



Coastal Breeding Birds



Common eider females and chicks paddling around the Boston Harbor Islands in a group called a “crèche”. This behavior protects young from predators. A crèche can be quite large; in 2008, a crèche of 120 birds was recorded (photo © R. Styreist).

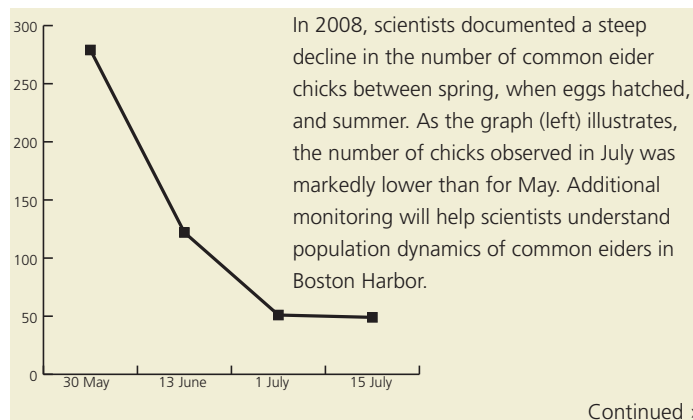
Status and Trends

Coastal breeding bird surveys have been conducted by the Northeast Temperate Network Inventory & Monitoring program (NETN) at Boston Harbor Islands, a National Park area (BOHA) since 2007. In 2008, researchers observed high mortality rates in common eider chicks. High juvenile mortality rates are relatively common in this species. Often, their populations fluctuate between years of reproductive “booms” and “busts”. In stable populations, these “bust” years are made up for by the long average life span of adult birds, which ensures that females will have several opportunities to successfully raise a clutch of chicks. Additional monitoring will help NETN scientists determine if these observations are indicative of detrimental, long-term trends.

The 34 distinct islands and peninsulas at BOHA represent the only drumlin field in the U.S. that intersects a coast. The area was designated an Important Bird Area in 2002 because it provides habitat for over a dozen species of colonial-nesting waterbirds, wading birds, cormorants, gulls, eider, oystercatchers, and shorebirds. Many of these species are of special concern.

Mudflats, salt marshes, estuarine, marine, intertidal, and upland areas at BOHA provide diverse food resources for coastal birds that come to the park to nest and rear young.

Annual monitoring at BOHA will enable Northeast Temperate Network scientists to determine how ecosystem disturbances, park management practices, and visitation patterns impact coastal breeding birds.



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Importance

Coastal breeding birds are a consistently reliable and easily detected indicator of long-term ecosystem health because they respond to changes in the structure and composition of natural communities, weather, and patterns in food availability across the entire landscape. They rely on beaches, rocky shores, cliffs, open ground, shrub and tree communities during the breeding season.

Management activities at NETN parks aimed at preserving historical features, landscapes, or practices may have an impact on these communities. By observing trends in coastal breeding bird populations, park managers can better understand the effects of these practices on ecosystem processes.

Breeding birds are important to many park visitors. Some NETN parks are recognized as Important Bird Areas and visitors flock to these parks to watch for and listen to breeding birds. As a volunteer-based program, coastal breeding bird monitoring involves and engages visitors in park stewardship. The information they gather helps to protect coastal breeding birds in a variety of ways. Examples include protecting crucial nesting areas from visitor impacts and guiding land management practices to improve water quality.

What do we want to understand?

1. Annually determine coastal breeding bird species composition and track long-term trends.
2. Annually estimate relative abundance of common and rare coastal breeding bird species; track long-term trends.
3. Correlate changes in coastal breeding bird communities with management actions and landscape changes.



Common eider chicks in a nest on Sheep Island © C. Trocki

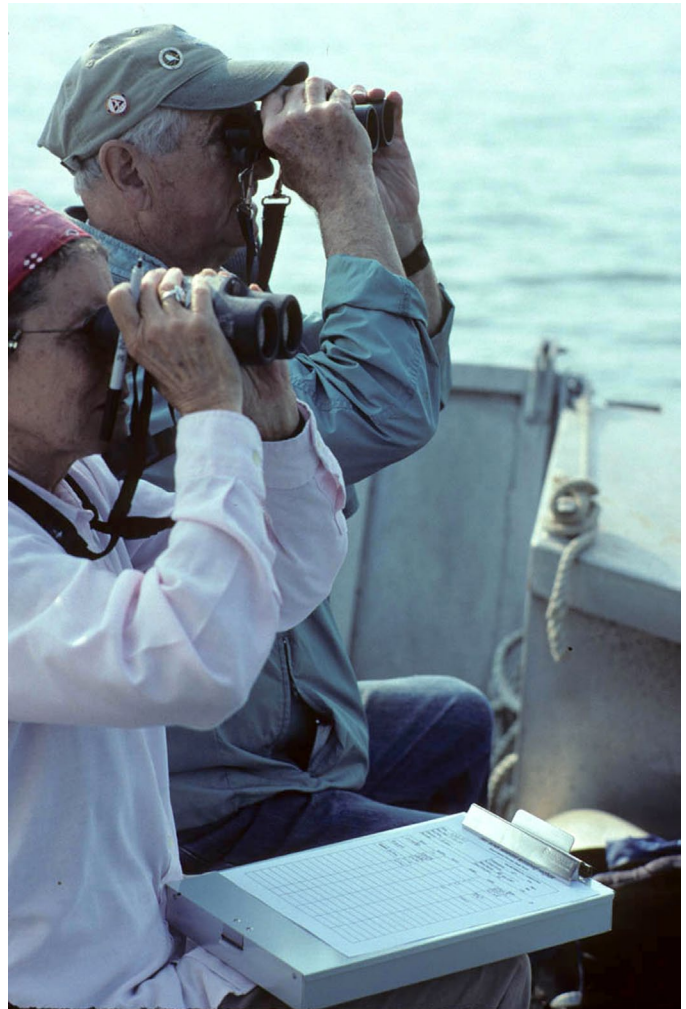
More Information

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Links

Northeast Temperate Network: www.science.nature.nps.gov/im/units/netn/
Coastal Breeding Bird Monitoring 2007 Field Season Summary
Coastal Breeding Bird Monitoring 2008 Field Season Summary



Citizen science volunteers on a boat-based survey © S. Morss Jr..

Monitoring Program

Researchers studying coastal breeding birds in the Northeast Temperate Network utilize citizen-science volunteers to count nesting and breeding waterbirds and coastal breeding birds along coastlines and on island in Boston Harbor. Volunteers, researchers and park staff estimated or directly counted all nests, incubating adults, or territorial nesting pairs on all islands where waterbirds have been known to nest in the past. The long-term monitoring protocol adopted by the park incorporates periodic surveillance for new nesting locations.

Species diversity, abundance, frequency of occurrence, and richness will be summarized annually. Periodically, a more detailed analysis will be conducted that will include estimates of population densities and trends, focusing on the most abundant species and those of management or conservation concern.

Volunteer birders are always needed—contact Lead Scientist, Carol Lynn Trocki at 401-952-2937 to find out how you can get involved in this program.