Movement studies at University of Florida

Movement is an essential behavior of living organisms—from the wind dispersal of seeds to the multi-basin migrations of bluefin tuna—as such it plays an important role in ecosystems and our ability to develop effective conservation and management. However, for most species we do not yet understand the causes and consequences of movement. Scientists at the University of Florida are conducting research to better understand these processes. Below we highlight just a few of the labs conducting tracking studies at UF but expect to add more in the near future:

The MabLab is led by Mathieu Basille, Assistant Professor in Landscape Ecology. They study spatial ecology inside out, from large-scale patterns using niche analyses to fine-scale mechanisms based on movement ecology. Using a combination of state-of-the-art quantitative frameworks and applied questions, the MabLab investigates the determinants of distribution and home ranges of raccoons, migration and nesting of wood storks, or navigation of seabirds on the open ocean." lab website: https://mablab.org/

Within the Wildlife Ecology and Conservation Department, Dr. Bill Pine tracks Gulf Sturgeon, amongst other species to assess their spatial fidelity and factors affecting their survival, as well as reproductive timing and spawning site selection. He also uses movement data to better understand the habitat use of native fish in large regulated rivers to improve conservation through work with dame operations. Lab website:https://sites.google.com/view/floridariverslab/home?authuser=0

The MERR lab (Movement ecology and reproductive resilience) is led by Sue Lowerre-Barbieri, who has a joint appointment with Fisheries and Aquatic Sciences (FAS/SFRC) and the Fish and Wildlife Research Institute (FWRI). The lab is currently studying movement ecology and reproductive resilience of Red Snapper, Red Grouper, Greater Amberjack, Red Drum, and Gag Grouper. Tracking studies, integrated with other methods, assess how reproductive behavior and source dynamics affect life cycle patterns; year class strength and recruitment; and vulnerability to stressors and fishing. Lab website: http://sfrc.ufl.edu/people/faculty/lowerre-barbieri

The Behringer Lab focuses on marine and disease ecology and is led by Donald Behringer, Associate Professor. Don has a joint appointment in Fisheries and Aquatic Sciences (FAS/SFRC) and the Emerging Pathogens Institute. He uses passive and active acoustic tracking to study movement in decapod crustaceans (e.g., lobsters and crabs), with a focus on understanding how disease affects their movement and the spatial connectivity of host and parasite populations. Lab website: http://behringerlab.com/

The Nature Coast Biological Station (NCBS) is collaborating with FWRI on a project to evaluate habitat use and movements of Common Snook in an expanding range of the Cedar Key region and Lower Suwannee Estuary. Thus far we have tagged snook over three years and have evaluated their movement throughout the region, with the iTAG data exchange allowing collaboration with USGS members who have detected our snook in the Lower Suwannee River. Future proposed work includes: a comparison of Red Drum and snook habitat use, working closely with iTag members. NCBS website: https://ncbs.ifas.ufl.edu/