

## **NORTHWARD EXPANSION OF COMMON SNOOK IN THE GULF OF MEXICO WITH FUTURE RESEARCH NEEDS**

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Globally, rising temperatures have resulted in numerous examples of poleward shifts in species distribution patterns with accompanying changes in community structure and ecosystem processes. In the Gulf of Mexico, higher mean temperatures and less frequent winter freezes have led to the expansion of tropics-associated marine organisms. Our objectives were to quantify changing environmental conditions and the poleward expansion of the Common Snook *Centropomus undecimalis* into the Cedar Keys area of Florida, USA (29 deg N). The snook is an economically and recreationally important sportfish found from southern Brazil to south Florida. Cedar Key and the Lower Suwannee River is north of the snook's historically documented range, likely due to lethal water temperatures during winter. Using data from a long-term monitoring program, we report an exponential increase in catches of snook in the area since 2007. The spatial and temporal expansion of the species began with adult fish in 2007. By 2018, snook of all sizes were found in the region, strong evidence of local reproduction during 2016–2018. The expansion of the snook's range into the Cedar Keys benefits the angling community there, and this newly established population may warrant attention in fisheries assessments. The locations of nursery habitat and winter thermal refuges (e.g., freshwater springs) need to be identified and have implications for land-use policy and minimum-flow regulations for rivers. The arrival of the snook in the northern Gulf of Mexico could affect food web ecology and habitat interactions among estuarine predators, and future studies should evaluate the snook's food habits and competitive interactions with resident fishes in this expanded range.

**PRESENTER BIO:** Dr. Micheal Allen is a professor in UF's Fisheries and Aquatic Sciences Program and the Director of the UF/IFAS Nature Coast Biological Station. Dr. Allen has authored over 140 peer-reviewed journal articles addressing fish ecology and fisheries management.