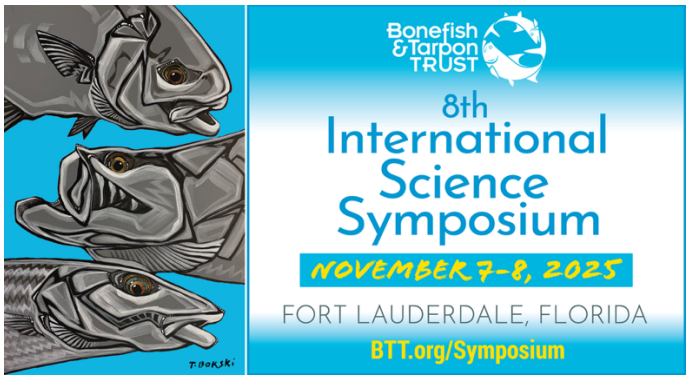


Spatial Dimensions and Conservation Status of Juvenile Permit and Tarpon Habitat in Belize.

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The geography and conservation of juvenile sportfish are poorly known and thus poorly managed or not managed at all. This is problematic because juvenile fish are in their most vulnerable life stage. In Belize, and in many other recreational destinations, anthropogenic impacts, such as development associated with the tourism industry, threaten juvenile habitats. However, conservation measures in Belize focus largely on adult sportfish and their habitats. For example, policy protects bonefish, permit, and tarpon as catch and release species. Juvenile permit inhabit shallow sandy and mixed seagrass beaches. Juvenile tarpon inhabit shallow brackish and saltwater lagoons, creeks, and interior mangrove wetlands. Our study maps juvenile permit and tarpon habitat using a mixed methods approach. First, we conducted interviews with Belizean fishing guides to assess habitat and location identification. Guides in Belize rarely target juvenile sportfish, so we scaled out habitats based on local identification by guides. We also conducted a visual assessment of satellite imagery to identify juvenile permit habitat and juvenile tarpon habitat. We then referenced these habitat patches with Belize's existing Marine Protected Areas (MPAs), development, and dredging maps provided by Belize Coastal Zone Management Authority and Institute. This information will lead to better understanding of the vulnerable juvenile habitats and initiate better protection from current and future threats in Belize as part of the global target known as 30 by 30, meaning 30% land and sea protected by 2030, of which Belize is a signatory nation.

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