

## **Sex and Length of Summer Flounder Discards in the Recreational Fishery, NJ to RI**

### **Project Team:**

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Collaborators: E. Hasbrouck (Cornell)

Advisor: P. Sullivan (Cornell)

Scemfis Representative: E. Bochenek (Scemfis)

**Project Description:** A recent stock assessment review of the summer flounder *Paralichthys dentatus* fishery assessment identified the need to account for sex-specific fishing mortality in the assessment model. However, sex-specific models of population dynamics can be data-intensive and require some knowledge or assumptions about the sex ratio of the population and catch (landings and discards). Sex-specific information for the population is collected annually by the National Marine Fisheries Service's (NMFS-NEFSC) trawl survey. Sex composition of the catch, however, is limited to a two-year set of data collected from landings in the recreational and commercial fishery and *no information* is available on sex composition of discards from either fishery. Preliminary analyses of the available data suggest that sex-at-length of fish landed in the commercial fishery is well described by data from the NMFS-NEFSC survey, yet in the recreational fishery, a significantly higher fraction of landed fish at a given length are female. Thus, it is invalid to apply the sex-at-length key from the NMFS-NEFSC survey, to discarded fish in recreational fishery. The absence of information on the sex composition of recreationally discarded summer flounder remains a key impediment to development of a sex-specific stock assessment model. We propose a field program to collect sex-at-length of recreational fishery discards from New Jersey, New York, and Rhode Island. This information will be incorporated directly into a sex-specific stock assessment model already in development.

**Experimental plan:** We will take samples on board vessels participating in the recreational fisheries through NJ, NY and RI both inshore and coastal once every 1½ weeks from May/June 1 through August 31, 2015 to evaluate the size distribution of discards in the summer flounder recreational fishery, and the size-specific sex ratios. While regulations and closures vary by state, the fishery is typically open coast-wide over this time period, and it is the period during which the majority of the catch is landed. Experienced sampling crews will participate on nine vessel days from each of the following ports: Fortescue NJ, south NJ, north NJ, Long Island Sound, NY and RI (54 trips total). For each trip the captain will be asked to record drift number, GPS coordinates, time, and depth, at the beginning and end of each drift. For each drift, the science crew will record the total length (mm) of all sub-legal summer flounder caught. As many discarded summer flounder over as wide a size spectrum as possible, will be tagged with the tow number and stored in a cooler for later analysis. Each of these fish will be dissected to determine sex.

### **Milestones for the current proposed year:**

1. sampling recreational trips and data assembly,
2. statistical analysis,
3. review of results & meeting with assessment team,
4. data transfer to Pat Sullivan for model development, and
4. review by industry representatives.

**Project Duration:** 1 Year

**Estimated Start Date:** 6/01/15