

A SYNOPSIS OF THE MASSACHUSETTS AUDUBON SOCIETY'S
TERN WARDEN'S REPORT FOR 1979

(Based on the report by Tern Warden Peter Trull)

During 1979, the Massachusetts Audubon Society's Tern Warden, Peter Trull, regularly visited twelve tern colonies (see table). Only three of these colonies enjoyed good reproductive success. These were the Least Tern colonies in Duxbury, Nauset, and West Dennis. Trull speculates that these colonies were successful because there was no significant predation, no storm-related damage, and minimal human disturbance at the three sites. Furthermore, the Bass River at West Dennis and Nauset Inlet were good sources of food for the birds.

The nine unsuccessful tern colonies were the victims of predation and human disturbance. The New Island (Eastham) and Gray's Beach (Yarmouthport) colonies were constantly disturbed by Great Horned Owl attacks, the effects of which are manifold. Not only do owls take adult terns and chicks, but also many young chicks die of exposure as well. When an owl attacks a colony, the adults usually take wing to protect themselves, abandoning their nests. If the attack occurs on a cool or wet night, the temporarily abandoned chicks may die of exposure if they are not taken by the owl. Renesting took place throughout the season, with an average incubation period of 29 days.

The Plymouth Beach tern colony also suffered Great Horned Owl predation. However, there is evidence that the terns' incubation period was normal, indicating that many adults did not desert the nests at night. Trull believes that starvation may have been responsible for the poor productivity here. In mid-July, hundreds of Blue-backed Herring (Alosa aestivalis), including one pile of 43 which were four to five inches long, and Butterfish (Poronotus tricanthus) were found scattered throughout the colony. These fish were clearly too big for young or nearly fledged chicks to swallow. When Trull found ten dead chicks within a short distance of each other, he concluded they must have starved to death.

At Scortons Beach (Sandwich) and Hardings Beach (Chatham), Striped Skunk (Mephistis mephistis) took many nesting Least Terns. Skunk tracks, frequently leading from nest to nest, were found regularly in both colonies. The Least Terns at Scortons Creek deserted by June 18; the 60 nesting pairs at Hardings Beach produced only two fledglings.

The Common Tern colony at West Dennis, which lies separate from the Least Tern colony there, suffered from Norway Rat (Rattus norvegicus) predation, as did the Long Beach (Centerville) colony. At both sites Trull found that eggs had been rolled from the nests, nests with eggs had been deserted, and freshly laid eggs had been removed from the nest. At West Dennis, where the Common Terns have had no breeding success for four consecutive years, partially eaten eggs, chicks, and adult terns were found under pieces of plywood.

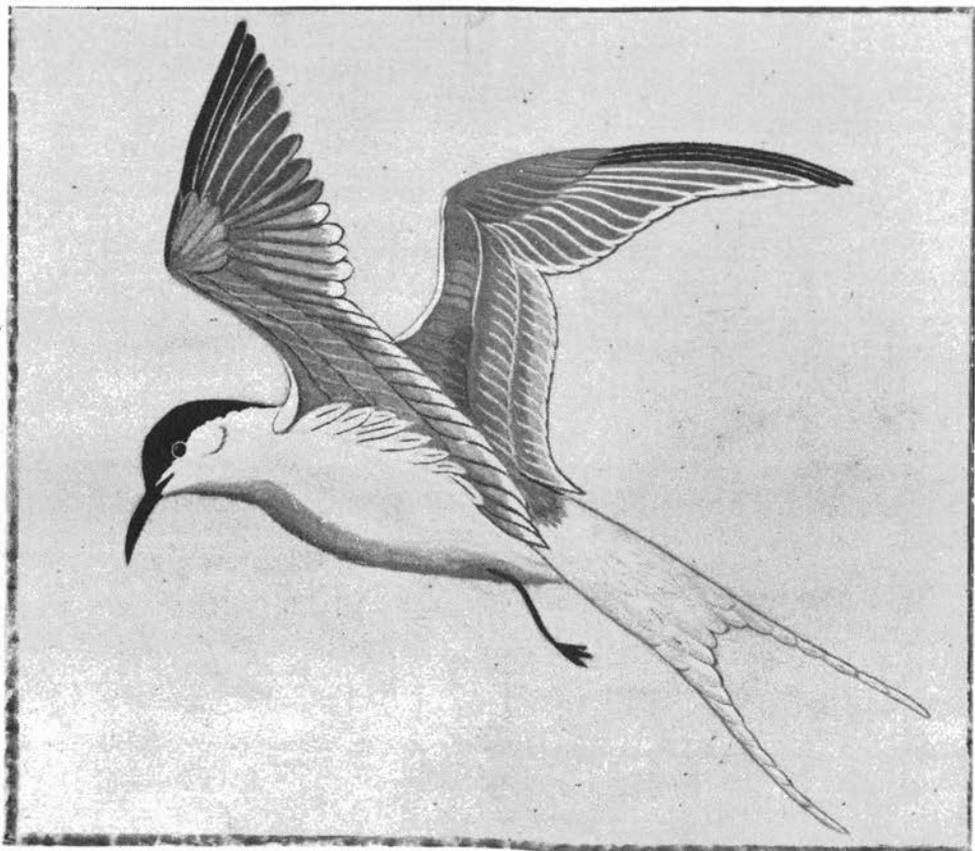
The Kalmus Park (Hyannis) Least Tern colony was disturbed constantly by beachgoers and vandals, in spite of which the terns enjoyed fair nesting success. Fortunately, unless nests and chicks are literally stepped on or driven over, Least Terns often calm down quickly, settling back onto their nests soon after the intruders have passed.

TERN CENSUS AND PRODUCTION RESULTS - 1979
(in pairs)

<u>COLONY</u>	<u>COMMON</u>	<u>LEAST</u>	<u>ROSEATE</u>	<u>ARCTIC</u>	<u>PRODUCTION</u>	<u>REMARKS</u>
Duxbury Beach		185		1	Approx. 1.4 c/pr; good	Leasts--synchronized nesting; Arctics--deserted.
Plymouth Beach	385	15	3	8	Leasts-good; C,R,A-fair	C,R,A--Great Horned Owl predation.
North Sandwich	25	25			Leasts-fair; Common-none	Possible Red-Fox predation; one Great Horned Owl kill found.
Scortons Creek, Sandwich		5			None	Deserted by 6/18.
Grays Beach, Yarmouthport	715		15		.75 c/pr.; fair	Great Horned Owl predation, night desertion; 29-day incubation.
New Island, Eastham	400		10		.25 c/pr.; poor	Great Horned Owl predation, night desertion; 29-day incubation; much re nesting.
Nauset, Orleans	6	230		9	All good	No disruption; good food source.
Hardings Beach, Chatham		60			Poor	Skunk predation.
West Dennis Beach	90	56			Leasts--good; Commons--poor	Rat predation in Common Tern colony.
Kalmus Park (Lewis Bay), Hyannis		70			Lots of disturb- ance; Leasts-fair.	Human disturbance, vandalism, broken signs.
Long Beach, Centerville	35	40			Leasts--poor; Commons--none	Rats,
South Cape Beach Mashpee		70			Fair	Synchronized nesting until 7/19, then fox predation.

The South Cape Beach Least Tern colony (Mashpee), which had been abandoned following Red Fox (*Vulpes fulva*) predation in 1977 and 1978, enjoyed fair nesting success in 1979. On July 12, 49 fledglings were tallied. However, a fox did make an appearance after this date, causing terns to abandon the area once again. By July 27, no Least Terns remained at the site.

The complete fifteen-page report by Peter Trull contains extensive details on each tern colony. For more information, direct inquiries to Natural History Services, Massachusetts Audubon Society, Lincoln, MA 01773.



Tern painting by Maggie Taylor, Weston, Mass.