

## HABITAT USE AND FORAGING BEHAVIOR OF BIRDS IN BARNEGAT BAY

Common Terns (*Sterna hirundo*), Forster's Tern (*Sterna forsteri*) and Black Skimmer (*Rynchops niger*) nest in salt marshes in coastal New Jersey, and feed in these same marshes and adjacent waters. Point counts and behavioral observations were used to examine habitat use and prey choice in 1995 and 1996. Black Skimmers fed primarily on the edges of bays and within the bay end of creeks, Forster's Terns fed entirely within interior salt marsh creeks and pools, and Common Terns fed in all of these habitats. Thus Common Tern had a more variable habitat use than the other two species. Habitat use was similar for the two years. None of the three species used the narrow mosquito ditches for foraging, and generally they avoided the area with very old mosquito ditching.

Prey brought back to the nest for mates or chicks varied among the species, with Killifish (*Fundulus* spp.) the most common prey for Black Skimmer and Forster's Tern, and Silversides (*Menidia* spp.) being the most common for Common Tern. Prey use varied during the reproductive season for the tern species: the most frequent prey species was not the same during courtship, small chick, and large chick phase. Further, the most frequent prey of Common Tern varied in different parts of Barnegat Bay. Within a given prey type the terns selected different sized fish of the same species for different purposes: large fish were brought to females, small fish were brought to small chicks, and large fish were brought to larger chicks. Their choice of prey for each reproductive stage reflects choice, and not the availability of fish.

These data have important implications for management and conservation of salt marshes along the east coast. The relatively restrictive foraging habitat of Forster's Tern suggests they may be limited by the availability of small pools for foraging, as well as by suitable nesting colonies sites near their foraging areas. This makes natural, undisturbed salt marsh with small pools particularly critical for protection and acquisition.

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