# SEAMAP 2012 Late Summer King Mackerel / Red Drum Ichthyoplankton Survey Cruise Report

Alabama Marine Resources Division
P.O. Box 189
Dauphin Island, Al. 36528

## Introduction

The SEAMAP Fall King Mackerel / Red Drum Ichthyoplankton Survey is conducted to provide fishery-independent monitoring assessment and shrimp abundance and location information essential to management of Alabama and near shore FMZ Gulf of Mexico fisheries resources in a coordinated and cost-efficient program. Fishery-independent information is that collected without direct reliance on statistics reported by commercial or recreational fishermen.

## Objectives

1. Conduct a late summer ichthyoplankton survey to collect information on king mackerel and red drum larval abundance and distribution with standard SEAMAP neuston and bongo nets.
2. Collect information on environmental parameters (salinity, temperature, dissolved oxygen, wind speed and direction) in conjunction with sampling.
3. Code all data according to approved NMFS SEAMAP Operations Manual guidelines.
4. Submit data to the Gulf States Marine Fisheries Commission Data Manager.

## Methods

The vessel that participated in the Alabama Late Summer Ichthyoplankton Survey was the Alabama Discovery. A bongo net was lowered along the port side of the vessel. A neuston net was lowered along the starboard side. Towing was conducted at or near 2 knots for 10 minutes at the surface for the neuston net. Towing was conducted at or near 2 knots for 3 minutes when possible as the bongo net was lowered to depth and retrieved to the surface. Choppy water conditions and a single speed davit winch required a proactive approach to deployment and retrieval of bongo nets to keep them from digging into the bottom. The majority of the bongo tows were under 3 minutes see Table 1 for fishing times. Bongo tows that exceeded or fell short of acceptable angle of deployment/retrieval were discarded and redone. Tows were redone at Stations 77002 and 77003 due to bad angles. A tow was redone at station 77005 due to twisting of the net around the depressor weight. Sample workup and data processing was conducted in accordance with the NMFS SEAMAP Operations Manual guidelines. At station 77002 the left bongo sample was lost due to spillage. We kept what was left and fixed it in 10% formalin. We made sure that it was clearly marked on sample jars and data sheets that this was an invalid sample. Environmental data were collected in conjunction with each sample. Temperature,

dissolved oxygen, salinity, and turbidity values were measured with a CDT. A sechi disc was also used to determine water clarity.

**Results**

Neuston samples (NN) were colleted at 6 stations and bongos (PN) at 6 stations in gulf statistical zones 10 and 11 on the 4th of September 2012. (Table 1)

**Deviations**

CTD cast were taken between neuston and bongo samples.

**Cruise participants:**

Alabama Marine Resources Division personnel Jason Herrmann, William Tarver, Bret James, and Clay Bennet collected samples. All bongo and neuston samples were preserved in 10 percent formalin solution. No samples were transferred to ethanol per the request of NOAA officials. CTD data was processed by Craig Newton, extracted by Diana Marchant, and submitted by Jason Herrmann.

Submitted By:

*Jason E. Herrmann*

Table 1. AMRD SEAMAP 2012 Late Summer King Mackerel/Red Drum Ichthyoplankton Survey Report Summary.

| | DATE | | | | STAT | | DO | | | SAL | | | TEMP | | | MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| STA# | MM/DD/YY | TIME | LAT | LON | ZONE | GEAR | SUR | MID | MAX | SUR | MID | MAX | SUR | MID | MAX | FISHED |
| 77001 | 09/04/12 | 07:57 | 30 10.92 | 87 59.40 | 10 | PN | 5.1 | 4.9 | 5.0 | 27.8 | 33.9 | 34.1 | 28.6 | 27.8 | 27.6 | 1 min |
| | | 07:13 | 30 10.80 | 87 59.72 | 10 | NN | 5.1 | 4.9 | 5.0 | 27.8 | 33.9 | 34.1 | 28.6 | 27.8 | 27.6 | 10 min |
| 77002 | 09/04/12 | 10:26 | 30 14.10 | 87 29.03 | 10 | PN | 5.3 | 5.6 | 5.2 | 33.4 | 33.6 | 34.5 | 28.1 | 28.1 | 28.2 | 1 min |
| | | 09:48 | 30 14.33 | 87 30.08 | 10 | NN | 5.3 | 5.6 | 5.2 | 33.4 | 33.6 | 34.5 | 28.1 | 28.1 | 28.2 | 10 min |
| 77003 | 09/04/12 | 12:18 | 29 58.05 | 87 29.07 | 10 | PN | 6.0 | 6.4 | 6.2 | 31.4 | 34.0 | 34.3 | 28.6 | 28.5 | 28.3 | 1.5 min |
| | | 11:47 | 29 58.65 | 87 29.80 | 10 | NN | 6.0 | 6.4 | 6.2 | 31.4 | 34.0 | 34.3 | 28.6 | 28.5 | 28.3 | 10 min |
| 77004 | 09/04/12 | 14:47 | 29 59.65 | 87 56.26 | 10 | PN | 5.9 | 5.5 | 5.3 | 27.2 | 33.6 | 34.9 | 28.6 | 27.5 | 27.5 | 1 min |
| | | 14:18 | 29 59.94 | 87 56.62 | 10 | NN | 5.9 | 5.5 | 5.3 | 27.2 | 33.6 | 34.9 | 28.6 | 27.5 | 27.5 | 10 min |
| 77005 | 09/04/12 | 16:33 | 30 08.06 | 88 05.82 | 11 | PN | 6.0 | 5.2 | 5.0 | 29.3 | 32.9 | 33.5 | 28.3 | 27.5 | 27.6 | 1 min |
| | | 15.59 | 30 08.53 | 88 07.09 | 11 | NN | 6.0 | 5.2 | 5.0 | 29.3 | 32.9 | 33.5 | 28.3 | 27.5 | 27.6 | 10 min |
| 77006 | 09/04/12 | 17.50 | 30 16.10 | 87 59.56 | 10 | PN | 5.7 | 5.8 | 6.1 | 22.3 | 22.3 | 22.3 | 28.5 | 28.5 | 28.5 | .75 min |
| | | 17:24 | 30 16.31 | 88 00.05 | 10 | NN | 5.7 | 5.8 | 6.1 | 22.3 | 22.3 | 22.3 | 28.5 | 28.5 | 28.5 | 10 min |

Submitted by: Jason E. Herrmann
Date Submitted: 10/05/12