

Food Habit of Nassau Grouper (*Epinephelus striatus*) Juveniles in Three Habitats in the Bahamas

Progress Report

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Little is known about the life history of Nassau grouper, *Epinephelus striatus*, prior to recruitment into a fishery. Post-larval and early-juvenile groupers have rarely been seen or collected, and their ecology and habitat requirements are largely unknown. We have examined the food habits of juvenile Nassau grouper in planktonic, artificial-reef, and patch-reef habitats, representing three distinct stages in the life history of this species, as part of a study aimed at understanding recruitment processes in the Bahamas.

Collections were made from plankton using a channel net that was fished from the surface in a pass between Exuma Sound and the Bahama Bank. Two types of artificial reefs were constructed in or adjacent to sparse turtle grass, *Thalassia testudinum*, beds in 2 – 4 m of water in the Bahama Bank to attract early juveniles: a monolayer cluster of queen conch, *Strombus gigas*, shells and a pyramid of cinderblocks. Naturally occurring *Monastrea* boulder coral patch reefs, adjacent to turtle grass beds in shallow water in the Bahama Bank, represented the third habitat type.

Specimens were collected between February and April 1989 and ranged in size from 27.0 to 310 mm (TL). Although crustaceans were important in the diet in each habitat, the dominant taxa varied with habitat. Shrimp was the primary prey for planktonic and artificial-reef juveniles, while crab was the dominant prey for patch-reef juveniles. Fish and gastropods were only important in the patch-reef habitat. The mean number of prey per stomach ranged from 1.3 to 2.0, and prey size generally increased with fish size.