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## For the Birds- Great Gull Island

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## FOR THE BIRDS

The voices of thousands of common terns with their “kee-arr” flight call fill the air on a spring morning on Great Gull Island. Calmly walking through the din is Helen Hays, director of the Great Gull Island Project. Helen Hays is a renowned ornithologist, as well as an inspiration, who has dedicated her work to researching and improving nesting habitat for nesting common and roseate terns on Great Gull Island. Since 1969, Hays and other museum staff and volunteers have worked to restore nesting tern colonies to the Island.

Great Gull Island New York is a 17-acre island at the eastern end of Long Island Sound and is owned by the American Museum of Natural History. The former site of Fort Michie, the island is home to one of the largest concentrations of nesting common terns (*Sterna hirundo*) in the world (9,500 pairs). The common terns lay their eggs in open shallow ground nests called “scrapes” on the interior of the island. During periods of rain or extreme heat, they may build the nest up by pulling seaweed, shells, small twigs or rocks into the nest. Common terns are listed as Threatened in New York and as a Species of Special Concern in Connecticut. Spaces between the boulders placed around the edge of the island to stabilize the shoreline, as well as some of the retaining walls of the fort, offer nesting sites for 1,300 pairs of roseate terns (*S. dougallii*), one of the largest nesting concentration of this federally endangered species in the Western Hemisphere. As a site that acts as a “source of birds” for other areas along the New England coastline, it is critical to maintain and improve the nesting habitats on Great Gull Island.

Since 1969, Hays and her team have been collecting data on every adult bird, chick and nest on Great Gull. The 45-year old dataset is the longest continuous record of any bird in North America. In addition, they have tried various techniques over the years to improve the nesting habitat for the birds. There were only a few birds nesting on Great Gull in the late 60s / early 70s and vegetation has limited the areas where terns can nest since the monitoring work began. Hays and her team have taken down buildings and structures left from Fort Michie. They’ve tried burning, flooding areas with seawater, shoveling, bulldozing, and plowing, all in an effort to clear vegetation and open more nesting habitat for the terns. All



Photo credit: Nancy Balcom

these efforts cleared areas for at least the beginning of the nesting season when the birds are selecting nesting sites, but by midsummer, vegetative growth was prolific.

Both invasive and nuisance plants pose a problem on parts of the island. They impact the nesting habitat of the birds, which nest on the ground and in the crevices of the rocks surrounding Great Gull. For example, black swallow-wort (*Cynanchum louiseae*) grows rapidly over the rocks, blocking access to the crevices that the roseate terns use for nesting. Another plant, wild radish (*Raphanus raphanistrum*)

has overtaken much of the interior of the Island. When the birds arrive in the spring, they see relatively open ground, but by late spring the wild radish has grown up to two feet tall and forms dense cover. This makes it difficult for the nest checkers, volunteers who conduct twice daily field checks looking for and marking nests and counting eggs and chicks.

Connecticut Sea Grant, UConn Extension and Department of Ecology and Evolutionary Biology are partnering with the American Museum of Natural History, U.S. Fish and Wildlife Service, Environmental Protection Agency’s Long Island Sound Study Futures Fund, Massachusetts Audubon and University of Rhode Island to discuss and conduct habitat management to improve the nesting habitat for the birds. UConn faculty are working with partners on vegetation management of nesting areas and using photography obtained with an unmanned flying aircraft (quadcopter) to assess the effectiveness of management actions. In addition, a habitat management plan for Great Gull Island will document the history of management actions and propose ideas for continued work. The difficulty with any management work is that the birds are present on the Island from April 27 to September 22 – corresponding closely with the vegetative season. No large-scale management work can be done while the birds are present.

Hays received an Honorary Doctor of Science from UConn’s College of Liberal Arts and Science at the May 2015 graduation ceremony in recognition of her outstanding contributions to ornithological research and conservation.

### ABOUT THE AUTHOR:

**Juliana Barrett** is an educator with Connecticut Sea Grant/UConn Extension



# Great Gull Island

by Juliana Barrett



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Helen Hays, a renowned ornithologist  
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