

LARGE PELAGICS RESEARCH CENTER
SEMI-ANNUAL PROGRESS REPORT – DEADLINE 05/30/2008



Report: #1

Reporting Period: 11/01/2007 – 05/30/2008

Project Title: Towards Long Term Tracking of Billfish

Principal Investigator(s): Kim Holland and David Itano

1. Purpose of the Project: To design and test new methods of attaching electronic tags (especially satellite tags) to pelagic fishes with the goal of extending the longevity of attachment of those types of tag. Sub-adult striped marlin were chosen as the best species to test these new types of attachment.

2. Progress during the last six months: Significant improvements were made to the design of the tag anchor but the normal striped marlin “run” failed to materialize resulting in too few deployments to allow sufficient testing of the new design.

Stress testing revealed that pre-drilled holes in the anchor shaft were a source of weakness and possible failure of the attachment system. Accordingly, stainless steel press-on lock washers were used to attach the tag leader to the anchor. These washers can be applied quickly and allow the anchor system to attach satellite tags to fish of different sizes.

The ‘normal’ winter run of sub-adult striped marlin failed to occur (the ‘absence’ of the run is documented in State of Hawaii recreational fishing data). Only three striped marlin were captured despite 28 days of fishing/tagging effort between November 2007 and April 2008. However, the new press-on washer system worked well on the three marlin that were tagged and released. The duration of attachment varied but the data are too few to draw conclusions about the effectiveness of the system.

3. Preliminary Data: Over the course of the project, seven striped marlin have been successfully been captured and released using the articulated cradle system and the new tag anchor design. The three marlin tagged during this reporting period retained their tags for 6, 30 and 76 days. The data transmitted from these tags are currently being analyzed. The very low number of fish released does not allow reasonable evaluation of the attachment system. More tagging is planned on a ‘no cast’ basis. By request, tagging kits using the new system have been distributed to two other research groups.

4. Difficulties: The almost complete absence of the “normal” winter season run of striped marlin precluded rigorous evaluation of the latest iteration of the anchor system.

5. Plans for the next six months to year: Tagging will recommence during the winter 2008/2009 season on a 'no cost extension' basis.

6. Dissemination

Publications:

Workshops: MADE (Mitigating ADverse Ecological impacts of open ocean fisheries) Kick-off Meeting - Genova (Italy) - 12-14 May 2008. (presentation of tagging techniques)

Conferences:

Manuals, Protocols:

Outreach Activities:

Patent, Copyright, Invention Disclosure Activity:

7. Collaborators and Personnel: Dr. Laurent Dagorn, IRD Montpellier, France.

8. Students: (list students receiving funding, degree type, anticipated graduation date, thesis or dissertation title)

8. Images and Captions:



Figure 1: (filename) Credit: Holland

Caption 1: Modified attachment method using press-on stainless steel washers



Figure 2: (filename) Credit:Holland

Caption 2: satellite tag attached to striped marlin using new press-on washer system.