

# JIMAR, PFRP ANNUAL PROGRESS REPORT FY 2004

**P.I. 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:** PFRP

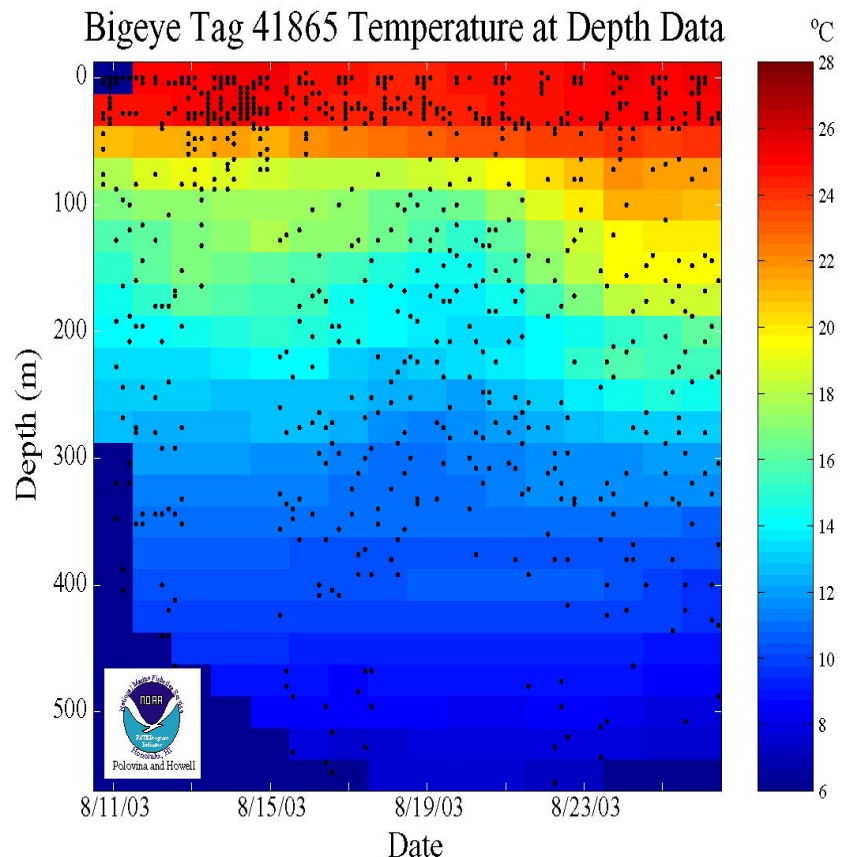
## 1. Purpose of the project and indicative results.

To describe the vertical habitat and horizontal movements of bigeye and albacore tunas in the central Pacific.

## 2. Progress during FY 2004. Provide a thorough discussion of accomplishments and problems.

In August 2003, 7 popup archival transmitting (PAT) tags were deployed on bigeye tunas (*Thunnus obesus*) from a commercial longliner in the northern subtropical gyre, north of Hawaii, and in March 2004, 6 albacore (*T. alalunga*) and 3 bigeye tuna were instrumented with PAT tags in the South Pacific near American Samoa; also from a commercial longliner. The work in American Samoa was done in conjunction with an oceanographic survey of the longline fishing grounds by the NOAA vessel *Oscar Sette* as part of another PFRP project that data that complements our tagging work by providing oceanographic data, especially regarding acoustic

backscatter, to compare with our tag-derived data. Comparisons of bigeye tuna habitat from tags deployed in both Hawaii and American Samoa will provide insights on how these tunas use different habitats. The figure above shows the temperature depth habitat



used by a bigeye tuna during an 18-day period. The dots indicate the depth of the fish where temperature was collected. The fish was encountered near 30°N latitude, occupied very shallow depths as well as depths below 500 m, and moved between habitats with different vertical temperature-depth structure. One problem encountered was high mortality on albacore tagged and released in American Samoa.

**3. Plans for the next fiscal year.**

To continue tag deployment around Hawaii and American Samoa in FY05. Consider tag deployment in American Samoa during a period with cooler water temperatures to try to reduce tag and release mortality.

**4. Papers, technical reports, meeting presentations, etc.**

Presentation at PFRP Meeting December 2003

**5. For multi-year projects, provide budget for the next year on a separate page.**