

Quarterly Management Summary – August 2014

Identifying and Evaluating the Distribution of Fishes in the Savannah River Estuary

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The second quarterly samples in the Savannah River Estuary with a tide-assisted seine method were collected during August 9-13, 2014. At the time of arrival to each of the sites, water quality conditions were measured. On each sampling occasion, the seines (0.63-cm mesh, 15.2-m in length x 1.8-m in height) were set parallel to the shoreline at slack high tide in 0.5–2.0 m water depth and allowed to fish for about 3.0–6.0 h. Juvenile and adult fishes, crabs, and shrimp were trapped behind the seine as the tide ebbed and water level dropped 1–2 m. The seine was retrieved by detaching the lead and float lines from the polyvinyl chloride posts and pulling the lead line to shore (usually < 0.5 m). The seine was then stretched out on shore or onboard a boat, and fauna were removed by hand. A few larger specimens of common fishes and crabs were identified, measured, and released. All other fishes, shrimp, and crabs were euthanized in alcohol per the University's animal use protocols, preserved in 10% formalin, and returned to the laboratory at the University of Georgia for identification and enumeration. In the laboratory, preserved specimens were identified and enumerated. Data were digitalized and stored on Microsoft EXCEL spreadsheets and then checked for mistakes by project personnel. In August, specimen collection totals were as follows: fishes - 320 individuals from 25 species; crabs - 169 individuals from 4 species; shrimp - 2,127 individuals from 3 species. A voucher specimen was retained for each of new shrimp and crab species collected. The four shrimp that were identified only to the genus level (*Palaemonetes*) in the previous May survey were taken to the experts at the Georgia Department of Natural Resources (Coastal Resources Division) in Brunswick, GA. Those experts agree with our genus identification; however, they too were unable to identify the shrimp to the species level.