Movements of Juvenile Pink Shrimp In the Everglades National Park, Florida

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Abstract

Considerable progress has been made in research on the adult phase of the pink shrimp, *Penaeus duorarum*, which supports the Tortugas fishery, including size distribution with depth, growth rates, spawning time and place, mortality rates, migration, and other particulars. Similarly, there has been good progress in our knowledge of the larval and postlarval stages of this species. From the inception of the Tortugas commercial fishery it was assumed that the estuaries at the southern end of the Florida peninsula were the nursery grounds for these

shrimp. This was confirmed by recoveries in the fishery of shrimp tagged and stained in the estuaries. It is thus established that these estuaries, now included in the Everglades National Park, are the principal and perhaps the sole source of shrimp available to the commercial vessels fishing the Tortugas. The juvenile stage of the life history of the pink shrimp which is passed in these estuaries is not well understood. To sample shrimp moving in one of the principal canals leading out to Florida Bay, a large net of small mesh was used in this study. Data on shrimp and other animals caught in this net, which blocks the 60-foot wide canal, are recorded. Simultaneous environmental data are also collected. As was expected, the mean numbers of juvenile shrimp caught on flooding tides are low compared to the mean numbers caught on ebbing tides. There is a good inverse relationship between the tide height and the numbers of shrimp caught in the net. No shrimp were caught during full daylight. Estimates of numbers of shrimp moving seaward from this canal may provide index values which will permit prediction of the numbers of shrimp available subsequently on the fishing grounds.