

AN INVENTORY OF THE BREEDING BIRDS OF MONOMOY  
NATIONAL WILDLIFE REFUGE, CHATHAM, MASSACHUSETTS, 1983

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As part of a cooperative ecological research project between the Massachusetts Audubon Society (MAS) Environmental Science Department and the United States Fish and Wildlife Service, we inventoried the breeding birds of the Monomoy National Wildlife Refuge (Monomoy NWR), situated 41°38'N, 69°58'W. An earlier breeding bird survey was conducted in 1974 by the U.S. Fish and Wildlife Service, but many changes have occurred on Monomoy NWR since then. The following paragraphs describe the methods used and the results obtained in 1983.

Due to time, logistical and weather constraints, no formal census methods for evaluating populations were possible. We recorded evidence of nesting (e.g., paired birds, mating calls, nests, eggs, chicks, and fledglings) and tallied nests where possible. Species were given a status of abundant, common, or uncommon based upon sighting frequencies, and numbers of breeding bird pairs or potential breeding pairs were ascertained for some species. Species for which nesting evidence was apparent but no nests were found were designated as probable nesters.

The refuge was divided into three major geographical areas.

1. Morris Island: approximately fifty acres (twenty hectares) of sand dunes, vegetated primarily with Beach Grass (Ammophila breviligulata); salt marsh, primarily cord grasses (Spartina patens and S. alterniflora); and mixed Scrub Oak (Quercus illicifolia) and Pitch Pine (Pinus rigida).

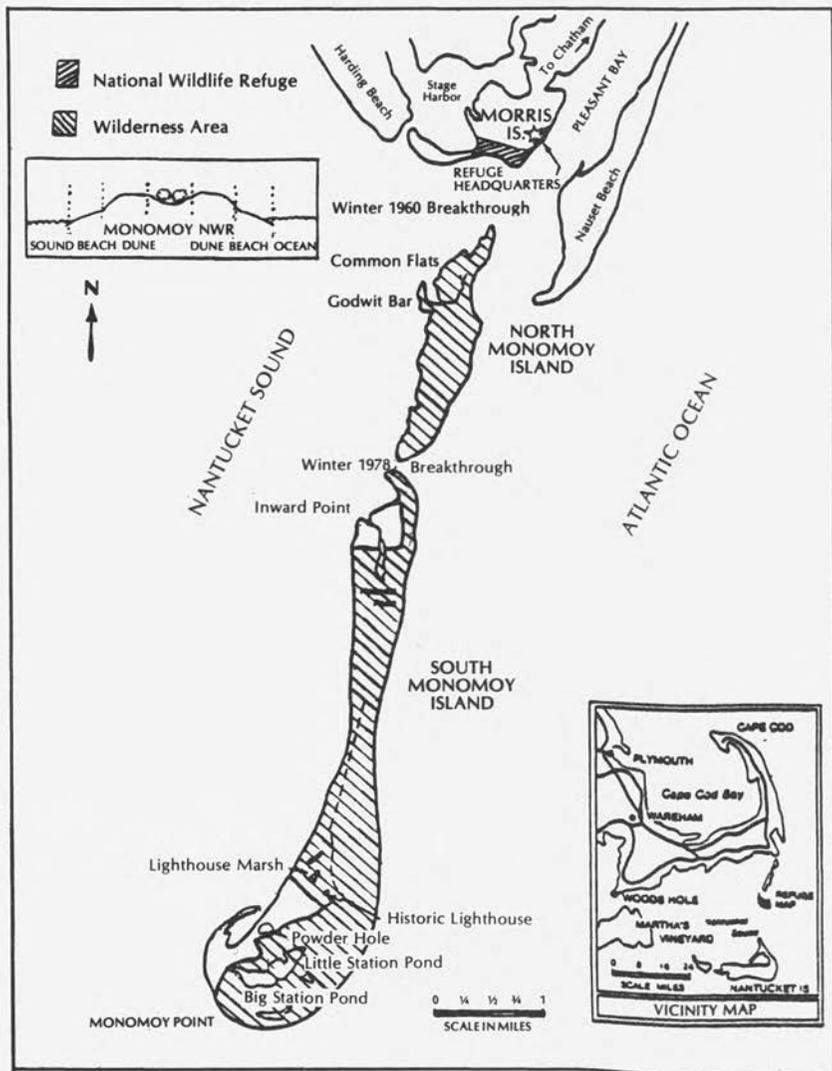
2. North Monomoy Island: approximately 550 acres (220 hectares) of salt marsh characterized by Cord Grass, Black Rush (Juncus gerardi), Salt Grass (Distichlis spicata), and sand dunes, primarily Beach Grass.

3. South Monomoy Island: Approximately 2100 acres (840 hectares), two-thirds of which are sand dunes dominated by Beach Grass and one-third (at the southern end) of which is a mixture of freshwater wetlands dominated by Narrow-leaved Cattails (Typha angustifolia), rushes (Juncus spp.), and Sedges (Carex spp.). Extensive thickets of Bayberry (Myrica pennsylvanica) and, to a lesser extent, Pussy Willow (Salix discolor), Beach Plum (Prunus maritima), and Poison Ivy (Rhus radicans) surround the ponds. Salt Spray Rose (Rosa rugosa) is also widely distributed over the island.

The latter two islands include approximately 2650 acres (1060 hectares) of barrier beach, which is the most significant type of habitat conserved by Monomoy NWR. As encroachment into surrounding areas continues and habitat is lost to development on Cape Cod and the islands, Monomoy NWR and other

isolated areas may be the only places of retreat for many breeding bird species. Annual inventories or censuses are an important way of documenting increases or decreases in bird populations on such areas. The following inventory constitutes what will be the first of many annual sampling efforts on Monomoy NWR and adjacent areas.

Acknowledgments. We wish to thank Wallace Bailey, former director of the Wellfleet Sanctuary of MAS for assistance with the inventory, Blair Nikula for the many hours he volunteered in the field and for review of the final script, John Fitch and Dick Forster for review of the final draft, and Wayne Petersen for "kidick, kidick, and kerwee."



	<i>Morris Island</i>	<i>North Monomoy</i>	<i>South Monomoy</i>	<i># Nests</i>		<i>Young Observed</i>	<i>Status</i>	<i>Probable Breeding</i>	<i>Comments</i>
				<i>North</i>	<i>South</i>				
Pied-billed Grebe <u>Podilymbus podiceps</u>			X			X	U		one pair
Snowy Egret <u>Egretta thula</u>			X		82	X	A		
Black-crowned Night-Heron <u>Nycticorax nycticorax</u>			X		40	X	A		
Canada Goose <u>Branta canadensis</u>		X	X	7	5	X	C		
Green-winged Teal <u>Anas crecca</u>			X		14	X	A		
American Black Duck <u>Anas rubripes</u>		X	X	2	7	X	A		most abundant waterfowl
Mallard <u>Anas platyrhynchos</u>		X	X	1	5		U		
Northern Pintail <u>Anas acuta</u>			X		2	X	U		
Blue-winged Teal <u>Anas discors</u>			X			X	U		four to five pairs
Northern Shoveler <u>Anas clypeata</u>			X			X	U		three pairs
Gadwall <u>Anas strepera</u>			X		2		C		
American Wigeon <u>Anas americana</u>			X				U	X	
Red-breasted Merganser <u>Merqus serrator</u>			X			X	U		one pair with young
Ruddy Duck <u>Oxyura jamaicensis</u>			X			X	C		at least ten males all summer
Northern Harrier * <u>Circus cyaneus</u>			X				U	?	fledglings seen but no nest or evidence of nesting could be found
Northern Bobwhite <u>Colinus virginianus</u>	X						C	X	
Virginia Rail <u>Rallus limicola</u>			X				U	X	calling during breeding season
Sora <u>Porzana carolina</u>			X				U	X	at least two calling during breeding season
Piping Plover * <u>Charadrius melodus</u>		X	X	1	1	X	U		three other territories but no nests found
American Oystercatcher <u>Haematopus palliatus</u>		X	X	7	2	X	A		numbers probably conservative; at least seven fledglings on N. Island
Willet <u>Catoptrophorus semipalmatus</u>		X		13		X	A		each nest contained four eggs

	Morris Island	North Monomoy	South Monomoy	# Nests		Young Observed	Status	Probable Breeding	Comments
				North	South				
Spotted Sandpiper <u>Actitis macularia</u>	X	X					U	X	
Laughing Gull <u>Larus atricilla</u>		X		905		X	A		up 300 pairs from 1982
Herring Gull <u>Larus argentatus</u>		X	X	1072		X			not censused on S. Island
Great Black-backed Gull <u>Larus marinus</u>		X	X	129		X			not censused on S. Island
Common Tern <u>Sterna hirundo</u>		X		1284		X	A		down 200 pairs from 1982
Arctic Tern <u>Sterna paradisaea</u>		X		2			U		both nests washed out
Mourning Dove <u>Zenaida macroura</u>	X						C	X	
Short-eared Owl * <u>Asio flammeus</u>		X	X		1	X	C		total of four territories for both islands with young
Belted Kingfisher <u>Ceryle alcyon</u>	X						U	X	two nest sites occupied by adults
Eastern Kingbird <u>Tyrannus tyrannus</u>	X		X				C	X	
Horned Lark <u>Eremophila alpestris</u>	X	X	X		1	X	A		
Tree Swallow <u>Tachycineta bicolor</u>			X				U	X	
N. Rough-winged Swallow <u>Stelgidopteryx serripennis</u>	X						U	X	
Barn Swallow <u>Hirundo rustica</u>			X		17	X	C		all nests and chicks destroyed by vandals
Blue Jay <u>Cyanocitta cristata</u>	X						C	X	
Black-capped Chickadee <u>Parus atricapillus</u>	X						A	X	
Tufted Titmouse <u>Parus bicolor</u>	X						C	X	
American Robin <u>Turdus migratorius</u>	X		X			X	A		
Gray Catbird <u>Dumetella carolinensis</u>	X		X				C	X	
Northern Mockingbird <u>Mimus polyglottos</u>	X						C	X	
Brown Thrasher <u>Toxostoma rufum</u>	X						U	X	
European Starling <u>Sturnus vulgaris</u>	X		X			X	U		

	Morris Island	North Monomoy	South Monomoy	# Nests		Young Observed	Status	Probable Breeding	Comments
				North	South				
Yellow Warbler <u>Dendroica petechia</u>	X		X				C	X	
Common Yellowthroat <u>Geothlypis trichas</u>	X		X				A	X	
Northern Cardinal <u>Cardinalis cardinalis</u>	X						C	X	
Rufous-sided Towhee <u>Pipilo erythrophthalmus</u>	X						C	X	
Savannah Sparrow <u>Passerculus sandwichensis</u>	X	X	X			X	A		
Sharp-tailed Sparrow <u>Ammodramus caudacutus</u>		X		1		X	C		
Song Sparrow <u>Melospiza melodia</u>	X		X				C	X	
Red-winged Blackbird <u>Agelaius phoeniceus</u>	X	X	X	1			A	X	
Common Grackle <u>Quiscalus quiscula</u>	X		X			X	C		
Brown-headed Cowbird <u>Molothrus ater</u>	X					X	U		
House Finch <u>Carpodacus mexicanus</u>	X						C	X	
American Goldfinch <u>Carduelis tristis</u>	X						C	X	
House Sparrow <u>Passer domesticus</u>	X						C	X	
* Denotes species "Blue Listed" in 1982. ( <u>American Birds</u> , 1982 35:3-10)									
Under the heading STATUS, A = Abundant; C = Common; U = Uncommon.									

DENVER HOLT, a student working toward a graduate degree in Wildlife Biology, did the research reported in this paper while serving as an intern on the Massachusetts Audubon Society's Tern Project. He will return to Monomoy in April to continue studying the food habits and nesting ecology of the Short-eared Owl, another investigation begun under the same auspices, and to collaborate with Blair Nikula on an April-May shorebird population inventory. Denver has also done research on raptors in the West, e.g., studies of the Northern Pygmy-Owl at the University of Montana.

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