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Breeding by a Lesser Black-backed Gull (*Larus fuscus*) on the Atlantic coast of North America

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Abstract

This paper documents the second observation of breeding by Lesser Black-backed Gull (*Larus fuscus*) in North America and first for the American Atlantic coast. A single bird was discovered on Appledore Island, Maine on 29 May 2007, standing near a Herring Gull (*L. argentatus*) at a nest with two eggs. We recorded breeding phenology and behavior of the pair and their chicks from 30 May until 3 August 2007. Additional observations of the pair and the surviving juvenile were made in mid- and late August.

Field encounters

We observed a Lesser Black-backed Gull (*Larus fuscus*) with a Herring Gull (*L. argentatus*) near a nest with two eggs on Appledore Island (42° 59' N; 70° 36' W) in the Isles of Shoals archipelago, located approximately 10 km from the coast of New Hampshire in the Gulf of Maine, first on the afternoon of 29 May 2007, while walking through a Herring Gull colony (Figure 1, Frontispiece; all photographs by David Brown). We discovered the Lesser Black-backed Gull standing next to a Herring Gull on the top of a bare ledge on the

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periphery of the island. We climbed to the top of the ledge and observed a nest with two eggs near the location where the Lesser Black-backed Gull had been standing. We moved away from the nest to allow the gulls to return; the Lesser Black-backed Gull and the Herring Gull returned to the two-egg nest. The two gulls stood very close together, suggesting that they were a mated pair. We observed the nest and pair for approximately 1.5 hours, took photographs, and left the site.

The next day, we constructed an observation platform and blind and placed it in the best position for viewing the nest. Because the nest was located in a depression surrounded by boulders, it was difficult to see from most angles. Thus, the blind had to be situated approximately 60 m from the nest site in order to view the nest and pair adequately. The nest was observed every day from 30 May until 3 August 2007, for a total of 215 hours. Breeding behaviors of the pair were recorded during incubation, hatching, and pre-fledging stages and will be described in detail elsewhere (Stoddard and Ellis, unpubl. data). Videotape and photographs were taken throughout the observation period.

Figure 1. Lesser Black-backed Gull (right) with incubating Herring Gull at nest on Appledore Island, Maine. *Photograph by David Brown.*

On 22 June, two chicks were observed at the nest (Figure 3). Both chicks survived until the week of 30 July, when the chicks moved behind the boulders surrounding the nest and were only occasionally visible. During this week, only one of the chicks was observed being fed by the parents, so we assume that the second chick had died. On 2 August, we went to the nest and found a fresh carcass nearby that appeared to be the second chick; we banded the surviving chick. On 3 August 2007 we left the island and were no longer able to observe the nest every day.

We returned to the island 11 August and observed the pre-fledgling with its parents near the nest. We also obtained videotape of the parents and the pre-fledgling. We observed the Lesser Black-backed Gull and Herring Gull at the nest 21 August, but the fledgling was not present. Several fledglings were observed in a group on the water near shore, and it is possible that the fledgling was in that group. We observed the nest from 10:30 through 12:30 and again from 13:30 through 15:00 and observed both adults at the nest, but the fledgling was not observed.

Discussion

There is only one other record of a Lesser Black-backed Gull in the Isles of Shoals. One individual was observed in September 2006 near the same location (southeastern side of Appledore Island) as the bird we discovered in 2007 (S. Mirick, pers. comm.). There have been sporadic sightings of Lesser Black-backed Gulls in coastal New Hampshire and Massachusetts, mainly during the winter months. Birds seen during summer months (June through August) are typically juveniles (S. Mirick, pers. comm.), and counts of both adults and juveniles have increased in recent decades.

Great Black-backed Gulls (*L. marinus*) and Herring Gulls breed on Appledore Island in a variety of habitats: on exposed inland ridges, cobble beaches, bare rock ledges on the island's periphery, and around shrubs and near buildings of the Shoals Marine Laboratory. Trends in Herring and Great Black-backed Gull populations on the Isles of Shoals are representative of those throughout New England. Neither species bred on the Isles of Shoals at the turn of the century, but by 1972, Herring Gulls had increased to over 7000 breeding pairs, while Great Black-backed Gulls had increased to over 1100 pairs (Drury 1973). Since 1975, the number of breeding Herring Gulls has steadily declined, while the number of breeding Great Black-backed Gulls has increased (Borror and Holmes 1990). Recent surveys indicate that breeding populations of both species have declined in the Isles of Shoals, and in 2006 there were approximately 1427 pairs of Herring Gulls and 1266 pairs of Great Black-backed Gull in the archipelago (Ellis, unpubl. data).

Lesser Black-backed Gull (*Larus fuscus*) breeds primarily in northern and western Europe but has undergone a considerable range expansion during the past century (Post and Lewis 1995). Since 1995, the breeding range of the subspecies *L. fuscus graellsii* has expanded southward to include the Canary Islands (Grande and Palacios 2002). The first record of a Lesser Black-backed Gull in North America (outside of Greenland) was in coastal New Jersey in 1934 (Edwards 1935). Records of this species in North America increased slowly from 1950 through the mid-

Figure 2. Juvenile gulls from nest of Lesser Black-backed Gull and Herring Gull at nest on Appledore Island, Maine; these birds were banded and color-marked for subsequent study. *Photograph by David Brown.*

1970s, then increased substantially thereafter; by 1994, it had been reported in all 31 states in the eastern half of the United States except for West Virginia (Post and Lewis 1995). Maximum numbers seen in a given day include 456 individuals observed in March 2007 at Lake Nockamixon, Pennsylvania (Bill Etter, pers comm.). Most observations of Lesser Black-backed Gulls along the Atlantic coast of North America occur from October through April, but increasingly the species is observed between May and September, particularly on the outer coasts, e.g., North Carolina. Wintering birds may come from Iceland, where breeding populations of Lesser Black-backed Gulls have been increasing (Cramp and Simmons 1983), but the only firm record of a banded Lesser Black-backed comes from Cold Spring Harbor, New York; the bird had been banded in a Dutch breeding colony (de Knijff and van Swelm 1998).

North America's only other record of a breeding Lesser Black-backed Gull comes from Juneau, Alaska on 12 June 1993 (vanVliet et al. 1993): one was observed with a Herring Gull at a nest with two eggs in the middle of a small mixed colony of Herring Gulls and and Glaucous-winged Gulls (*L. glaucescens*). That nesting was apparently not successful; the authors visited the site six weeks after the initial observation and found egg shell fragments and dried egg shell membranes near the nest, along with both members of the pair. They did not locate any evidence of juvenile birds at or near the nest.

Populations of the three subspecies of Lesser Black-backed Gulls (*intermedius*, *graellsii*, and the nominate) have changed dramatically in recent years. Populations of *L. f. graellsii* and *intermedius* have increased, whereas *L. f. fuscus* has decreased significantly throughout its range. *L. f. graellsii* breeds in the Faroes, British Isles, Iceland, France, the Netherlands, Germany, and more recently, the Canary Islands in the Macronesian archipelago (Post and Lewis 1995, Grande and Palacios 2002). *L. f. intermedius* breeds in southern Norway, Sweden, Denmark, and the Netherlands. *L. f. fuscus* breeds in northern Norway, Denmark, Sweden, Finland, and Russia. Based on range expansion, increased breeding populations, and migratory patterns, *L. f. graellsii* would be most likely to occur in North America, along with some *L .f. intermedius* (Post and Lewis 1995; de Knijff and N. van Swelm 1998). *L. f. fuscus* has not been conclusively documented in North America.

Putative hybrids between Herring and Lesser Black-backed Gulls have been observed in some eastern states, including North Carolina, Connecticut (<www.fordham.edu/lewis/birds/comhyb/herxles.html>), and New York (<www.birds.cornell.edu/crows/lbbgull_hybrid.htm>). These observations, combined with records of large numbers of wintering Lesser Black-backed Gulls and observations of juvenile-plumaged birds (Ridout 1993), suggest that there may be breeding populations in North America that have yet to be discovered.

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