

NORTHEAST CONSORTIUM
2011 Progress Report

Project Title: Spawning movements and habitat use of winter flounder in the southern GOM.

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Hypothesis: Winter flounder in the Gulf of Maine spawn in coastal and offshore waters rather than in estuaries.

To test this hypothesis, we proposed the following objectives:

1. Acoustically tag 40 pre-spawning adult winter flounder (20 males, 20 females) in our selected study area in February 2009.
2. Track these fish over the next three months to determine their spatial distribution and movements.
3. Sample the adult population of winter flounder in our study site from February to May 2009 to quantify how the reproductive status of these fish changes over time in this offshore area.
4. Determine how the spatial distribution of spawning fish relates to attributes of the spawning habitat.

Major Accomplishments and Milestones:

Since this project is winding to a close, the major goal during this reporting period was disseminating information. Outreach was achieved through scientific presentations at the following meetings:

- Fisheries Roundtable Meeting – Aug. 26, 2010, Portsmouth, NH
- Annual meeting of the American Fisheries Society – Sept. 12-16, 2010, Pittsburgh, PA
- Northeast Consortium PI Meeting – Oct. 21, 2010, Portsmouth, NH
- Flatfish Biology Conference – Dec. 1-2, 2010, Westbrook, CT

Unexpected difficulties and project alterations:

There were no unexpected difficulties or project alterations during this reporting period.

Next steps, tasks for next 6 months:

During the next six months, manuscripts will be completed and submitted for publication.

Impacts of the project to fishermen/fishing community and scientist/science community:

This study contributes to a broader understanding of winter flounder spawning habitat, especially for those populations north of Cape Cod. Given that the long-term viability of marine resources depend on protection of their habitat, and that the Sustainable Fisheries Act requires regional fishery management councils to describe, identify, protect, conserve and enhance essential fish habitats (EFH), studies of winter flounder spawning habitat are necessary. Results of the research will be useful to fisheries managers. For example, there is good evidence that

southern winter flounder populations return to the same spawning area each year (Saila 1961a; Phelan 1992), and this may be true in the GOM as well. In addition, it appears that the northern populations do not undertake long migrations (Howe and Coates 1975). Therefore localized spawning areas, such as those we are identifying, are probably critical to local populations, and the fishery that depends on them. Clearly it is important to study and understand the essential spawning habitat associated with this area. State and federal fisheries managers and regulators will be able to use the data to identify, conserve and enhance the essential habitat for winter flounder.



Elizabeth Fairchild
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