

**JIMAR/PFRP ANNUAL PROGRESS REPORT
FY 2004**

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Samuel G. Pooley has not been actively involved in this project since assuming the directorship of the NMFS Honolulu Laboratory and subsequently the post of NOAA Fisheries Acting Regional Director.

Project Title: Distributions, Histories, and Recent Catch Trends with Six Fish Taxa Taken as Incidental Catch by the Hawaii-based Commercial Longline Fishery

Funding Agency: NOAA/JIMAR

Project Purpose and Results:

This project was designed to provide corrected catch rates for blue shark, blue marlin, mahimahi, wahoo, opah, and pomfrets taken by the Hawaii-based longline fishery. It has entailed development of statistical models from observer data with subsequent application to the logbook data from unobserved sets as comparison standards. This project is also contributing to improved linkage of data gathered by the NMFS Observer Program, the logbook program, and auction data from the United Fishing Agency, Ltd., Honolulu, Hawaii.

Progress during FY 2004:

Recent activities under this project have focused on producing deliverables. A paper that presents corrected catch rates for blue marlin in the Hawaii-based longline fishery from March 1994 through June 2002 has been completed and is in internal review at the Pacific Islands Fisheries Science Center.

No specific new problems have been encountered in FY 2004. The usual difficulty is that I (Walsh) tend to underestimate the time required to do the logbook checks against model predictions and auction data. These tasks lengthened the duration of the blue marlin analysis, which required checking and correction of the catches on individual sets from approximately 500 fishing trips since 1994.

The marlins project has contributed to improve linkage between observer, logbook, and auction data, in the sense that the work was conducted as an integrated analysis predicated upon use of the fishery observer data to develop a statistical model, application of its coefficients to logbook data as a comparison standard, and use of sales data to verify analytical results. At present, however, an error reporting and documentation system analogous to that developed for the observer data at the Pacific Islands Regional Office has not been “genericized” for use with the logbooks. As such, this integrated analysis can probably be described as conceptually sound, but its implementation was neither particularly “user friendly” nor efficient.

The corrected blue marlin logbook catch data generated by these analyses have been incorporated into the ORACLE database at the Pacific Islands Fisheries Science Center. Interested parties can contact William A. Walsh (William.Walsh@noaa.gov; (808)-983-5346) or Brent Miyamoto (Brent.Miyamoto@noaa.gov; (808)-983-5340) regarding the corrected data and means of access. Although a convenient logbook error reporting and documentation system is not yet available, this nonetheless represents progress in data quality control and management because the blue marlin data have been characterized by very serious problems with logbook accuracy. The preliminary work that generated the actual corrections has also been archived in the ONAGA data base at the Pacific Islands Fisheries Science Center, so that interested parties can examine, and if necessary reproduce, the corrected data set. William A. Walsh (William.Walsh@noaa.gov; (808)-983-5346) or Russell Price (Russell.Price@noaa.gov; (808)-983-5312) can provide details.

Work conducted under this and the related, preceding project has been recognized and incorporated into agency-level planning at NOAA Fisheries. "Evaluating Bycatch: A National Approach to Standardized Bycatch Monitoring Programs", published by the NMFS in June 2003, cited Walsh (2000) ("Comparisons of fish catches reported by fishery observers and in logbooks of Hawaii-based longline vessels"; Southwest Fisheries Science Center Administrative Report H-00-07) and Walsh et al. (2002) ("Comparison of logbook reports of incidental blue shark catch rates by Hawaii-based longline vessels to fishery observer data by application of a generalized additive model"; Fisheries Research 58:79-94) in relation to the accuracy of both observer and logbook data and the characterization of forms of bias. This was noteworthy because, although the report is lengthy (70 pages), its citations only include 34 listings, so the aforementioned work can legitimately be considered a substantive contribution to the current, relevant knowledge.

Plans for FY 2005:

The intention is to continue to provide completed reports with corrected catch histories. Also, the data linkage and quality control efforts will be ongoing activities.

Journal Papers Published in FY 2004:

None

Paper Withdrawn from Submission in FY 2004:

"Integrated use of observers and logbook data sets to enhance fisheries monitoring", by William A. Walsh.

This paper was submitted to the North American Journal of Fisheries Management in April 2003. Reviews were mixed; while both stated that the subject was important, one recommended publication with only minor revision whereas the second recommended major revisions. The crux of the second review was that the paper would be improved by considering the problem of logbook accuracy from a comparative perspective; i.e., by using similar methods with dissimilar species, it might clarify the breadth of their applicability to logbook data. Upon consideration, most of these points seemed correct. For this reason, the review was kept and will be used in preparing additional reports.

Meeting Presentations in FY 2004:

Presentation to the 4th Meeting of the Interim Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC), 26 January-4 February, 2004, Honolulu, Hawaii, USA. Working Paper 3: “Analysis of blue marlin (*Makaira nigricans*) catch rates in the Hawaii-based longline fishery with a generalized additive model and commercial sales data.”

Poster presentation for the JIMAR Progress Review, March 4-5, 2004. “Analysis of Blue Marlin (*Makaira nigricans*) Catch Rates in the Hawaii-based Longline Fishery with a Generalized Additive Model and Commercial Sales Data”, by William A. Walsh.

Academic Advisory Responsibilities and Activities:

None

Budgetary Requests:

This project has completed its scheduled duration. No additional funds are requested.