

Ornithological Assessment of Essex County Coastal Bird Islands

Summary Report for the Nuttall Ornithological Club Blake Fund, August 31, 2017

Beginning in January 2017 Mass Audubon implemented a project designed to assess avian breeding activity on 39 inshore islands located off Cape Ann, Essex County, Massachusetts. Collectively these islands comprise the Essex County Coastal Bird Islands Important Bird Area (IBA). The overall purpose and goals of the study were:

- I. *Develop an understanding of past and current bird survey efforts, examine historic avian data sources and data sets, review past and present management actions, and consider possibilities and options for possible future management activities.***
- II. *Complete a preliminary assessment of current breeding bird activity on the islands.***
- III. *Develop recommendations, plans, and budgets for future follow up actions.***

I. Initial efforts of the project focused on determining the past history of avian breeding activity on the Essex County Coastal Bird Islands. This phase of the project was greatly facilitated by a thoroughly referenced review by J. Berry published in *Bird Observer* (Vol. 33, No. 1, 2005) which carefully summarizes the historic breeding activity of colonial waterbirds nesting on the Essex County Coastal Bird Islands. Berry's survey timeline begins roughly at the beginning of the 20th century with the works of Ipswich ornithologist, C.W. Townsend (1905, 1920, 1921), and is generously supplemented by the works of E.H. Forbush (1925), J.A. Hagar (1941), W.H. Drury (1973, 1974), I.C.T. Nisbet (1973), J. Hatch (1982), R. Andrews (1990), and W. Petersen & R. Meservey (2003). The quality and thoroughness of Berry's paper cannot be underestimated in supplementing the goals of the current project. Along with the sources consulted above, more recent colonial waterbird survey data examined included the results of Mass Wildlife's 1994-95 Massachusetts Coastal Colonial Waterbird Inventory, and similar summaries from 2006-2008, 2013, and 2014.

II. A first step toward assessing the current breeding bird activity on the islands was convening an organizational meeting in January 2017 to plan for the execution of a preliminary assessment of current breeding bird activity on the islands. Present at this organizational meeting were Jim Berry (volunteer), Robert Buchsbaum (Mass Audubon), Jeff Collins (Mass Audubon), Chris Leahy (Mass Audubon), Wayne Petersen (Mass Audubon), Margo Servison (Mass Audubon), and Drew Vitz (Mass Wildlife). The following action items emerged from this meeting:

- Establish a priority list for island visitations (Appendix A), and follow up with owners of islands prior to summer visitations. Highest priority was given to islands owned by Mass Audubon (i.e., House, Kettle, Normans Woe, and Straitsmouth).¹
- Establish a priority target species list for future island visits (e.g., Common Eider, Great Cormorant, Manx Shearwater, American Oystercatcher, Black Guillemot, and all wading bird and tern species).
- Establish a contact list of boat owners or organizations who could assist with the logistics of making island visitations.

Most of the species data obtained during approximately 17 hours of island visitation time in 2017 is summarized on the accompanying spreadsheet (Appendix B). Logistical support for all of the island visitations is gratefully acknowledged, and the survey efforts of Chris Leahy, Jim Berry, and Amber Carr were particularly appreciated. Due to the landing difficulties associated with many of the islands surveyed, the precise population size of different species on many of them was not determinable. Species' breeding presence was registered as CONFIRMED, PROBABLE, or POSSIBLE. For species simply noted on the islands but for which there was no evidence whatsoever to suggest breeding, an X is indicated next to that species on the spreadsheet.

In addition to establishing the presence or absence of bird species on the islands surveyed, and their breeding status whenever possible, general observations about the vegetation cover and other features of each island was recorded whenever possible. The vegetation information is summarized on an accompanying page (Appendix C), however more complete additional information is available in a separate file for each island that was visited.

We encountered logistical obstacles for surveying the islands. As Mass Audubon does not have a boat, we needed to reach out to the larger community for logistic support. Three individuals, two private boat owners and the Gloucester Harbor Master, volunteered their time and boats to assist us in the 2017 surveys. The three boat captains spent a combined total of approximately 18 hours on these surveys. Unfortunately we were unable to secure a boat for surveying some of the highest priority islands. Fortunately however, Mass Wildlife will be conducting a comprehensive survey of breeding waterbirds on all the islands in Massachusetts in the summer of 2018, so we will be able to add that data to the data we collected this summer.

III. Future management recommendations and plans have not yet been developed to date. Due to time constraints this year, we focused our 2017 efforts on completing preliminary surveys on as many islands as possible. Additional funding received from another foundation will allow us to continue our work in the Essex County Coastal Bird Islands IBA next year, at which point we will be better positioned to formally craft potential specific management recommendations.

Additionally, since several of the islands are already being managed for coastal waterbirds by the U.S. Fish and Wildlife Service, this task could become a cooperative operation. For example the

¹ While Mass Audubon owned islands are our highest priority, especially for future management, we were unable to visit most of these islands due to logistical obstacles.

Service has been actively managing the gull population on Thatcher Island for a number of years. Additionally, Mass Audubon's Ecological Extension Service has been contracted by the town of Gloucester to evaluate the ecological integrity of Ten Pound Island and the avian community there. Future management recommendations will obviously take these efforts into account.

Appendix A

Essex County Rocky Islands Priority List for Visitation

Island Summary

The Essex County Rocky Island Important Bird Area is composed of 39 islands that provide or could provide habitat for breeding birds. When this project began the team prioritized the islands based on historical knowledge of breeding bird presence on the islands.

High Priority

Egg Rock
Ram Island
Tinkers Island
Cat Island/Children's Island
Cormorant Rock
Grays Rock
Coney Island
Eagle Island
South Gooseberry Island
North Gooseberry Island
Pope Head
Chubb Island
House Island
Kettle Island
Normans Woe Rock
Ten Pound Island
Milk Island
Thacher Island

Medium Priority

Marblehead Rock
Great Haste Island
Halfway Rock
Bakers Island
Little Misery Island
Great Misery Island
Rock Dundy
Graves Island
Great Egg Rock
Straitsmouth Island
Dry Salvages

Low Priority

Dread Ledge
Off Rock
Satan Rock
Dry Breakers
Rams Island
Salt Rock
Little Salt Rocks
Little Egg Rock
Salt Island
Little Salvages

Twenty-seven of the islands (highlighted in the above) were surveyed this summer, either on foot or from a boat.

Appendix C

Vegetation Summaries Obtained During Visits of 25 Essex County Coastal Bird Islands

Tinker's Island – This island consists of two rocky headlands with a cobble bridge linking the N. and S. ends. The densest vegetation is on the two extremes. This has long been a summer colony with about a dozen current residences, so that such trees as exist, including domestic fruit trees, and much of the other vegetation are the result of deliberate human disturbance. A full spreadsheet and complete plant list (excluding garden species) is available for this island. Currently this island supports nesting gulls, but at one time also had a few nesting terns.

Children's/Cat Island – This island supports an active YMCA youth camp during the summer, so that the central part of the island is essentially a mowed lawn. However this is margined with what amounts to hedges of thick shrubby growth, and there are copses of trees at each end: a small pine grove on the south end and a thick sumac copse in the North. A spread sheet with a full plant list is available for this island. Children's Island currently hosts a variety of species including the probability of several long-legged wading birds.

Cormorant Rock – Patches of weedy forbs and grasses around the top and upper sides of the peaked part (mainly leeward side) of the island. Good numbers of cormorants nesting here, as well as Common Eiders based on the presence of several broods in the water.

Gray's Rock – This is an un-vegetated island, however it supports nesting cormorants and possibly a pair of American Oystercatchers.

Coney Island – The crown of this island is well vegetated with small (*cf* cherry) trees at South end with scrub at margins and covering the North end. There is also a small patch of salt marsh (i.e. *Spartina*) on the West side. Cormorants and gulls both nest on Coney Island.

Eagle Island – The highest point of the island at the south end has a copse of trees (mainly *P. serotina* = Black Cherry) surrounded by lower woody species. The vegetation then becomes increasingly sparser northward with the northern third bare rock. This is an important island because it has both egrets and Glossy Ibises nesting on it.

South Gooseberry Island – Mostly barren rock with a shingle beach covering the NW third of the island. Some low shrubs mixed with forbs and grasses on a single flat summit. Plenty of cormorants nesting on South Gooseberry, partly because of the island's configuration.

North Gooseberry Island – Mostly barren rock with an ample shingle beach covering the SW quadrant of the island. Low shrubby vegetation on the flat summit in two discrete areas. Many cormorants on this island too, and a single American Oystercatcher observed on the shingle beach.

Pope Head – Barren rock with no visible vegetation. No positive evidence of nesting on this island, which is so low likely gets washed over in storms or super high tides.

Chubb Island – A ring of shrubby vegetation around a central rock stack; also a ring of barren DCCO habitat above the high tide line. No much happening on this island other than a few pairs of cormorants.

House Island – This important island is the only one that is covered with a stand of mature forest (arguably similar to the pre-settlement vegetation?). It consists of a mix of Northern Red Oak and Shagbark Hickory (possibly also *C. glabra*). Many of the oaks have a DBH exceeding 7.5 feet. (There is also a low cf. *Tilia* sp. on this and other islands, which I can't place = introduced Large-leafed Linden?)

The understory is largely open with ground cover dominated in places with *Poa* “*annua*.” Invasives in the interior are relatively few, though there is some Winged Euonymous and quite a lot of Wintercreeper (*E. fortunei*); Asian honeysuckle spp. and Oriental Bittersweet are frequent in the shrub zone. There are some small freshwater pools at the edge of the rock on the south side edged with *Spartina* sp., *Juncus gerardi*, *J. effusus* and a few stems of *Phragmites*.

The island is a perfect example of “classic” veg structure of these islands with a perimeter of bare rock; an edge dominated by forbs such as Seaside Goldenrod; a zone of Poison Ivy; a 5-6’ high shrub zone variably composed of a mix of low cherry, sumac, and honeysuckle, and ending with forest at the center. Getting through the PI zone to the interior is challenging.

A plant spreadsheet exists for other species.

In the 1970s this island supported one of the largest heronries in the state and was the first site where Cattle Egret was confirmed nesting in Massachusetts.

Norman’s Woe – Not much indication of lots of nesting birds on this island.

Ten Pound Island – This island generally conforms to the wooded island profile with a copse of mature trees on the crown of the island, giving way to scrub at the fringes and at the SE end. The major difference is that the vegetation is predominately non-native. Most of the trees are Sycamore Maples and the understory and open areas are choked with Japanese Knotweed, Multiflora Rose, Mugwort and the like.

This island has decent number of nesting birds of several species. However it is apparent that the majority of eider nests are unsuccessful, with either eggs or hatchlings or both apparently taken by one or more predators. Evidence for this is largely the discrepancy between the 39 active nests counted in May and the presence of only a dozen to 20 or so juvenile birds seen in eider crèches surrounding waters thereafter. We have confirmed that rats are active at night on the island, though their population is uncertain (Local legend has it that during a fire 20 or more years ago, “hundreds” of rats fled the island and invaded East Gloucester). There was also evidence of predation by Black-crowned Night-Herons (per characteristic egg slicing), and off course large gulls are frequent predators of eggs and nestlings. Clearly more information is needed before we fully understand the predation situation on the island and what steps might be taken to mitigate it.

Each of the visits to this island was also documented by Amber Carr in her reports to the Gloucester Mayor's office, which commissioned the series of surveys. These reports contain additional information that should be included in the Rocky Islands records.

Thacher Island – We have no detailed vegetation analysis available for this island, but there are apparently lots of gulls nesting there, as well as Common Eiders and cormorants. The USFWS has done a lot of monitoring and management on Thacher Island, so this information is available elsewhere. Unfortunately the island also has rats.

Marblehead Rock – Barren of vegetation even though the summit is well above flood line. In spite of its lack of vegetation, this island supports Common Eiders, cormorants, and a handful of gulls.

Great Haste Island – This is an un-vegetated island. An American Oystercatcher on the island gave indications of nesting.

Halfway Rock – Another un-vegetated island. Despite the fact that no cormorants were nesting on this island, an immature Great Cormorant was noted resting on this rock.

Bakers Island – The vegetation on the Essex Heritage (EH) land on the island consists of dense scrub of predictable coastal and (extensively) exotic species with some scattered small trees. The lighthouse area has large areas of cleared open areas (lawns). There is a pond only one edge of which is accessible from the EH property, which could not be surveyed in any detail. The private portion of the island has additional areas of brush and trees scattered among more than 50 residences. There are also two more ponds.

Despite the extensive vegetation on this island and a scattering of passerines, there was only a few pairs of Herring Gulls nesting there.

Little Misery Island – Typical of more wooded islands with a copse of mature trees (incl. oak, cherry, and maple) occupying most of the center with a dense thicket of dwarfed trees and lower shrubs surrounding and covering the east end of the island; the usual barrier of Poison Ivy was present around the perimeter of the island. Understory comprised of a variety of forbs and graminoids.

No seabirds were nesting on this island.

Rock Dundy – This is an un-vegetated island with only a few pairs of nesting cormorants.

Graves Island - Top of the island thickly vegetated, including mature oak, pine and cherry with surrounding shrubby copses. A few cormorants and gulls nesting, but precise counts not able to be made.

Great Egg Rock – Apparently totally barren of vegetation. Cormorants and Great Black-backed Gulls nesting on this barren island.

Dry Breakers – Another island barren of vegetation; awash in storm tides. Despite the lack of any nesting waterbirds, an immature Great Cormorant was resting on this island. Also, small numbers of both Gray and Harbor Seals were apparently hauled out on this island.

The Rams –These are smaller versions of the larger wooded islands with a copse of a few mature trees occupying part of the center with dense surrounding thickets of scrub and poison Ivy. Little or no understory. Also little obvious evidence of breeding waterbirds.

Salt Rock - A small skerry, awash in bad weather. No breeding birds at all.

Satan Rock – A wash over ledge only; no vegetation and no nesting birds.

Little Egg Rock – A wash over ledge only; no vegetation and no birds.