

**FISHERIES DISASTER RELIEF PROGRAM (FDRP)  
ANNUAL REPORT FOR FY 2007**

P.I. Name: Frank Parrish

P.I. Address: Pacific Islands Fisheries Science Center  
2570 Dole Street  
Honolulu Hawaii, 96822

FDRP Project Title and Project No.:

Detecting movements of juvenile opakapaka (*Pristipomoides filamentosus*) using hydro-acoustic surveys validated with sonic tracking. Project number 657788

Funding Agency: NOAA

1. Purpose of the Project (one paragraph)

This study evaluates the feasibility of standardized fixed hydro-acoustic transects to monitor and detect changes in assemblages of juvenile opakapaka (*Pristipomoides filamentosus*) of time. Juvenile paka are known to recruit to, reside, and migrate out of a small area outside of Kaneohe Bay known as the “nursery grounds.” These fish are being surveyed using 38, 120 and 200 Khz frequency echo sounders. This particular study is focused on detecting change associated with ontogenic movements particularly annual migration off the grounds to adult habitat. The funds for this work are to support a tagging and tracking component of the study where 40+ juvenile paka are tagged with transmitters and released on the nursery grounds and are monitored for a 3 month period with a receiver array. The array not only covers the nursery grounds but also extends to adjacent deeper adult grounds where the fish are expected to migrate to. Weekly hydroacoustic surveys of the grounds are to be conducted before the introduction of tagged fish and then continue after the fish are released.

2. Progress during FY 2007 (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):

The project’s timeline has shifted back a month. The standardized hydro-acoustic surveys have been conducted on the nursery grounds as planned over the last couple weeks. All of the sonic tags, receiver stations, and acoustics releases have been purchased and delivered. Poor availability of fish has delayed the project some. The original proposal planned to release a combination of wild paka and cultured juvenile paka raised at HIMB. Unfortunately this years run of culture paka failed leaving us without cultured fish. Some of these fish were to be tagged. Since they were unavailable the funds budgeted for those tags were used to purchase higher quality acoustic release systems. An important decision since the acoustic releases models

used in the pilot project failed. We are still moving ahead with our plans for the tagging study on the wild fish. Wild paka have been collected under a DLNR permit and are currently at HIMB in a holding pen for acclimation and transmitter implantation.

The acoustic receiver array will be deployed in and adjacent to the nursery grounds in early July and the tagged fish will be deployed. The hydro-acoustic surveys will continue for weeks following the fish deployment. The recovery of the listening array is still scheduled for fall October/November.

3. Plans for project completion:

Data collection should be completed by December 2007 and assuming the receivers are successfully recovered and download analysis will be conducted in spring 2008 and the project completed before the summer FY08 FDRP deadline.

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

NA

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

NA