Egg Rock Update

1982 Report

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Director

Newsletter of the Fratercula Fund of the National Audubon Society

Fourteen Pair of Puffins Breed at Eastern Egg Rock

After a 100 year absence, five pair of puffins nested at Eastern Egg Rock in 1981. All five of the 1981 breeding pairs returned to their rock burrows in 1982 and nine additional pairs nested. Of the 28 breeding puffins, two were six years old, 20 were five years old and two were four years old.

Most of the Egg Rock puffins are banded returns from the 571 Newfoundland nestlings transplanted to the island between 1975 and 1980. Yet in 1982 four of the breeding puffins were unbanded. Most likely these unbanded birds are recruits from either Matinicus Rock or Machias Seal Island, the only other Gulf of Maine puffin colonies. As many as seven unbanded puffins were observed at Egg Rock at one time in 1982, suggesting that the number of unbanded birds is increasing and that immigrants from other colonies will become an increasingly important part of the Egg Rock population.

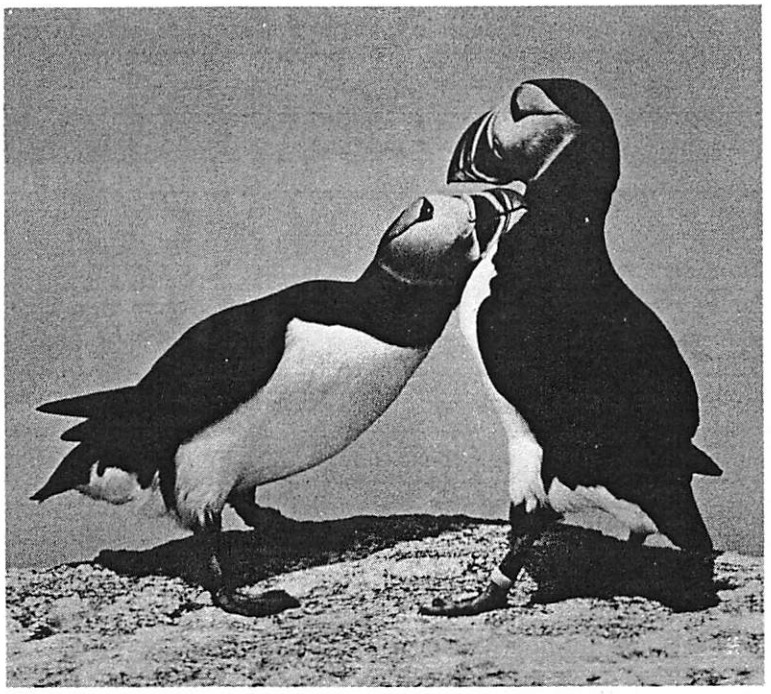

Photo by Stephen W. Kress

Transplanted as nestlings from Newfoundland in 1978, four-year-old puffins #45 and #98 (right) frequently courted atop Eastern Egg Rock boulders in 1982. They will likely join the island's breeding population in 1983.

In addition to the 28 breeding puffins, 42 others were observed over the course of the summer. Most of these were too young to breed, but their presence at Egg Rock provides assurance that the breeding population will continue to increase for at least the next several years.

By observing the number of days between the first and last feedings at each burrow, it was determined that twelve of the fourteen pairs were successful. This is a very respectable fledging success considering that most of the birds were inexperienced, first breeders.

Circumstances surrounding the two failed nests suggest that one pair (five year olds #91 and #95) lost their egg after several days of persistent rain. This pair successfully fledged a chick in 1981 and was exchanging incubation stints at regular intervals before the rains. On July 2nd, two days after the rains, the pair stopped incubating and spent the rest of the summer billing and loafing on the rocks above their burrow. The other pair that failed may also be linked to a weather-related incident. Transplanted five year old #61 and its unbanded mate (a female named "Streak" because of a distinctive white mark on her upper mandible) were feeding their chick until July 22 when the winds began gusting to 30mph. That same day "Streak" was observed with a broken leg, possibly due to a poor landing among the boulders. For one month following the incident, #61 and "Streak" billed and sat together on the rocks above their burrow rather than tending their chick. By the end of the summer "Streak" was back on her feet.

Decoys Lure Puffins to Wooden Ball Island

Based on knowledge that many pre-breeding puffins travel among the outer Maine islands looking for a colony to eventually join, 17 life-sized decoys were placed in suitable habitat on Wooden Ball Island in early June. Wooden Ball is a 136A nearly treeless island that lies about six miles northeast of Matinicus Rock. To provide the sounds of active breeding puffins and perhaps lure prospecting birds to investigate potential nest sites, an automatic tape recorder with pre-recorded puffin growls was positioned among the granite boulders and a speaker hidden in a deep crevice. Powered by a long-life car battery, the automatic system projected puffin calls from 6 AM to 3 PM daily.

In addition to the seventeen life-size decoys, two fiberglass two-foot-tall "superpuffins" were placed in conspicuous locations. The rationale for these giant models was to make the puffin display more conspicuous to birds that might be passing the island at a distance. It is also possible that larger than life-sized models might serve as a super-stimulus.

While puffins have appeared previously at Wooden Ball Island, no one on this new venture would have dared guess how much puffin activity we would see in the next two months. Gregg Transue, who spent a month on the island, described his reaction on June 13th when he was placing the decoys out for the first time: "We had nine decoys in place and were beginning to put number 10 and 11 in place, when low and behold, there was a puffin almost landing next to the decoy we had just put up!" That puffin didn't land, but before the two month observation period was over, 65 different landings occurred - nearly all with the decoys. Most were on a bare rock point, but on at least eleven occasions, puffins interacted with decoys in suitable nesting habitat and some explored under the boulders in an apparent nest site search.

Puffins were seen flying past Wooden Ball Island every day that visibility permitted an offshore view - sometimes as many as 55 "flybys"/day. Yet even more notable is the fact that with the decoys in place, puffins landed on the island on 73% of the 33 observation days. By contrast, no puffins landed during a 12 day period without decoys.

It's difficult to evaluate the success of the superpuffins because even though only two birds landed with them at Wooden Ball, they may have helped attract some of the puffins to the island. Later in the summer one of the superpuffins was taken to Eastern Egg Rock where more birds would have an opportunity to interact with the oversized model. There, after several days of avoidance, as many as nine puffins sat under the superpuffin at the same time.

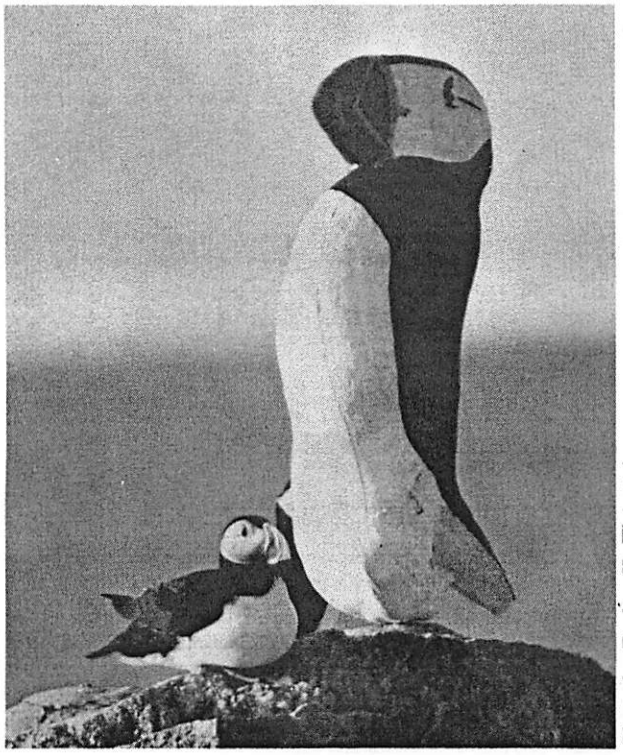

Photo by Evelyn H. Weinstein

Puffins rest in the shadow of superpuffin at Eastern Egg Rock.

While the decoys certainly proved their value for attracting puffins, it soon became apparent that prospecting individuals were sometimes severely harrassed by Herring and Great Black-backed Gulls. At least 463 pair of gulls bred on Wooden Ball Island in 1982. These were a mix of about two-thirds Herring Gulls and one-third Great Black-backed Gulls.

Encounters between two visiting transplant puffins from Eastern Egg Rock and gulls that were breeding near the puffin decoys, illustrate how a few aggressive gulls can inhibit puffin colonization. Four-year-old puffin number 76 arrived at Wooden Ball on June 16 in company with an unbanded puffin and both associated with decoys for about two hours. This same puffin had previously been at Eastern Egg Rock from June 4 to 14th and was associating there with an unbanded bird. On June 18, #76 returned to the decoys at Wooden Ball and a Herring Gull swooped in low. The puffin was about six feet off the ground when the gull grabbed it in mid air. The two tumbled out of sight and we suspected that we had seen the last of the puffin. Fortunately, #76 did escape and, remarkably, was seen back at Egg Rock four days later. Three year old puffin #68 also experienced a similar gull harrassment at Wooden Ball. It stayed at the island for a week during which time it explored rock crevices, carried vegetation and billed with other puffins. Then on June 26th, as it flew toward the

boulder field, a Great Black-backed Gull knocked it to the ground. The puffin made a quick scramble back to the sea and excaped, but like four year old #76, it did not return to Wooden Ball.

Such encounters provide evidence that gull harrassment and predation can effectively inhibit prospecting puffins. Clearly, the chances of puffins starting a successful colony in such dangerous habitat is most unlikely. Watching the interaction of puffins and gulls at Wooden Ball Island helps to explain why puffins have not naturally recolonized any of their former Maine nesting islands. With limited control of gulls near suitable puffin habitat, the decoy and sound attracting technique may offer great potential for starting new puffin colonies.

Island Updates

Eastern Egg Rock Common Tern Colony Now the Largest in Maine. After a 43 year absence, the combined management approaches of gull control and decoys plus sound led to the recolonization of Eastern Egg Rock by 80 pair of terns in 1980. The population increased to 164 pair in 1981 and to 424 pair in 1982! Arctic and Roseate Terns have also increased on the island, with as many as 21 Roseate Terns observed at once this summer.

Old Hump and Ross Island Petrel Colonies Expand. In 1980 at Old Hump Ledge, 32 artificial petrel burrows were constructed and an automatic tape player broadcasted underground petrel volcalizations from dusk to dawn. That year three pair of Leach's Storm-Petrels layed eggs and one pair fledged a chick. The tape recorder was not used in 1981 or 1982, but the stimulation provided in 1980 continues to have its effect. In 1982, all three of the burrows active in 1980 remained occupied and three additional pairs also bred in nearby artificial burrows. The six pairs produced four chicks - the highest number to date. Similarly, on Ross Island one pair of petrels bred in artificial burrows stimulated with sound in 1981, but not stimulated in 1982. To test the roll of scent in attracting breeding petrels, 40 artificial burrows were dug at another location on Ross Island. All received pre-recorded petrel purring calls and half of the burrows received soil samples from active petrel burrows. Although there was not enough activity to prove anything about the role of smell in attracting petrels, two pair did breed in the new petrel site - one pair in a burrow with smell and the other in a burrow without smell.

Transplanted Puffins Breed at Matinicus Rock and Machias Seal Island. In 1982 nine transplanted puffins bred at Matinicus Rock. Three of these bred at Matinicus within the past two years, but the increase adds breeders from two additional age groups. This past summer the transplanted breeders included three seven-year-olds, one six-year-old and five five-year-olds. It was surprising to find that both members of two pairs were banded, transplanted puffins. A total of sixty different transplanted puffins was observed at Matinicus Rock this past summer. In addition, five two-year-olds banded as native chicks at Machias Seal Island (out of a total group of 58) appeared for a few days at Matinicus Rock, providing evidence that inter-island travels are not unique to the transplanted puffins. In two weeks of observation at Machias Seal Island, a project biologist observed six transplanted puffins of which one five-year-old was breeding.

Egg Rock Techniques to Assist Tern and Albatross Projects. The decoy and sound techniques that helped re-establish terns to Eastern Egg Rock are assisting other troubled tern populations by encouraging birds to re-establish on vacant habitat or to relocate to areas safer from predators and flooding. This past summer cooperative efforts assisted the Wisconsin Dept. of Natural Resources, the Jamaica Bay National Wildlife Refuge (Brooklyn, NY), Chincoteage National Wildlife Refuge (Chincoteage, VA), Seatuck National Wildlife Refuge (Islip, NY), and Massachusetts Audubon Society (Monomoy Is., MA).

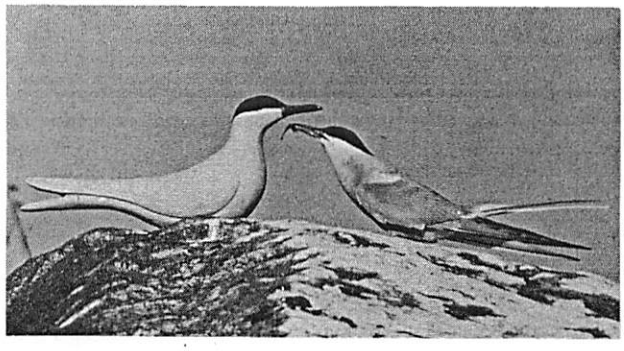

Photo by Stephen W. Kress

Decoys help to lure terns to new breeding sites and sometimes stimulate courtship behavior.

In an imaginative application of the tern recolonization techniques, Richard Podolsky, a veteran of five field seasons with the puffin project, will attempt to lure prospecting Laysan Albatross to a predator free nesting site on Kilauea Point, Kauai in the Hawaiian Islands. For the past several years, approximately 10-20 pair of albatross have attempted to nest on Kauai but feral dogs have prevented most breeding attempts. This winter, Podolsky, working with EARTHWATCH assistants, will clear scrub vegetation, display albatross decoys and broadcast the sounds of courting albatross.

ACKNOWLEDGEMENTS

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I also extend my thanks to the Maine Department of Conservation and Bureau of Public Lands for their lease of Eastern Egg Rock to the National Audubon Society and I extend my appreciation to the Maine Department of Inland Fisheries and Wildlife for their continued cooperation.

I am grateful to the Canadian Wildlife Service for permission to place an assistant on Machias Seal Island and thank Carl W. Buchheister, the U.S. Fish and Wildlife Service and staff of the U.S. Coast Guard station on Matinicus Rock for their ongoing cooperation. I also thank the crew of the vessel HURRICANE from the Hurricane Is. Outward Bound School for their assistance with Penobscot Bay logistics. It is also a special pleasure to acknowledge the excellent cooperation received from the Thomas Watkinson family, owners of Wooden Ball Island, for their generous permission to study puffins on their island.

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