

JIMAR – PFRP ANNUAL REPORT FOR FY 2007

P.I./Sponsor Name: Jeffrey Polovina and Michael Seki

Project Proposal Title: Describing the Vertical Habitat of Bigeye and Albacore Tunas and Post Release Survival for Marlins in the Central Pacific Longline Fisheries with Pop-up Archival Transmitting Tags

Funding Agency: NOAA

NOAA Goal (Check those that apply):

- To protect, restore, and manage the use of coastal and ocean resources through ecosystem-base management
- To understand climate variability and change to enhance society's ability to plan and respond
- To serve society's needs for weather and water information
- To support the nation's commerce with information for safe, efficient, and environmentally sound transportation

1. Purpose of the Project (one paragraph)

To describe the vertical habitat and horizontal movements of bigeye and albacore tunas in the central Pacific. These tunas are target species in longline fisheries in both Hawaii and American Samoa, and an understanding of the habitats and movements of these species is needed as a background to fisheries management.

2. Progress during FY 2006 (One-two paragraphs, including a comparison of the actual accomplishments to the objectives established for the period, and the reasons for slippage if established objectives were not met):

Based on analysis of pop-up tag data we've determined that opah, in the central North Pacific, generally inhabit a 50–400 m depth range and a 8–22°C temperature range. They are frequently found in shallower depths, between 50 and 150 m, during the night, and in greater depths ranging from 100 to 400 m during the day. However, opah are constantly moving vertically within this broad habitat. During the day, they are very likely to spend at least a little time in depths shallower than 175 m; while at night, excursions occurring below 200 m are not uncommon. Their vertical speeds are generally less than 25 cm/s; however, a burst descent in excess of 4 m/s has been recorded.

3. Plans for the next fiscal year (one paragraph):

Project concluded at the end of FY06. However some analyses and manuscript preparation continued through FY07.

4. List of papers published in refereed journals during FY 2007.

Polovina, J. J., D. Hawn, and M. Abecassis. In Press. Vertical movement and habitat of opah (*Lampris guttatus*) in the central North Pacific recorded with po-up archival tags. *Marine Biology*.

Domokos, R., M. P. Seki, J. J. Polovina, D. R, Hawn. In Press. Oceanographic characterization of of the American Samoa albacore habitat and longline fishing grounds. *Fish. Oceanogr*

5. Other papers, technical reports, meeting presentations, etc.

Talks at Tuna Conf, PFRP meetings, Oregon State University.

6. Graduates (Names of students graduating with MS or PhD degrees during FY 2006.

Provide titles of their thesis or dissertation):

7. Awards (List awards given to JIMAR employees or to the project itself during the period):

8. Publication Count (Total count of publications for the reporting period and previous periods categorized by NOAA lead author and Institute (or subgrantee) lead author and whether it was peer-reviewed or non peer-reviewed (not including presentations):

	JL Lead Author			NOAA Lead Author			Other Lead Author		
	FY05	FY06	FY07	FY05	FY06	FY07	FY05	FY06	FY07
Peer-reviewed						2			
Non-peer reviewed									

9. Students and Post-docs (Number of students and post-docs that were associated with NOAA funded research. Please indicate if they received any NOAA funding. For institutes that award subcontracts, please include information from your subgrantees):

10. Personnel:

(i) Number of employees by job title and terminal degree that received more than 50% support from NOAA, including visiting scientists (this information is not required from subgrantees): Oceanographer M.S. – 1 employee

(ii) Number of employees/students that received 100% of their funding from an OAR laboratory and/or are located within that laboratory.

(iii) Number of employees/students that were hired by NOAA during the past year:

11. Images and Captions (JIMAR will be including images in the annual report. Please send two of your best high-resolution, color images (photo, graphic, schematic) as a JPEG or TIFF with a caption for each image. Hardcopies of images can be dropped off at the JIMAR office if no electronic versions are available.



● Caption 1: The deepwater fish Opah (*Lampris guttatus*), one of the species of deepwater fish caught in the Hawaii-based longline fishery and a species we tagged with electronic tags to describe their habitat.

12. For multi-year projects, provide budget for the next year on a separate page. Contact Dodie Lau to confirm whether or not your project is to receive continuation funds (e.g., year 2, year 3), and for budget preparation assistance, lau@hawaii.edu