

1. Project title and contract number

Evaluation of closed areas: Cashes Ledge as juvenile cod habitat

Prime Award No. NA05NMF4721057

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2. PI contact information

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4. Major accomplishments and milestones

We continue to make significant progress on all three project goals:

Objective 1: we have been reviewing the historic data of cod on Cashes Ledge collected by Bob Steneck (U. Maine-Orono) in the 1980's and 1990's and will be comparing data caught in 2006 and 2007 to these historical benchmarks.

Objective 2: in June of 2006, Tom Weber (UNH) conducted multibeam sampling from the F/V Seacup captained by Matthew Weber of our field sites around the peaks and sides of Cashes Ledge in order to create detailed habitat maps including the spatial extent of kelp habitat on the ledge. Tom collected half a terabyte of multibeam data. The Gulf of Maine Mapping Initiative sponsored a graduate student of Dr. Craig Brown from the University of Ulster, Chris McGonigle to come to the US and produce predictive habitat maps by analyzing these data. Chris was stationed at GMRI last summer and is in the final stages of completing the first series of analyses and habitat maps. Tom Weber has also created a map of the kelp habitat on the top of Cashes Ledge, which will be compared to the distribution of cod, their growth rates, and their diet.

Objective 3: in order to determine the juvenile cod use of Cashes Ledge, we conducted gillnet, hook-and-line, and video surveys in 2006 and 2007. Gill net sampling was conducted in the summer and fall of 2006 and the spring, summer, and fall of 2007. Hook-and-line and video work were conducted in the summer of 2006 and spring, summer, and fall of 2007. All three methods were successful in measuring cod abundance at Cashes Ledge, and all lab samples (i.e., otolith aging, stomach contents, etc.) from hook and line and gillnet surveys have been processed. Preliminary analyses have been conducted on seasonal trends in cod abundance.

5. Unexpected difficulties and project alterations

In the past year no major difficulties have been incurred. Thus we have not had to alter the project scope. See previous project reports for alterations that were made in the first year of the project of the project.

6. Next steps, tasks for next 6 months

- 1) Complete the habitat maps
- 2) Groundtruth the habitat maps
- 3) Analyze cod data
- 4) Overlay cod abundance, diet, condition data, etc. on habitat maps to assess the role of habitat in cod population dynamics and production
- 5) Compare historic cod abundance data with current levels.

7. Impacts of the project to fishermen/fishing community, and scientist/science community

We anticipate presenting results at both fisher and scientific conferences over the next year.

8. Signature and date

Jonathan Grabowski

July 1, 2008