Essential Fish Habitat project status report

Reporting date: 10/20/2012

Project number: 2008-9

Title: Juvenile Slope Rockfish Habitat Utilization

PIs: Pat Malecha, Andy Gray, Chris Lunsford, Dave Clausen

Funding year: 2008

Funding amount: $93,300

Status: ☐ Complete ☐ Incomplete, on schedule ☒ Incomplete, behind schedule

Planned completion date if incomplete: Habitat preference and predator trials were completed in January, February, and March of 2009. A draft manuscript is currently in preparation.

Reporting: Preliminary results from this research were reported in an oral presentation as part of the HEPR-themed AFSC seminar series. A draft manuscript is currently in preparation.

Results: Surface trawling (up to 60 nautical miles offshore) with an aquarium codend (livebox) successfully captured over 1200 live juvenile rockfish. Live specimens were transferred to the TSMRI wet laboratory with minimal mortalities. A genetic analysis was completed and identified five distinct rockfish species among the captured specimens. The two most abundant species were Pacific ocean perch (POP) and yellowtail rockfish. Great sculpin were acquired near Little Port Walter, transferred to the TSMRI wet laboratory and were used as predators. Suitable observational arrays were obtained and installed in the TSMRI wet laboratory and fish were acclimated to a modified photoperiod. Habitat preference and predation trials were completed in March 2009. POP and yellowtail rockfish preferentially utilized emergent habitats versus gravel during daylight hours but were less associated with these habitats at night. POP utilized coral and cobble equally whereas yellowtail rockfish preferred to utilize coral more than any other habitat. The percentage of rockfish in contact with either the bottom or with an emergent habitat was significantly greater during nighttime observations than daytime. Predation of POP was highest in gravel habitats compared to emergent habitats. Additional research, not part of the original study plan, is continuing utilizing the remaining rockfish populations. Subsamples of known-age POP have been periodically sacrificed and their otoliths have been extracted. These otoliths will be examined by the AFSC Age and Growth Unit to validate current aging methods. Additionally, POP have been used in a Gulf of Alaska Integrated Ecosystem Research Program (GOAIERP) bioenergetic pilot study.