBE	96	5-5
No Name	COEI	15 Jul 02	11:31:27	SC28	SC		L	M					97	5-5
No Name	COEI	15 Jul 02	11:31:50	NE30	NE	0	L	M		P			98	5-5
No Name	COEI	15 Jul 02	11:32:31	NE32	NE	0	L	M		P			99	5-5
No Name	COEI	15 Jul 02	11:33:41	NE34	NE	0	L	M		P			100	5-5
No Name	COEI	15 Jul 02	11:34:10	SC36	SC		L	M					101	5-5
No Name	COEI	15 Jul 02	11:34:10	SC38	SC		L	M					102	5-5
No Name	COEI	15 Jul 02	11:35:30	SC40	SC		L	M					103	5-5
No Name	COEI	15 Jul 02	11:36:25	NE42	NE	0	N	M		P		AVIAN/POBE	104	5-5
No Name	COEI	15 Jul 02	11:36:25	NE44	NE	0	M	M		P		AVIAN/POBE	105	5-5
No Name	COEI	15 Jul 02	11:36:25	SC46	SC		M	M					106	5-5
No Name	COEI	15 Jul 02	11:36:25	NE48	NE	0	M	M		P		AVIAN/POBE	107	5-5
No Name	COEI	15 Jul 02	11:37:16	NE50	NE	0	L	M		P		AVIAN/POBE	108	5-5
No Name	COEI	15 Jul 02	11:38:03	NE52	NE	0	M	M		P			109	5-5
No Name	COEI	15 Jul 02	11:38:30										110	5-5
No Name	COEI	15 Jul 02	11:38:48	SC54	SC		L	M					111	5-5
No Name	COEI	15 Jul 02	11:40:32	SC56	SC		L	M					112	5-6
No Name	COEI	15 Jul 02	11:40:32	NE58	NE	0	M	M		P		AVIAN/POBE	113	5-6
No Name	COEI	15 Jul 02	11:40:56	NE60	NE	0	M	M		P		AVIAN/POBE	114	5-6
No Name	COEI	15 Jul 02	11:41:37	NE62	NE	0	M	M		P		AVIAN/POBE	115	5-6
No Name	COEI	15 Jul 02	11:43:39	NE64	NE	0	M	M		P		AVIAN/POBE	116	5-6
No Name	COEI	15 Jul 02	11:43:39	SC66	SC		M	M					117	5-6
No Name	COEI	15 Jul 02	11:44:25	NE68	NE	0	M	M		P		AVIAN/POBE	118	5-6
No Name	POBE	15 Jul 02	11:45:00		PBT								119	5-6
No Name	COEI	15 Jul 02	11:50:27	NE70	NE	4	L	M					120	5-6
No Name	COEI	15 Jul 02	11:20:05	NE1	NE	0	L	M		P		POBE	1386	4-21
No Name	COEI	15 Jul 02	11:21:03	SC3	SC		L	M					1387	4-21
No Name	COEI	15 Jul 02	11:24:01	SC5	SC		L	M					1388	4-21
No Name	COEI	15 Jul 02	11:24:22	NE7	NE	0	L	M		P		POBE	1389	4-21
No Name	COEI	15 Jul 02	11:26:07	NE9	NE	0	L	M		P		POBE	1390	4-21
No Name	COEI	15 Jul 02	11:27:05	NE11	NE	0	L	M		P		POBE	1391	4-21
No Name	COEI	15 Jul 02	11:27:22	SC13	SC		L	M					1392	4-21
No Name	COEI	15 Jul 02	11:27:50	SC15	SC		L	M					1393	4-21
No Name	COEI	15 Jul 02	11:27:50	NE17	NE	0	L	M		P			1394	4-21
No Name	COEI	15 Jul 02	11:28:49	NE19	NE	H	L	M					1395	4-21
No Name	COEI	15 Jul 02	11:29:04	NE21	NE	0	L	M		P		POBE	1396	4-21
No Name	COEI	15 Jul 02	11:29:32	SC23	SC		L	M					1397	4-21
No Name	COEI	15 Jul 02	11:29:52	NE25	NE	0	L	M		P		POBE	1398	4-21
No Name	COEI	15 Jul 02	11:32:20	SC27	SC		L	M					1399	4-21
No Name	COEI	15 Jul 02	11:32:30	SC29	SC		L	M					1400	4-21
No Name	COEI	15 Jul 02	11:32:52	NE31	NE	0	M	M		P		POBE	1401	4-21
No Name	COEI	15 Jul 02	11:33:13	NE33	NE	0	M	M		P		POBE	1402	4-21
No Name	COEI	15 Jul 02	11:33:44	SC35	SC		N	M					1403	4-21

Island	Species	Date	Time	Nest_ID	Sight_Type	Eggs_Live	Drift	Elev	Veg	Pred	Pred_Egg	Pred_Type	Rec_No	Bk-No
No Name	POBE	15 Jul 02	11:33:57		PBT								1404	4-21
No Name	COEI	15 Jul 02	11:34:12	NE37	NE	0	H	M		P		POBE	1405	4-21
No Name	COEI	15 Jul 02	11:34:41	NE39	NE	0	L	M		P		POBE	1406	4-21
No Name	COEI	15 Jul 02	11:35:04	NE41	NE	0	M	M		P		POBE	1407	4-21
No Name	COEI	15 Jul 02	11:35:29	NE43	NE	0	L	M		P		POBE	1408	4-21
No Name	COEI	15 Jul 02	11:35:55	NE45	NE	0	M	M		P		POBE	1409	4-21
No Name	COEI	15 Jul 02	11:36:23	NE47	NE	0	L	M		P		POBE	1410	4-21
No Name	COEI	15 Jul 02	11:37:08	SC51	SC		M	M					1411	4-21
No Name	COEI	15 Jul 02	11:37:20	SC53	SC		M	M					1412	4-21
No Name	COEI	15 Jul 02	11:37:50	NE55	NE	0	M	M		P		POBE	1413	4-21
No Name	COEI	15 Jul 02	11:38:40	SC57	SC		M	H					1414	4-22
No Name	COEI	15 Jul 02	11:39:17	SC59	SC		M	H					1415	4-22
No Name	COEI	15 Jul 02	11:39:46	NE61	NE	0	L	M		P		POBE	1416	4-22
No Name	COEI	15 Jul 02	11:40:06	NE63	NE	0	M	M		P		POBE	1417	4-22
No Name	COEI	15 Jul 02	11:40:21	SC65	SC		M	M					1418	4-22
No Name	COEI	15 Jul 02	11:42:27	NE67	NE	0	H	M		P		POBE	1419	4-22
No Name	COEI	15 Jul 02	11:46:30	NE69	NE	0	M	M		P		POBE	1420	4-22
No Name	COEI	15 Jul 02	11:36:37	NE49	NE	0	L	M		P		POBE	1471	4-21
Pole	COEI	14 Jul 02	10:40:03	NE77	NE	0	H	H		P		ARFO	470	2-58
Pole	COEI	14 Jul 02	10:40:22	SC79	SC		L	M					471	2-58
Pole	COEI	14 Jul 02	10:41:52	SC81	SC		L	M					472	2-58
Pole	COEI	14 Jul 02	10:42:24	SC83	SC		L	M					473	2-58
Pole	COEI	14 Jul 02	10:43:36	SC85	SC		M	H					474	2-58
Pole	COEI	14 Jul 02	10:43:40	SC87	SC		L	M					475	2-58
Pole	COEI	14 Jul 02	10:44:16	NE89	NE	0	L	H	V05	P		ARFO	476	2-58
Pole	COEI	14 Jul 02	10:44:30	SC91	SC		L	M					477	2-58
Pole	COEI	14 Jul 02	10:46:22	SC93	SC		L	H					478	2-58
Pole	COEI	14 Jul 02	10:47:07	NE95	NE	0	M	H		P		ARFO	479	2-58
Pole	COEI	14 Jul 02	10:47:07	NE97	NE	0	M	H		P		ARFO	480	2-58
Pole	COEI	14 Jul 02	10:47:37	NE99	NE	0	M	H		P		ARFO	481	2-58
Pole	COEI	14 Jul 02	10:48:20	NE101	NE	0	L	H	E30	P		ARFO	482	2-58
Pole	GLGU	14 Jul 02	10:50:27	NE103	NE	0	L	H		P		ARFO	483	2-58
Pole	COEI	14 Jul 02	10:50:47		EE								484	2-58
Pole	COEI	14 Jul 02	10:50:47		EE								485	2-58
Pole	COEI	14 Jul 02	10:51:12	NE105	NE	0	L	H		P		ARFO	486	2-58
Pole	GLGU	14 Jul 02	10:51:24	NE107	NE	0	N	M		P		ARFO	487	2-59
Pole	COEI	14 Jul 02	10:52:44	NE109	NE	0	L	H	E70	P		ARFO	488	2-59
Pole	COEI	14 Jul 02	10:52:44	NE111	NE	0	N	H	E70	P		ARFO	489	2-59
Pole	COEI	14 Jul 02	10:53:10	NE113	NE	0	M	H		P		ARFO	490	2-59
Pole	COEI	14 Jul 02	10:54:04	SC115	SC		L	H					491	2-59
Pole	GLGU	14 Jul 02	10:54:29	NE117	NE	0	L	H		P		ARFO	492	2-59
Pole	GLGU	14 Jul 02	10:55:01	NE119	NE	0	L	M		P		ARFO	493	2-59
Pole	COEI	14 Jul 02	10:55:42	NE121	NE	0	N	H		P		ARFO	494	2-59
Pole	COEI	14 Jul 02	10:56:38	SC123	SC		M	H					495	2-59
Pole	COEI	14 Jul 02	11:01:00	NE125	NE	0	N	H	E60	P		ARFO	496	2-59
Pole	COEI	14 Jul 02	11:01:41	NE127	NE	0	N	H	E75	P		GLGU	497	2-59
Pole	COEI	14 Jul 02	11:02:47	NE129	NE	0	N	H	E50	P		GLGU	498	2-59
Pole	COEI	14 Jul 02	11:03:38	NE131	NE	0	M	H	E60	P		ARFO	499	2-59
Pole	COEI	14 Jul 02	11:04:40	NE133	NE	0	N	H	E60	P		ARFO	500	2-59
Pole	COEI	14 Jul 02	11:05:31	NE135	NE	0	L	H	E60	P		ARFO	501	2-59
Pole	COEI	14 Jul 02	11:05:31	NE137	NE	0	L	H	E60	P		ARFO	502	2-59
Pole	COEI	14 Jul 02	11:05:31	NE139	NE	0	L	H	E60	P		ARFO	503	2-59
Pole	COEI	14 Jul 02	11:05:31	NE141	NE	0	L	H	E60	P		ARFO	504	2-59
Pole	COEI	14 Jul 02	11:05:31	NE143	NE	0	L	H	E60	P		ARFO	505	2-59
Pole	COEI	14 Jul 02	11:06:00	SC145	SC		N	H	E40				506	2-59
Pole	COEI	14 Jul 02	11:06:00	SC147	SC		N	H	E40				507	2-59
Pole	COEI	14 Jul 02	11:06:35	NE149	NE	0	N	H	E100	P		ARFO	508	2-59
Pole	COEI	14 Jul 02	11:06:35	NE151	NE	0	N	H	E100	P		ARFO	509	2-59
Pole	COEI	14 Jul 02	11:06:35	SC153	SC		N	H	E100				510	2-59
Pole	COEI	14 Jul 02	11:06:35	SC155	SC		N	H	E100				511	2-59
Pole	COEI	14 Jul 02	11:06:35	SC157	SC		N	H	E100				512	2-59
Pole	COEI	14 Jul 02	11:06:35	SC159	SC		N	H	E100				513	2-59
Pole	COEI	14 Jul 02	11:06:35	SC161	SC		N	H	E100				514	2-59
Pole	COEI	14 Jul 02	11:06:35	SC163	SC		N	H	E100				515	2-59
Pole	COEI	14 Jul 02	11:06:35	SC165	SC		N	H	E100				516	2-59
Pole	COEI	14 Jul 02	11:07:30	SC167	SC		N	H	V70				517	2-60
Pole	COEI	14 Jul 02	11:08:50	NE169	NE	0	L	H	E60	P		ARFO	518	2-60
Pole	COEI	14 Jul 02	11:10:20	NE171	NE	0	M	H		P		ARFO	519	2-60
Pole	COEI	14 Jul 02	11:10:34	NE173	NE	0	N	H	E70	P		ARFO	520	2-60

Island	Species	Date	Time	Nest_ID	Sight_Type	Eggs_Live	Drift	Elev	Veg	Pred	Pred_Egg	Pred_Type	Rec_No	Bk-No
Pole	COEI	14 Jul 02	11:11:17	NE175	NE	0	M	H		P		ARFO	521	2-60
Pole	COEI	14 Jul 02	11:11:17	SC177	SC		M	H					522	2-60
Pole	COEI	14 Jul 02	11:12:05	NE179	NE	0	H	H		P		ARFO	523	2-60
Pole	COEI	14 Jul 02	11:12:10	NE181	NE	0	H	H		P		ARFO	524	2-60
Pole	COEI	14 Jul 02	11:12:20	NE183	NE	0	H	H		P		ARFO	525	2-60
Pole	COEI	14 Jul 02	11:12:30	NE185	NE	0	H	H		P		ARFO	526	2-60
Pole	COEI	14 Jul 02	11:12:40	NE187	NE	0	H	H		P		ARFO	527	2-60
Pole	COEI	14 Jul 02	11:12:50	NE189	NE	0	H	H		P		ARFO	528	2-60
Pole	COEI	14 Jul 02	11:13:00	SC191	SC		H	H					529	2-60
Pole	COEI	14 Jul 02	11:13:10	SC193	SC		H	H					530	2-60
Pole	COEI	14 Jul 02	11:13:20	SC195	SC		H	H					531	2-60
Pole	COEI	14 Jul 02	11:13:30	SC197	SC		H	H					532	2-60
Pole	COEI	14 Jul 02	11:13:40	SC199	SC		H	H					533	2-60
Pole	COEI	14 Jul 02	11:13:50	SC201	SC		H	H					534	2-60
Pole	COEI	14 Jul 02	11:14:00	SC203	SC		H	H					535	2-60
Pole	COEI	14 Jul 02	11:14:06	SC205	SC		M	H	V20				536	2-60
Pole	COEI	14 Jul 02	11:14:47	NE207	NE	0	M	H		P		ARFO	537	2-60
Pole	COEI	14 Jul 02	11:15:27	SC209	SC		H	H					538	2-60
Pole	COEI	14 Jul 02	11:15:54	SC211	SC		M	H					539	2-60
Pole	COEI	14 Jul 02	11:15:54	SC213	SC		M	H					540	2-60
Pole	COEI	14 Jul 02	11:16:13	SC215	SC		M	H					541	2-60
Pole	KIEI	14 Jul 02	11:16:36	NE217	NE	0	M	H		P		ARFO	542	2-60
Pole	COEI	14 Jul 02	11:16:58	SC219	SC		M	H					543	2-60
Pole	COEI	14 Jul 02	11:16:58	SC221	SC		M	H					544	2-60
Pole	COEI	14 Jul 02	11:18:51	SC223	SC		N	H	E100				545	2-61
Pole	COEI	14 Jul 02	11:18:51	SC225	SC		N	H	E100				546	2-61
Pole	COEI	14 Jul 02	11:18:51	SC227	SC		N	H	E100				547	2-61
Pole	COEI	14 Jul 02	11:18:51	SC229	SC		N	H	E100				548	2-61
Pole	COEI	14 Jul 02	11:19:00	SC231	SC		L	H					549	2-61
Pole	COEI	14 Jul 02	11:20:08	SC233	SC		L	H					550	2-61
Pole	COEI	14 Jul 02	11:20:08	NE235	NE	0	L	H	V10	P		ARFO	551	2-61
Pole	KIEI	14 Jul 02	11:20:50	NE237	NE	0	L	H		P		ARFO	552	2-61
Pole	COEI	14 Jul 02	11:21:30	NE239	NE	0	M	H		P		ARFO	553	2-61
Pole	COEI	14 Jul 02	11:21:54	NE241	NE	0	L	H		P		ARFO	554	2-61
Pole	COEI	14 Jul 02	11:22:15	NE243	NE	0	H	H		P		ARFO	555	2-61
Pole	KIEI	14 Jul 02	11:23:20	NE245	NE	0	M	H		P		ARFO	556	2-61
Pole	KIEI	14 Jul 02	11:23:20	NE247	NE	0	M	H		P		ARFO	557	2-61
Pole	COEI	14 Jul 02	11:24:05	NE249	NE	0	M	H		P		ARFO	558	2-61
Pole	COEI	14 Jul 02	11:24:24	NE251	NE	0	H	H		P		ARFO	559	2-61
Pole	COEI	14 Jul 02	11:24:40	SC253	SC		H	H					560	2-61
Pole	COEI	14 Jul 02	11:25:00	NE255	NE	0	H	H	E20	P		ARFO	561	2-61
Pole	COEI	14 Jul 02	11:25:15	SC257	SC		M	H					562	2-61
Pole	COEI	14 Jul 02	11:25:45	SC259	SC		M	H					563	2-61
Pole	COEI	14 Jul 02	11:25:45	SC261	SC		M	H					564	2-61
Pole	COEI	14 Jul 02	11:25:45	SC263	SC		M	H					565	2-61
Pole	COEI	14 Jul 02	11:26:07	NE265	NE	0	H	H		P		ARFO	566	2-61
Pole	COEI	14 Jul 02	11:26:32	SC267	SC		H	H					567	2-61
Pole	COEI	14 Jul 02	11:26:32	SC269	SC		H	H					568	2-61
Pole	COEI	14 Jul 02	11:26:32	SC271	SC		H	H					569	2-61
Pole	COEI	14 Jul 02	11:26:32	NE273	NE	0	H	H		P		ARFO	570	2-61
Pole	COEI	14 Jul 02	11:31:01	SC275	SC		M	H					571	2-62
Pole	COEI	14 Jul 02	11:31:26	NE277	NE	0	H	H		P		ARFO	572	2-62
Pole	COEI	14 Jul 02	11:32:30	SC279	SC		H	H					573	2-62
Pole	COEI	14 Jul 02	11:32:53	SC281	SC		M	H					574	2-62
Pole	COEI	14 Jul 02	11:33:38	NE283	NE	0	H	H		P		ARFO	575	2-62
Pole	COEI	14 Jul 02	11:34:00	NE285	NE	0	H	H		P		ARFO	576	2-62
Pole	COEI	14 Jul 02	11:34:30	NE287	NE	0	H	H		P		ARFO	577	2-62
Pole	COEI	14 Jul 02	11:34:43	SC289	SC		L	M					578	2-62
Pole	COEI	14 Jul 02	11:35:30	SC291	SC		M	H					579	2-62
Pole	COEI	14 Jul 02	11:35:57	SC293	SC		H	H					580	2-62
Pole	COEI	14 Jul 02	11:37:15	SC295	SC		H	H					581	2-62
Pole	COEI	14 Jul 02	11:41:02	NE297	NE	0	L	M		P		GLGU	582	2-62
Pole	COEI	14 Jul 02	12:02:28	NE299	NE	0	L	M		P		ARFO	583	2-62
Pole	COEI	14 Jul 02	12:06:30	NE301	NE	0	L	L		P		ARFO	584	2-62
Pole	GLGU	14 Jul 02	12:08:27	NE303	NE	0	N	H	E70	P		ARFO	585	2-62
Pole	COEI	14 Jul 02	12:10:52	SC305	SC		L	M					586	2-62
Pole	COEI	14 Jul 02	12:11:08	NE307	NE	0	L	M		P		ARFO	587	2-62
Pole	COEI	14 Jul 02	12:12:02	SC309	SC		L	M					588	2-62
Pole	COEI	14 Jul 02	12:15:52	NE311	NE	0	L	M		P		ARFO	589	2-62

Island	Species	Date	Time	Nest_ID	Sight_Type	Eggs_Live	Drift	Elev	Veg	Pred	Pred_Egg	Pred_Type	Rec_No	Bk-No
Pole	COEI	14 Jul 02	12:17:12	SC313	SC		L	M					590	2-62
Pole	COEI	14 Jul 02	12:17:49		EE								591	2-62
Pole	COEI	14 Jul 02	12:17:55	SC315	SC		L	M					592	2-62
Pole	POBE	14 Jul 02	12:26:06		PBB								593	2-62
Pole	COEI	14 Jul 02	12:26:36	SC317	SC		L	M					594	2-62
Pole	COEI	14 Jul 02	12:27:22	NE319	NE	0	M	H		P		ARFO	595	2-62
Pole	COEI	14 Jul 02	12:27:53	SC321	SC		L	M					596	2-62
Pole	COEI	14 Jul 02	12:28:42	SC323	SC		M	H					597	2-62
Pole	COEI	14 Jul 02	12:31:23	SC325	SC		L	M					598	2-63
Pole	POBE	14 Jul 02	12:32:26		PBT								599	2-63
Pole	COEI	14 Jul 02	12:34:28	NE327	NE	0	M	M		P		POBE	600	2-63
Pole	COEI	14 Jul 02	12:34:52	SC329	SC		L	M					601	2-63
Pole	COEI	14 Jul 02	12:35:28	NE331	NE.	0	L	M		P		POBE	602	2-63
Pole	COEI	14 Jul 02	12:36:23	SC333	SC		L	M					603	2-63
Pole	COEI	14 Jul 02	12:37:23	SC335	SC		L	L					604	2-63
Pole	COEI	14 Jul 02	12:37:23	NE337	NE	0	L	L		P		ARFO	605	2-63
Pole	COEI	14 Jul 02	12:43:05	NE339	NE	0	M	H		P		ARFO	606	2-63
Pole	COEI	14 Jul 02	12:43:53	SC341	SC		L	H					607	2-63
Pole	COEI	14 Jul 02	12:44:29	NE343	NE	0	L	M		P		ARFO	608	2-63
Pole	COEI	14 Jul 02	12:51:11	SC345	SC		M	M					609	2-63
Pole	COEI	14 Jul 02	12:52:30	SC347	SC		L	M					610	2-63
Pole	COEI	14 Jul 02	12:54:07	SC349	SC		L	M					611	2-63
Pole	COEI	14 Jul 02	12:55:39	SC351	SC		L	L					612	2-63
Pole	COEI	14 Jul 02	12:59:54	SC353	SC		L	L					613	2-63
Pole	COEI	14 Jul 02	13:00:59	SC355	SC		L	M					614	2-63
Pole	COEI	14 Jul 02	10:30:30	SC2	SC		L	H					952	3-28
Pole	COEI	14 Jul 02	10:37:03	SC6	SC		L	H					954	3-28
Pole	COEI	14 Jul 02	10:37:25	SC8	SC		L	H					955	3-28
Pole	COEI	14 Jul 02	10:37:46	NE10	NE	0	M	H		P		ARFO	956	3-28
Pole	COEI	14 Jul 02	10:38:12	NE12	NE	0	H	H		P		ARFO	957	3-28
Pole	COEI	14 Jul 02	10:39:10	NE14	NE	0	H	H		P		ARFO	958	3-28
Pole	COEI	14 Jul 02	10:42:18	SC16	SC		L	M					959	3-28
Pole	COEI	14 Jul 02	10:43:50	SC18	SC		L	H					960	3-29
Pole	COEI	14 Jul 02	10:44:52	NE20	NE	0	M	M		P		ARFO	961	3-29
Pole	COEI	14 Jul 02	10:45:59	SC22	SC		M	M					962	3-29
Pole	COEI	14 Jul 02	10:46:40	SC24	SC		M	H					963	3-29
Pole	COEI	14 Jul 02	10:47:54	SC26	SC		L	M					964	3-29
Pole	COEI	14 Jul 02	10:48:10	SC28	SC		M	M					965	3-29
Pole	COEI	14 Jul 02	10:49:00	NE30	NE	0	M	H		P		ARFO	966	3-29
Pole	COEI	14 Jul 02	10:50:26	NE32	NE	0	H	H		P		ARFO	967	3-29
Pole	COEI	14 Jul 02	10:55:30	SC34	SC		M	H					968	3-29
Pole	COEI	14 Jul 02	10:55:30	SC36	SC		M	H					969	3-29
Pole	COEI	14 Jul 02	10:57:50	NE38	NE	0	M	M		P		ARFO	970	3-29
Pole	COEI	14 Jul 02	10:57:50	SC40	SC		M	M					971	3-29
Pole	COEI	14 Jul 02	10:57:50	SC42	SC		M	M					972	3-29
Pole	COEI	14 Jul 02	10:59:11	NE44	NE	0	L	M		P		ARFO	973	3-29
Pole	COEI	14 Jul 02	10:59:32	SC46	SC		L	M					974	3-29
Pole	COEI	14 Jul 02	10:59:56	SC48	SC		H	M					975	3-29
Pole	COEI	14 Jul 02	11:00:30	SC50	SC		H	M					976	3-29
Pole	COEI	14 Jul 02	11:01:50	NE52	NE	0	L	M		P		ARFO	977	3-29
Pole	COEI	14 Jul 02	11:01:50	NE54	NE	0	L	M		P		ARFO	978	3-29
Pole	COEI	14 Jul 02	11:04:45	NE56	NE	0	L	M		P		ARFO	979	3-29
Pole	COEI	14 Jul 02	11:05:42	SC58	SC		M	M					980	3-29
Pole	COEI	14 Jul 02	11:07:39	NE60	NE	0	M	M		P		ARFO	981	3-29
Pole	COEI	14 Jul 02	11:08:04	SC62	SC		M	M					982	3-29
Pole	COEI	14 Jul 02	11:24:27	SC64	SC		H	M					983	3-29
Pole	COEI	14 Jul 02	11:24:54	NE66	NE	0	H	H		P		ARFO	984	3-29
Pole	COEI	14 Jul 02	11:24:54	NE68	NE	0	H	H		P		ARFO	985	3-29
Pole	COEI	14 Jul 02	11:24:54	SC70	SC		H	H					986	3-29
Pole	COEI	14 Jul 02	11:24:54	SC72	SC		H	H					987	3-29
Pole	COEI	14 Jul 02	11:24:54	SC74	SC		H	H					988	3-29
Pole	COEI	14 Jul 02	11:25:55	SC76	SC		H	H					989	3-29
Pole	COEI	14 Jul 02	11:26:27	SC78	SC		H	H					990	3-30
Pole	COEI	14 Jul 02	11:26:52	NE80	NE	0	H	H		P		ARFO	991	3-30
Pole	COEI	14 Jul 02	11:27:18	NE82	NE	0	H	H		P		ARFO	992	3-30
Pole	COEI	14 Jul 02	11:27:40	SC84	SC		M	H					993	3-30
Pole	COEI	14 Jul 02	11:28:20	NE86	NE	0	H	H		P		ARFO	994	3-30
Pole	COEI	14 Jul 02	11:29:46	SC88	SC		H	H					995	3-30
Pole	COEI	14 Jul 02	11:31:45	SC90	SC		L	M					996	3-30

Island	Species	Date	Time	Nest_ID	Sight_Type	Eggs_Live	Drift	Elev	Veg	Pred	Pred_Egg	Pred_Type	Rec_No	Bk-No
Pole	COEI	14 Jul 02	11:32:14	SC92	SC		L	M					997	3-30
Pole	COEI	14 Jul 02	11:32:36	SC94	SC		M	M					998	3-30
Pole	COEI	14 Jul 02	11:33:00	SC96	SC		M	M					999	3-30
Pole	COEI	14 Jul 02	11:33:40	SC98	SC		M	M					1000	3-30
Pole	COEI	14 Jul 02	11:33:50	SC100	SC		M	M					1001	3-30
Pole	COEI	14 Jul 02	11:34:50	NE102	NE	0	M	M		P		ARFO	1002	3-30
Pole	COEI	14 Jul 02	11:36:00	SC104	SC		M	L					1003	3-30
Pole	COEI	14 Jul 02	11:36:29	SC106	SC		L	M					1004	3-30
Pole	COEI	14 Jul 02	12:06:12	SC108	SC		M	M					1005	3-30
Pole	COEI	14 Jul 02	12:07:15	SC110	SC		M	M					1006	3-30
Pole	COEI	14 Jul 02	12:29:35	SC112	SC		L	M					1007	3-30
Pole	COEI	14 Jul 02	12:30:05	SC114	SC		L	M					1008	3-30
Pole	COEI	14 Jul 02	12:30:52	SC116	SC		L	H					1009	3-30
Pole	COEI	14 Jul 02	12:31:36	SC118	SC		L	H					1010	3-30
Pole	COEI	14 Jul 02	12:32:39	SC120	SC		L	H					1011	3-30
Pole	COEI	14 Jul 02	12:33:10	NE122	NE	0	M	M		P		ARFO	1012	3-30
Pole	COEI	14 Jul 02	12:33:30	SC124	SC		M	M					1013	3-30
Pole	COEI	14 Jul 02	12:34:35	NE126	NE	0	M	M		P		ARFO	1014	3-30
Pole	COEI	14 Jul 02	12:35:15	NE128	NE	0	L	M		P		ARFO	1015	3-30
Pole	COEI	14 Jul 02	12:35:46	NE130	NE	0	M	M		P		ARFO	1016	3-30
Pole	COEI	14 Jul 02	12:36:20	SC132	SC		L	M					1017	3-30
Pole	COEI	14 Jul 02	12:36:36	SC134	SC		L	M					1018	3-30
Pole	COEI	14 Jul 02	12:40:37	SC136	SC		L	H					1019	3-30
Pole	COEI	14 Jul 02	12:45:47	NE138	NE	0	M	M		P		GLGU	1020	3-31
Pole	COEI	14 Jul 02	12:46:28	SC140	SC		L	M					1021	3-31
Pole	COEI	14 Jul 02	12:47:04	SC142	SC		M	M					1022	3-31
Pole	COEI	14 Jul 02	12:47:45	SC144	SC		L	M					1023	3-31
Pole	COEI	14 Jul 02	12:48:26	SC146	SC		L	M					1024	3-31
Pole	COEI	14 Jul 02	12:49:25	SC148	SC		L	H					1025	3-31
Pole	COEI	14 Jul 02	12:51:40	SC150	SC		L	H					1026	3-31
Pole	COEI	14 Jul 02	12:52:40	SC152	SC		L	H					1027	3-31
Pole	COEI	14 Jul 02	12:53:30	SC154	SC		L	H					1028	3-31
Pole	COEI	14 Jul 02	12:55:26	SC156	SC		M	H					1029	3-31
Pole	COEI	14 Jul 02	12:55:50	SC158	SC		M	H					1030	3-31
Pole	COEI	14 Jul 02	12:57:30	SC160	SC		M	M					1031	3-31
Pole	COEI	14 Jul 02	12:58:20	SC162	SC		L	M					1032	3-31
Pole	COEI	14 Jul 02	12:58:40	SC164	SC		M	M					1033	3-31
Pole	COEI	14 Jul 02	12:59:23	SC166	SC		L	M					1034	3-31
Pole	COEI	14 Jul 02	13:00:30	NE168	NE	0	L	M		P		ARFO	1035	3-31
Pole	COEI	14 Jul 02	10:46:40										1463	3-29
Reindeer	COEI	13 Jul 02	20:17:12	NE1	NE	0	L	M		P		AVIAN	402	2-55
Reindeer	COEI	13 Jul 02	20:18:05	SC3	SC		L	M					403	2-55
Reindeer	COEI	13 Jul 02	20:19:50	SC5	SC		L	M					404	2-55
Reindeer	COEI	13 Jul 02	20:21:56	NE7	NE	0	L	M		P		GLGU	405	2-55
Reindeer	GLGU	13 Jul 02	20:24:12	NE9	NE	H	M	H					406	2-55
Reindeer	GLGU	13 Jul 02	20:27:18	NE11	NE	H	L	M					407	2-55
Reindeer	COEI	13 Jul 02	20:28:17	EE								GLGU	408	2-55
Reindeer	COEI	13 Jul 02	20:35:00	SC15	SC		M	L					409	2-55
Reindeer	GLGU	13 Jul 02	20:37:13	SC17	SC		M	L					410	2-55
Reindeer	GLGU	13 Jul 02	20:38:53	SC19	SC		L	L					411	2-55
Reindeer	COEI	13 Jul 02	20:41:15	SC21	SC		L	L					412	2-55
Reindeer	COEI	13 Jul 02	19:49:35	SC1	SC		M	L					632	4-13
Reindeer	COEI	13 Jul 02	19:53:29	NE3	NE	Y	M	M					633	4-13
Reindeer	GLGU	13 Jul 02	19:58:37	NE5	NE	2	L	M					634	4-13
Reindeer	COEI	13 Jul 02	20:00:00	SC7	SC		M	M					635	4-13
Reindeer	COEI	13 Jul 02	20:02:12	SC9	SC		M	L					636	4-13
Reindeer	COEI	13 Jul 02	20:03:01	SC11	SC		M	L					637	4-13
Reindeer	COEI	13 Jul 02	20:03:28	NE13	NE	0	M	L		P		GLGU	638	4-13
Reindeer	KIEI	13 Jul 02	20:14:09										639	4-13
Reindeer	COEI	13 Jul 02	19:46:35	NE2	NE	0	L	M		P		GLGU	827	3-23
Reindeer	COEI	13 Jul 02	19:47:00	SC4	SC		L	M					828	3-23
Reindeer	COEI	13 Jul 02	19:47:30	SC6	SC		L	M					829	3-23
Reindeer	COEI	13 Jul 02	19:47:55	SC8	SC		L	M					830	3-23
Reindeer	COEI	13 Jul 02	19:48:22	SC10	SC		L	M					831	3-23
Reindeer	COEI	13 Jul 02	19:48:50	NE12	NE	3	M	M					832	3-23
Reindeer	COEI	13 Jul 02	19:49:10	SC14	SC		L	M					833	3-23
Reindeer	GLGU	13 Jul 02	19:49:38	NE16	NE	H	M	H					834	3-23
Reindeer	COEI	13 Jul 02	19:49:54	SC18	SC		L	L					835	3-23
Reindeer	COEI	13 Jul 02	19:50:30	NE20	NE	3	M	L					836	3-23

Island	Species	Date	Time	Nest_ID	Sight_Type	Eggs_Live	Drift	Elev	Veg	Pred	Pred_Egg	Pred_Type	Rec_No	Bk-No
Reindeer	COEI	13 Jul 02	19:50:30	SC22	SC		M	L					837	3-23
Reindeer	COEI	13 Jul 02	19:50:40	NE24	NE	0	M	L		P		GLGU	838	3-23
Reindeer	COEI	13 Jul 02	19:51:30	SC26	SC		L	M					839	3-23
Reindeer	COEI	13 Jul 02	19:51:40	SC28	SC		M	L					840	3-23
Reindeer	COEI	13 Jul 02	19:52:30	SC30	SC		L	L					841	3-23
Reindeer	COEI	13 Jul 02	19:53:36	SC32	SC		L	L					842	3-23
Reindeer	COEI	13 Jul 02	19:54:09	SC34	SC		L	M					843	3-23
Reindeer	COEI	13 Jul 02	19:55:20	NE36	NE	0	L	M		P		GLGU	844	3-23
Reindeer	COEI	13 Jul 02	19:57:18	SC38	SC		L	L					845	3-23
Reindeer	COEI	13 Jul 02	20:00:00	SC40	SC		L	L					846	3-23
Reindeer	COEI	13 Jul 02	20:05:45	SC42	SC		L	L					847	3-23
Reindeer	COEI	13 Jul 02	20:06:04	SC44	SC		L	L					848	3-23
Reindeer	GLGU	13 Jul 02	20:06:35	NE46	NE	H	L	L					849	3-23
Reindeer	COEI	13 Jul 02	20:09:50	NE48	NE	0	L	L		P		GLGU	850	3-23
Reindeer	COEI	13 Jul 02	20:13:10	NE50	NE	Y	M	L					851	3-23
Reindeer	GLGU	13 Jul 02	20:14:50	NE52	NE	H	M	M					852	3-23
Reindeer	COEI	13 Jul 02	20:15:08	NE54	NE	0	M	M		P		GLGU	853	3-23
Reindeer	COEI	13 Jul 02	20:15:36	NE56	NE	Y	L	L					854	3-23
Reindeer	COEI	13 Jul 02	20:20:35	NE58	NE	0	L	L		P		GLGU	855	3-24
Reindeer	COEI	13 Jul 02	20:23:45	SC60	SC		L	L					856	3-24
Reindeer	GLGU	13 Jul 02	20:24:26	NE62	NE	H	N	L					857	3-24
Reindeer	GLGU	13 Jul 02	20:25:46	SC64	SC		N	L					858	3-24
Thetis	COEI	13 Jul 02	14:46:13	NE1	NE	4	L	M					345	2-53
Thetis	COEI	13 Jul 02	14:54:42	SC3	SC		H	M					346	2-53
Thetis	COEI	13 Jul 02	14:56:17	SC5	SC		H	M					347	2-53
Thetis	COEI	13 Jul 02	15:01:54	SC7	SC		L	M					348	2-53
Thetis	COEI	13 Jul 02	15:02:22	SC9	SC		L	M					349	2-53
Thetis	COEI	13 Jul 02	15:02:54	SC11	SC		M	M					350	2-53
Thetis	COEI	13 Jul 02	15:03:19	SC13	SC		M	M					351	2-53
Thetis	COEI	13 Jul 02	15:03:44	SC15	SC		M	M					352	2-53
Thetis	COEI	13 Jul 02	15:04:02	SC17	SC		M	M					353	2-53
Thetis	COEI	13 Jul 02	15:04:39	SC19	SC		M	M					354	2-53
Thetis	COEI	13 Jul 02	15:09:52	SC21	SC		L	M					355	2-53
Thetis	COEI	13 Jul 02	15:12:53	SC23	SC		L	H					356	2-53
Thetis	COEI	13 Jul 02	15:16:54	SC25	SC		L	H					357	2-53
Thetis	COEI	13 Jul 02	15:17:37	NE27	NE	H	L	H					358	2-53
Thetis	COEI	13 Jul 02	15:21:28	SC29	SC		L	H					359	2-53
Thetis	COEI	13 Jul 02	15:21:58	SC31	SC		L	H					360	2-53
Thetis	COEI	13 Jul 02	15:22:25	NE33	NE	2	L	M					361	2-53
Thetis	COEI	13 Jul 02	15:23:49	SC35	SC		L	M					362	2-53
Thetis	COEI	13 Jul 02	15:30:29	SC37	SC		L	L					363	2-53
Thetis	COEI	13 Jul 02	15:35:04	SC39	SC		L	M					364	2-53
Thetis	COEI	13 Jul 02	15:38:17	NE41	NE	0	L	M		P		GLGU	365	2-53
Thetis	COEI	13 Jul 02	15:41:10	SC43	SC		L	M					366	2-53
Thetis	COEI	13 Jul 02	15:41:10	SC45	SC		L	M					367	2-53
Thetis	COEI	13 Jul 02	15:41:10	SC47	SC		L	M					368	2-53
Thetis	COEI	13 Jul 02	15:43:09	NE49	NE	0	L	M		P		U	369	2-53
Thetis	COEI	13 Jul 02	15:45:33	NE51	NE	0	L	H		P		U	370	2-53
Thetis	COEI	13 Jul 02	15:46:10	NE53	NE	H	L	H					371	2-53
Thetis	COEI	13 Jul 02	15:50:59	SC55	SC		L	M					372	2-53
Thetis	COEI	13 Jul 02	15:53:12	NE57	NE	Y	L	H					373	2-53
Thetis	COEI	13 Jul 02	15:57:34	NE59	NE	0	M	M		P		U	374	2-54
Thetis	COEI	13 Jul 02	15:58:54	NE61	NE	0	L	M		P		GLGU	375	2-54
Thetis	COEI	13 Jul 02	16:00:03	NE63	NE	0	L	M		P		U	376	2-54
Thetis	COEI	13 Jul 02	16:00:41	SC65	SC		L	M					377	2-54
Thetis	COEI	13 Jul 02	16:01:20	SC67	SC		M	L					378	2-54
Thetis	COEI	13 Jul 02	16:03:32	NE69	NE	0	L	M		P		U	379	2-54
Thetis	COEI	13 Jul 02	16:03:32	NE71	NE	0	M	L		P		GLGU	380	2-54
Thetis	COEI	13 Jul 02	16:05:33	NE73	NE	0	M	M		P		U	381	2-54
Thetis	COEI	13 Jul 02	16:05:52	NE75	NE	Y	M	H					382	2-54
Thetis	COEI	13 Jul 02	16:06:24	NE77	NE	Y	H	H					383	2-54
Thetis	COEI	13 Jul 02	16:11:03	NE79	NE	Y	H	H				POBE/ARFO	384	2-54
Thetis	COEI	13 Jul 02	16:11:03	NE81	NE	Y	H	H					385	2-54
Thetis	COEI	13 Jul 02	16:13:13	NE83	NE	0	H	H		P		U	386	2-54
Thetis	COEI	13 Jul 02	16:16:05	NE85	NE	0	L	H		P		GLGU	387	2-54
Thetis	COEI	13 Jul 02	16:18:32	NE87	NE	0	L	M		P		U	388	2-54
Thetis	COEI	13 Jul 02	16:21:45	NE89	NE	0	M	M		P		U	389	2-54
Thetis	COEI	13 Jul 02	16:23:23	NE91	NE	0	L	M		P		POBE/ARFO	390	2-54
Thetis	COEI	13 Jul 02	16:28:16	SC93	SC		L	H					391	2-54

Island	Species	Date	Time	Nest_ID	Sight_Type	Eggs_Live	Drift	Elev	Veg	Pred	Pred_Egg	Pred_Type	Rec_No	Bk-No
Thetis	GLGU	13 Jul 02	16:31:50	NE95	NE	0	L	L		P		U	392	2-54
Thetis	GLGU	13 Jul 02	16:36:13	NE97	NE	0	L	M		P		U	393	2-54
Thetis	COEI	13 Jul 02	16:40:00	NE99	NE	0	L	M		P		U	394	2-54
Thetis	GLGU	13 Jul 02	16:45:56	NE101	NE	0	L	M		P		U	395	2-54
Thetis	COEI	13 Jul 02	16:50:17	SC103	SC		M	M					396	2-54
Thetis	COEI	13 Jul 02	16:52:30	NE105	NE	5	L	M					397	2-54
Thetis	COEI	13 Jul 02	16:52:30	NE107	NE	3	L	M					398	2-54
Thetis	COEI	13 Jul 02	16:55:39	SC109	SC		M	M					399	2-54
Thetis	GLGU	13 Jul 02	16:56:34	NE111	NE	0	L	M		P		U	400	2-54
Thetis	COEI	13 Jul 02	16:57:53	NE113	NE	0	L	M		P		U	401	2-54
Thetis	COEI	13 Jul 02	14:54:08	NE601	NE	0	L	H		P		GLGU/HU	615	4-12
Thetis	COEI	13 Jul 02	14:55:11	SC603	SC		L	H					616	4-12
Thetis	HUMAN	13 Jul 02	15:06:14		HU								617	4-12
Thetis	COEI	13 Jul 02	15:07:35	SC605	SC		H	H					618	4-12
Thetis	COEI	13 Jul 02	15:08:12	NE607	NE	4	H	H					619	4-12
Thetis	COEI	13 Jul 02	15:12:26	SC609	SC		H	H					620	4-12
Thetis	COEI	13 Jul 02	15:54:48	NE611	NE	0	M	H		P		GLGU/HU	621	4-12
Thetis	COEI	13 Jul 02	15:56:00	NE613	NE	0	M	H		P		GLGU/HU	622	4-12
Thetis	COEI	13 Jul 02	16:01:40	SC615	SC		L	H					623	4-12
Thetis	GLGU	13 Jul 02	16:12:20	SC617	SC		L	L					624	4-12
Thetis	COEI	13 Jul 02	16:22:08	SC619	SC		L	M					625	4-12
Thetis	COEI	13 Jul 02	16:22:08	NE621	NE	Y	M	L					626	4-12
Thetis	GLGU	13 Jul 02	16:31:49	NE623	NE	0	L	M		P		GLGU/HU	627	4-12
Thetis	GLGU	13 Jul 02	16:33:32	NE625	NE	0	L	M		P		GLGU/HU	628	4-12
Thetis	COEI	13 Jul 02	16:49:59	SC627	SC		L	M					629	4-12
Thetis	COEI	13 Jul 02	16:56:24	SC629	SC		L	M					630	4-12
Thetis	GLGU	13 Jul 02	16:56:58	NE631	NE	0	M	M		P		GLGU/HU	631	4-12
Thetis	COEI	13 Jul 02	14:54:00	SC2	SC		M	H					815	3-22
Thetis	COEI	13 Jul 02	14:55:10	SC4	SC		M	M					816	3-22
Thetis	COEI	13 Jul 02	14:55:45	SC6	SC		M	H					817	3-22
Thetis	COEI	13 Jul 02	14:58:50	SC8	SC		H	M					818	3-22
Thetis	COEI	13 Jul 02	15:01:39	NE10	NE	3	H	M					819	3-22
Thetis	COEI	13 Jul 02	15:03:50	SC12	SC		H	M					820	3-22
Thetis	COEI	13 Jul 02	15:06:35	SC14	SC		L	M					821	3-22
Thetis	COEI	13 Jul 02	16:23:23	NE16	NE	0	L	L		P		GLGU/HU	822	3-22
Thetis	COEI	13 Jul 02	16:24:10	NE18	NE	0	M	L		P		GLGU/HU	823	3-22
Thetis	COEI	13 Jul 02	16:38:41	NE20	NE	0	L	M		P		GLGU/HU	824	3-22
Thetis	COEI	13 Jul 02	16:39:17	SC22	SC		L	L					825	3-22
Thetis	COEI	13 Jul 02	16:40:21	NE24	NE	0	L	L		P		GLGU/HU	826	3-22