Fish assemblages in tidal and non-tidal freshwater tributaries of the Indian River Lagoon.

Introduction:
The Indian River Lagoon and associated coastal tidal freshwater rivers and streams are recognized as habitats at risk that support many fish species of particular concern and are in need of assessment, protection, and restoration. Many "Species of Greatest Conservation Need" (SGCN) have been reported from these tidal freshwater habitats including rare tropical peripheral species such as the opossum pipefish (*Microphis brachyurus*), the bigmouth sleeper (*Gobiomorus dormitor*), and the lesser known centropomids (i.e., tarpon snook (*Centropomus pectinatus*), swordspine snook (*C. ensiferus*), smallscale fat snook (*C. parallelus*), and largescale fat snook (*C. mexicanus*). Although fish communities in larger tidal streams have received some attention, there have been no quantitative surveys conducted within the smaller non-tidal freshwater tributaries for comparison, and the importance of these systems to SGCN and peripheral species remains undetermined.

Objectives:
1. To describe the overall composition, abundance, and distribution of fish communities within smaller tidal and non-tidal rivers and streams of the Indian River Lagoon;
2. To determine the relative resource value of these tidal and non-tidal rivers and streams for SGCN and rare peripheral species along Florida's east coast.

Approach:
Sampling will be conducted using a combination of 21.3-m center-bag seines, 61-m center bag seines, and electro-shocking gear. At each sampling location, water quality data consisting of water temperature, salinity, pH, dissolved oxygen, and turbidity will be recorded, and detailed habitat characteristics (water depth, shoreline vegetation, substrate composition) and environmental conditions (weather, wind speed, cloud cover, rainfall) will be documented.

Benefits:
Results from this research will be used to describe the distribution and habitat needs of rare and threatened species, and promote the effective management and conservation of smaller tidal and non-tidal tributaries to SGCN.

Location:
East Florida, Indian River Lagoon: St. Sebastian River, Crane Creek, and Turkey Creek.

Figure 1. Map of the Indian River Lagoon along Florida's central east coast, and detail of the proposed study region (exploded inset)

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