

Feeding Habits of Striped Bass during the Spawning Migration in the Roanoke River, North Carolina

By

Jennifer R. Paramore, Roger A. Rulifson, and James W. Kornegay

Abstract: Feeding habits of prespawn and postspawn striped bass, *Morone saxatilis*, were examined by collecting 136 adults by electroshock from the Roanoke River, North Carolina during the spring 1999 spawning migration. Feeding habits were compared to three years of creel survey data conducted on the Roanoke recreational fishery. Results indicated that most (%) females were not actively feeding during the prespawn period, but most (%) postspawn females had consumed prey items just prior to collection. No prespawn or postspawn males provided evidence of feeding. Postspawn females fed primarily on small fish, crayfish, eels, insects and snails. The migrating population appeared to be primarily piscivorous, although the study was not designed to determine opportunistic or selective feeding. Most recreational fishers (45 to 78%) used mainly cut natural bait in the lower portion of the Roanoke River (Zone 2) during the open fishing season (dates), then switched to artificial lures (62 to 95%, except 1999) during the closed fishing season (dates). Upstream on and near the primarily spawning grounds (Zone 1), fishers used a combination of live and cut natural bait with artificial bait, then switched to live natural bait (50 to 54%) during the closed season. Several hypotheses may explain results observed, including a possible depleted riverine food web, a predisposition for prespawn adults to forego foraging prior to spawning, and the readiness of all fish to respond to natural and artificial baits when presented in the immediate vicinity.