

# Managing Vegetation on Maine Islands for Federally-Endangered Roseate Terns

Seabird Restoration Program, National Audubon Society



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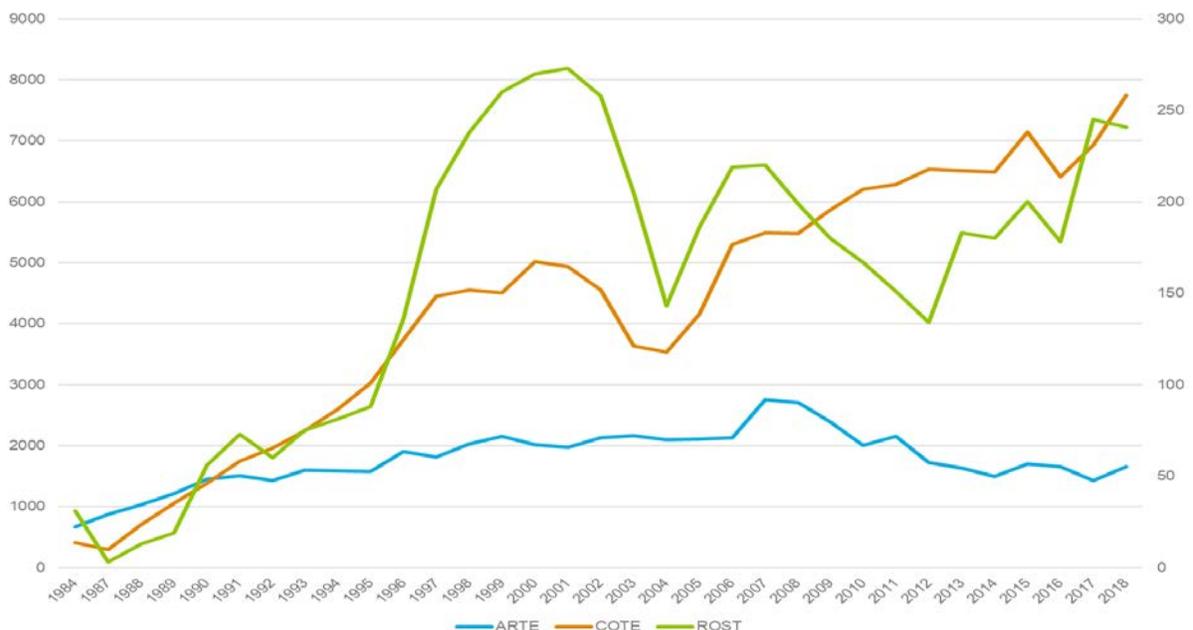
Audubon scientists of the Seabird Restoration Program (SRP) have been working since 1977 to employ social attraction methods to attract terns back to island seabird colonies in the Gulf of Maine. The first restored tern colony for the program was established by 1980 on the Muscongus Bay island of Eastern Egg Rock. It was made up of Common and Arctic Terns and by 1981 the first pair of Roseate Terns had joined the colony.

Today there are over 240 pairs of Roseate Terns nesting in the Gulf of Maine (GOM) and roughly 90% of *all* terns in Maine nest only on managed islands. The work of our island teams includes not only employing social attraction methods, but also protecting the birds from disturbance, and most especially for this grant project, in managing vegetative growth to ensure ground-nesting habitat is available to the birds upon return to the islands during nesting season.

## GOM Season Overview

Despite severe weather events and a late-season drop in food sources the Gulf of Maine tern population remained robust. The Roseate Tern population was 241 pairs, down only slightly from 245 pairs in 2017. There population has shown a general upwards trend over the past 6-8 years.

## GOM Breeding Pairs: SRP Managed Terns 1984-2018



## Grant Funded Focus

Work proposed to the Nuttall Ornithological Club included activities around habitat management of Roseate Terns on three of our managed seabird islands in the Gulf of Maine. We applied the grant funding from the Blake-Nuttall Fund specifically to our operations at Jenny Island and will report the activities there.

Jenny Island is a 3-acre island in Casco Bay. The island is owned by the State of Maine and managed by SRP. Roseate Terns prefer to nest alongside Common Terns and both are found there.

## Grant Activities

Early season activity included cutting and mowing of approximately 0.28 acres of tern habitat to ensure open habitat for terns to nest. Vegetation was removed to expose bedrock where terns prefer to nest.

Geotextiles were positioned over vegetation adjacent to preferred nesting sites to discourage vegetative growth and create an extension of the area on which the terns nest. In early 2018, synthetic textile mats were laid, but the team also deployed new, biodegradable mats, which were utilized by the terns to nest (see Figure 1).



Figure 1: Geotextile mats on Jenny Island, May 2018.  
Photo: Huenefeldt / SRP

The new biodegradable mats conformed rapidly to the terrain after several rains and continued as a weed barrier at the close of the nesting season.

Hand pulling of vegetation was conducted in the tern colony early and late in the season with an emphasis on

invasive wild radish (*Raphanus raphanistrum*). The majority of radish was pulled while the plant was in full bloom and readily identified by its flower. Additional late season vegetation work to remove any final vegetation was conducted during the island close operations to remove observation blinds and camp infrastructure.

### 2018 Jenny Island Tern Population

Roseate Terns prefer to nest alongside Common Terns which provides greater protection than if Roseate Terns nested alone. Common Terns had a record year with 1426 nesting pairs and productivity rate of 0.96 chicks per nest. This was 128 pairs more than in 2017 and a new high for the island. Roseate Tern also had more nests than in previous years with 25 recorded, up from 22 in 2017. Productivity was low, however, at 0.62 chicks fledged per nest.

Vegetation management is critical and apparently allowing habitat to remain available for nesting pairs as supported by the stable nesting records. SRP scientists believe the low productivity number, however, is due to both avian predation (Black-crowned Night Herons, gulls, and corvids were all observed) as well as the previously noted decline in forage fish availability across the GOM late in the nesting season.

We thank the Blake Nuttall Ornithological Society for funding this grant to deploy proven vegetation management techniques to aid the federally-endangered Roseate Terns nesting in in Maine.