

GLOSSY IBIS NESTS ON FOUR BROTHERS, ESSEX COUNTY

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ABSTRACT

The history of colonial waterbirds on Four Brothers, Lake Champlain, in Essex County, NY, is documented for the past 150 years. The only colonial nesting species for the first century was Herring Gull, but diversity grew during the second half of the 20th Century. Owned by The Nature Conservancy and managed by High Peaks Audubon Society, the four islands now host eight species of colonial waterbirds, with Glossy Ibis the latest arrival. This is the first ibis colony in upstate New York and apparently the northernmost Glossy Ibis nesting worldwide and part of the northward range expansion of the species in eastern North America during the past half-century.

INTRODUCTION

In the mid-19th Century, the Rev. G. Ingersoll presented Zadock Thompson, author of *Natural History of Vermont*, with Herring Gull eggs collected on "one of the islands called the Four Brothers situated five or six miles from Burlington" (Thompson 1853). For the next century this was the only colonial waterbird species nesting on the Four Brothers. The Herring Gulls were joined by Ring-billed Gulls in 1949 (Belknap 1955). Black-crowned Night-Herons were nesting in 1951 (VT Dept. of Fish & Game), the author found nesting Cattle Egrets in 1973, and Mrs. Carl Buchheister located the first nest of Great Black-backed Gull in 1975 (Carleton 1999). Snowy Egrets were present in 1976 and again in 1984 and 1985, but nesting was not proven. The next increase in the colony came in 1984 when Double-crested Cormorants, present since 1951 (VT Dept. of Fish & Game), finally commenced nesting (Carleton 1999). Great Blue Herons joined in 1993 (Carleton 1999), bringing the list of colonial nesting waterbirds to seven species.

The four small islands, with a total area of just 17.8 acres, are located in the Essex County, NY, waters of Lake Champlain and lie some two miles east of the tip of Willsboro Point. Previous owners have included

the Shipmans, the Hatch family, John Astor, and the University of Vermont. In 1981, The Nature Conservancy acquired the islands from the university and entered into a management agreement with High Peaks Audubon Society, Inc., to provide for protection and studies of the Four Brothers. In addition to colonial waterbirds, the islands also have nesting Canada Geese, Gadwalls, Mallards, Red-breasted and Common mergansers, Spotted Sandpipers, a variety of passerines, and American Black Ducks have nested historically.

To carry out management duties, High Peaks Audubon employs a wildlife manager and warden(s), owns two marine workboats, and is responsible for sanctuary signs, patrols, an annual census, and bird-banding. Banding is done under Master-Station Permit 21553, with a total of 21,750 waterbirds of ten species banded between 1982 and 1999. Census figures are provided to the Great Lakes Colonial Waterbird Census.

OBSERVATIONS

On the early afternoon of June 12, 1999, a High Peaks Audubon banding and census team of 13, led by the author as wildlife manager, landed on the 2.4 acre Island "B", the southeast islet of Four Brothers. Here, guano and Dutch elm disease have killed the overstory of paper birch, American elm, and American basswood in recent decades, allowing dense thickets of young pin (fire) cherry and basswood to spring up. This successional growth provides nesting platforms for Cattle Egrets and Black-crowned Night-Herons, while Double-crested Cormorants use the higher remaining dead snags.

Volunteer Lissa Richardson called our attention to three adult Glossy Ibis (*Plegadis falcinellus*) overhead. Although exciting, they were not entirely unexpected, since one had been seen flying from Shelburne Farms, VT, to an apparent roost on Four Brothers two years previously, on May 24, 1997 (Carleton 1999). The three would drift northward in formation on the south wind, then repeatedly return to hang over a favored spot. Knowing the penchant of parent birds to keep watch when intruded upon, we suspected they were incubating birds and their behavior might focus our search for one or two particular nests among so many.

Most of the nests in that area still held sets of eggs, which we began examining and comparing. Three types were found. The smallest and palest elliptical light blue eggs measured about 45x30 mm, typical of Cattle Egret. Most, however, were more subelliptical and larger, about 55x35 mm, and the familiar pale greenish or blue of Black-crowned



Figure 1: Nearly fledged Glossy Ibis 23 July 1999.



Figure 2: Closeup of bird in figure 1.

Photos by J.M.C. Peterson

Night-Heron. One somewhat long subelliptical or elongate ovate set was intermediate, about 50x35 mm, and an unfamiliar deep blue. Our suspicion that this nest, placed five feet high in a crotch near the trunk, was that of Glossy Ibis was confirmed by later research. Colin Harrison (1978) described eggs of this ibis as "Uniform light blue, much deeper than on heron eggs," giving measurements of 53-36 mm (vs. 53-37 for the night-heron).

Six weeks later, on July 23, 1999, the author returned to Island "B" with Warden Richard W. MacDonald and Robert C. Wei. We soon found a nest, south of the putative ibis nest of June 12, placed about 7-feet high in a basswood sapling and containing three downy Glossy Ibis nestlings. With their black down and pink bills circled by three black bands, they were curious looking, to say the least. They were banded, photographed, and replaced in the nest. These were half-grown chicks, or about three weeks old. Shortly after, we retrieved an older, nearly fledged bird of about six weeks from a nearby sapling where it was perched, able to climb and flap awkwardly. This young ibis had a more fully decurved bill, patches of white on the crown and throat, iridescent feathering, and was also banded and photographed before release. The four Glossy Ibis were fitted with size 6 aluminum bands 966-51846 through 51848 and 966-51852.

OCCURRENCE IN EASTERN NORTH AMERICA AND NEW YORK

A half-century ago, the only nesting Glossy Ibis population in the United States was confined to southern Florida. A northward expansion followed, with birds nesting in New Jersey in 1955, Maryland and Virginia in 1956, and Long Island in 1961 (Peterson 1988). By 1970 they had moved up the New England coast to southern Maine (Erwin 1979), nesting in Massachusetts in 1974 (Veit and Petersen 1993). In Maine, breeding was confirmed in three Atlas blocks, possible in two others between 1978-83, all on the extreme southeast coast (Adamus n.d.). Spahn (1998) observed of New York, "Since the earliest discovery of nesting in the state, the center of breeding activity has remained in southwestern LI," noting that this ibis also nests on Staten Island.

The northernmost confirmed Glossy Ibis nesting in Maine was in Atlas block 028 near Portland, Cumberland County. Thus, the Four Brothers not only provide the first and only nesting for upstate New York, but also appear to be the northernmost Glossy Ibis colony in the world.

Into mid-August, three adults and an immature Glossy Ibis frequented nearby Shelburne Bay, VT, on the east shore of Lake Champlain (Theodore Murin, pers. comm.). No band was observed, but this immature may have been 966-51852, the eldest of the July 23 young. In early September, Murin observed two immatures at the south end of an old railroad causeway between Colchester and South Hero, VT. Each was banded on the left tarsus, and undoubtedly were two of the three siblings banded on the nest during late July. On October 6, this writer and Amtrak passenger saw a Glossy Ibis lift with Ring-billed Gulls from a cornfield south of Rouses Point, flushed by the passing northbound "Adirondack." The field is about 37 miles north of Four Brothers and 27 miles northwest of the Vermont causeway where the previous sighting was made.

Lake water levels were quite low in 1999, due to drought, standing just above 96 feet in mid-May and dropping to just over 94 feet by late August, some three feet lower than the year before and perhaps a foot below average. This may have improved feeding depths, resulting in a more attractive breeding situation for this species. The possibility also exists that ibis have nested on Four Brothers since 1997 and were simply overlooked among all of the cormorants, herons, egrets, night-herons, waterfowl, and gulls.

There is a certain irony in knowing that in the same year that Glossy Ibis was added as the eighth species on these New York islands in pioneer or successional vegetation largely a result of cormorant vent activity, the Vermont Department of Fish and Wildlife obtained a USF&WS permit for cormorant control, solely "for the purpose of enhancing and maintaining avian and plant diversity on State-owned islands in Lake Champlain" (U.S. Fish & Wildlife Service 1999).

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