JIMAR – PFRP ANNUAL REPORT FOR FY 2005

P.I./Sponsor Name: William A. Walsh (JIMAR/PFRP), Keith A. Bigelow (NMFS), and John Sibert (JIMAR/PFRP)

Project Proposal Title: Evaluation of Data Quality for Catches of Several Pelagic Management Unit Species by Hawaii-based Longline Vessels and Exploratory Analyses of Historical Catch Records from Japanese Longline Vessels

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)

This project continues and expands upon two earlier Pelagic Fisheries Research Program project (Distributions, Histories, and Recent Catch Trends with Six Fish Taxa Taken as Incidental Catch by the Hawai'i-based Commercial Longline Fishery, by William A. Walsh and Samuel G. Pooley; Comparisons of Catch Rates for Target and Incidentally Taken Fishes in Widely Separated Areas of the Pacific Ocean, by William A. Walsh and Samuel G. Pooley). In general, the project is intended to provide well-documented and verified data sets for use in multispecies modeling in the context of ecosystem-based management. There are two specific intentions. The first is to conduct data quality control studies akin to those in the previous projects with those pelagic management unit (PMU) species that have not yet been so evaluated. The underlying premise for this task is that catch trends for all species, not only the targets or those taken with regularity as incidental catch, should be considered in relation to ecosystem-based management. The second specific intention is to conduct exploratory analyses of catch data collected in the post-World War II era by Bureau of Commercial Fisheries observers stationed aboard Japanese longline vessels. The reason for including historical work is to provide background information that could prove useful in assessing the effects of industrialized fishing in the Pacific Ocean over a time scale of several decades.

2. Progress during FY 2005 (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):

This project was funded in November 2004, with a scheduled two-year duration. Progress was achieved during FY 2005 on the basis of its continuity with earlier work. Specifically, the logbook data quality control studies with blue marlin, striped marlin, and shortbill spearfish revealed that all of these species are involved in species misidentifications that at times include black marlin or sailfish, which were listed among the species of interest for this project. These patterns of misidentifications, which have greatly inflated the nominal catches of black marlin and sailfish, have occurred despite the fact that they are considered rare (black marlin) or not common (sailfish) in the catch of the Hawaii-based fishery. Because the misidentifications represent a "tangled web," the logbook quality control work for black marlin and sailfish is being conducted along with that for striped marlin and sailfish. Moreover, because these species are rare or not common, the quality control work is being conducted by direct comparisons to auction sales records, rather than by the residuals analyses being used with striped marlin and shortbill spearfish. The considerable upward bias for the black marlin catch is demonstrated by the fact that correction of 0.8% of the longline sets by the Hawaii-based fleet during the study period, all of which were deployed on trips that logged multiple black marlin, resulted in a 34% decrease from the nominal black marlin catch. Similar, though less marked, results are expected with sailfish. The additional logbook data corrections to be based upon residuals analyses with striped marlin and shortbill spearfish are expected to lead to further, substantial reductions in the estimated catches of these species.

3. Plans for the next fiscal year (one paragraph):
The plan for FY 2006 is to complete the evaluation and correction of the logbook catch data for sailfish and black marlin for the 10-year period March 1994-February 2004. The results so obtained will be included in a manuscript for publication in a peer-reviewed journal. The manuscript will be comparative, with additional results for striped marlin and sailfish. Additional logbook quality control work and the exploratory analyses of historical Japanese catch data will follow the billfishes work and manuscript preparation.

4. List of papers published in refereed journals during FY 2005.

None

The FY 2005 progress report for another project ("Distributions, Histories, and Recent Catch Trends with Six Fish Taxa Taken as Incidental Catch by the Hawaii-based Commercial Longline Fishery") lists a peer-reviewed paper in press (Fisheries Research).

5. Other papers, technical reports, meeting presentations, etc.
None

6. Graduates (Names of students graduating with MS or PhD degrees during FY 2005. Provide titles of their thesis or dissertation):
None

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		
	FY03	FY04	FY05	FY03	FY04	FY05	FY03	FY04	FY05
Peer-reviewed	0	0	0						
Non-peer reviewed									

The FY 2005 progress report for another project ("Distributions, Histories, and Recent Catch Trends with Six Fish Taxa Taken as Incidental Catch by the Hawaii-based Commercial Longline Fishery") lists a non-peer reviewed paper presented to the Interim Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC), 26 January-4 February, 2004, Honolulu, Hawaii, USA.

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):
None

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):

This grant provided salary support for William A. Walsh (PFRP, Assistant Researcher, c/o Pacific Islands Fisheries Science Center).

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

None

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

None

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 of TIFF with a caption for each image. Hardcopies of images can be dropped off at the JIMAR office if no electronic versions are available.

Not applicable