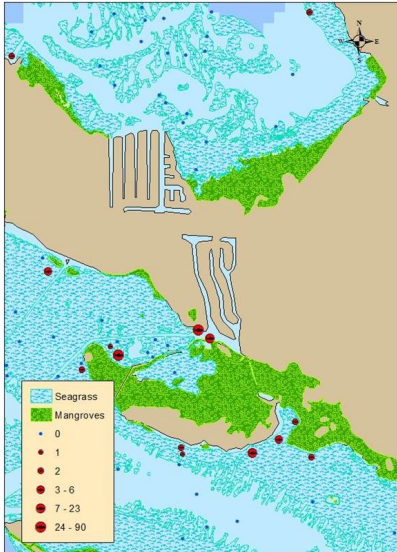


FAS 6932 Spatial Ecology and Modeling Spring 2014

Spatial abundance of Snook in Sarasota Bay



Course focus

This new 2 credit course focuses on the spatial dynamics of fish populations. Using a variety of theoretical concepts, customized tools, models, spatial analysis techniques and real data we examine relationships between fish and their habitat and the implications for population dynamics and fisheries management.

Students

need to be interested in the topic and be happy to contribute to an on-going research area. The course, which combines lectures in-class exercises and written assignments, requires graduate status. Knowledge of R is helpful.

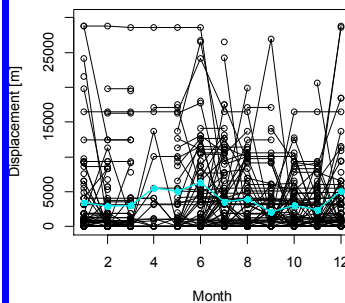
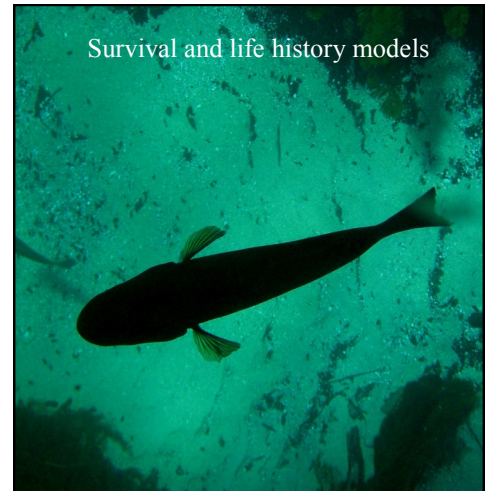
Goals

Upon completion of the course the students will have a working knowledge of concepts to examine spatial dimensions of fisheries. Students will be familiar with ecological models that lead to spatial patterns and will interpret them in the context of fisheries management.

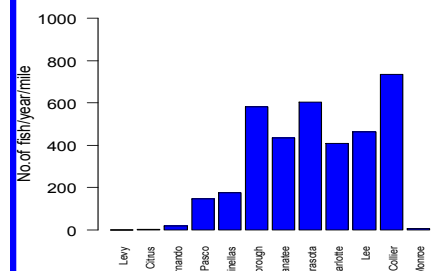
Course topics

1. Overview of spatial population structure in stock assessment
2. Essential R and ArcGIS
3. Visualization and analysis of spatial relationships
4. Habitat in the life cycle of fishes
5. Density-dependent habitat selection
6. Movement and movement models
7. Spatial scaling and local productivity
8. Fish attraction and artificial reefs
9. Spatial resolution of fisheries data
10. Spatial fisheries management approaches.

Survival and life history models



Spatial patterns of catch and effort



Course schedule

Wednesday Periods 3-4
McCarthy B, room 3096

Contact

Dr. Juliane Struve
Assistant research professor
Department of Fisheries and Aquatic Sciences
University of Florida

Reading: The reading material required for this course changes from year to year and will be made available at the beginning of the term. However, we are very fond of MacCall, A.(1990): Dynamic geography of marine fish populations. Washington Sea Grant Program. 153 pages.