

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southeast Fisheries Center
Pascagoula Facility
P. O. Drawer 1207
Pascagoula, MS 39567-0112

NOAA Ship OREGON II Cruise 149
11/29-12/18/84

INTRODUCTION

The NOAA Ship OREGON II departed Pascagoula, Miss. on November 29, 1984 to conduct an ichthyoplankton survey in the U. S. Gulf of Mexico, and international waters (25 N. to 29 N. Lat. and 85 W. to 96 W. Long.) (Figure 1). One port call was made December 9 in Pascagoula. The cruise terminated in Pascagoula on December 18.

OBJECTIVES

- 1) Collect plankton samples with bongo and neuston nets for studies of abundance and distribution of commercially and recreationally important fish larvae.
- 2) Collect temperature, salinity, and dissolved oxygen data at the surface, mid-depth, and maximum depth (not to exceed 200 meters).
- 3) Collect insects to detect possible transgulf migrations (U. S. Department of Agriculture through contract with Louisiana State University).

MATERIALS AND METHODS

Plankton samples were taken with standard MARMAP bongo and neuston samplers. The bongo sampler consisted of two conical 61 centimeter nets with a mesh size of 333 microns. Tows were made using an oblique method with towing speed varying between 1.5 and 2.0 knots. Bongo nets were set at a pay-out rate of 50 meters per minute and retrieved at 20 meters per minute. Maximum sampling depth was 200 meters and minimum depth was 75 meters. A torpedo shaped digital flow meter was used to determine the amount of water filtered. Neuston samples were taken with a 947 micron mesh net on a 1 by 2 meter frame. Tows were of 10 minute duration with half the frame submerged. Two neuston samples were taken at each station.

Samples were initially preserved in 10% buffered formalin and after 24 hours were transferred to 70% ethyl alcohol for final preservation.

A CTD was used to record temperature and salinity. To verify the CTD data an XBT was fired and salinity samples were collected at the first

station of each day. Dissolved oxygen measurements were taken with an oxygen meter.

At each station observations of cloud cover, water color, secchi disc, barometric pressure, wave height, and wind speed and direction were recorded.

Insect collections were made using 7 conical nets, 1 black light trap, and 11 sticky traps.

RESULTS

Thirty-six ichthyoplankton stations were sampled throughout the entire cruise. At each station a CTD cast, a bongo, and two neuston samples were completed. Due to inclement weather a bottle cast was completed instead of a CTD cast at three stations. Environmental collections were returned to Pascagoula for interpretation. Collections included: 15 XBT drops, 19 cloud cover observations, 8 secchi disc readings, 9 water color measurements, 31 temperature/salinity profiles (CTD), 42 salinity samples, and 103 dissolved oxygen readings. Plankton samples were returned to Miami for later shipment to the Polish Sorting Center in Szczecin, Poland for sorting and identification. One neuston sample from each station was sent to the Louisiana State University for sorting and identification.


A total of 265 insects were recorded. The majority of these: 215 (81.1%) were caught in nets, 25 (9.4%) by blacklight, 20 (7.5%) on sticky traps, and 5 (1.9%) on deck.

One whale (identification unknown) was sighted on December 9, 1984 at 28°29' N. and 88°29' W. in 970 fathoms.

Cruise Participants

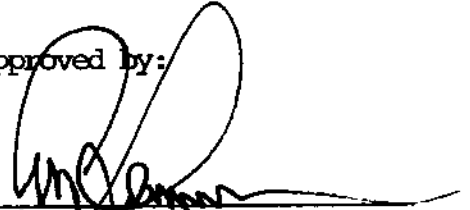
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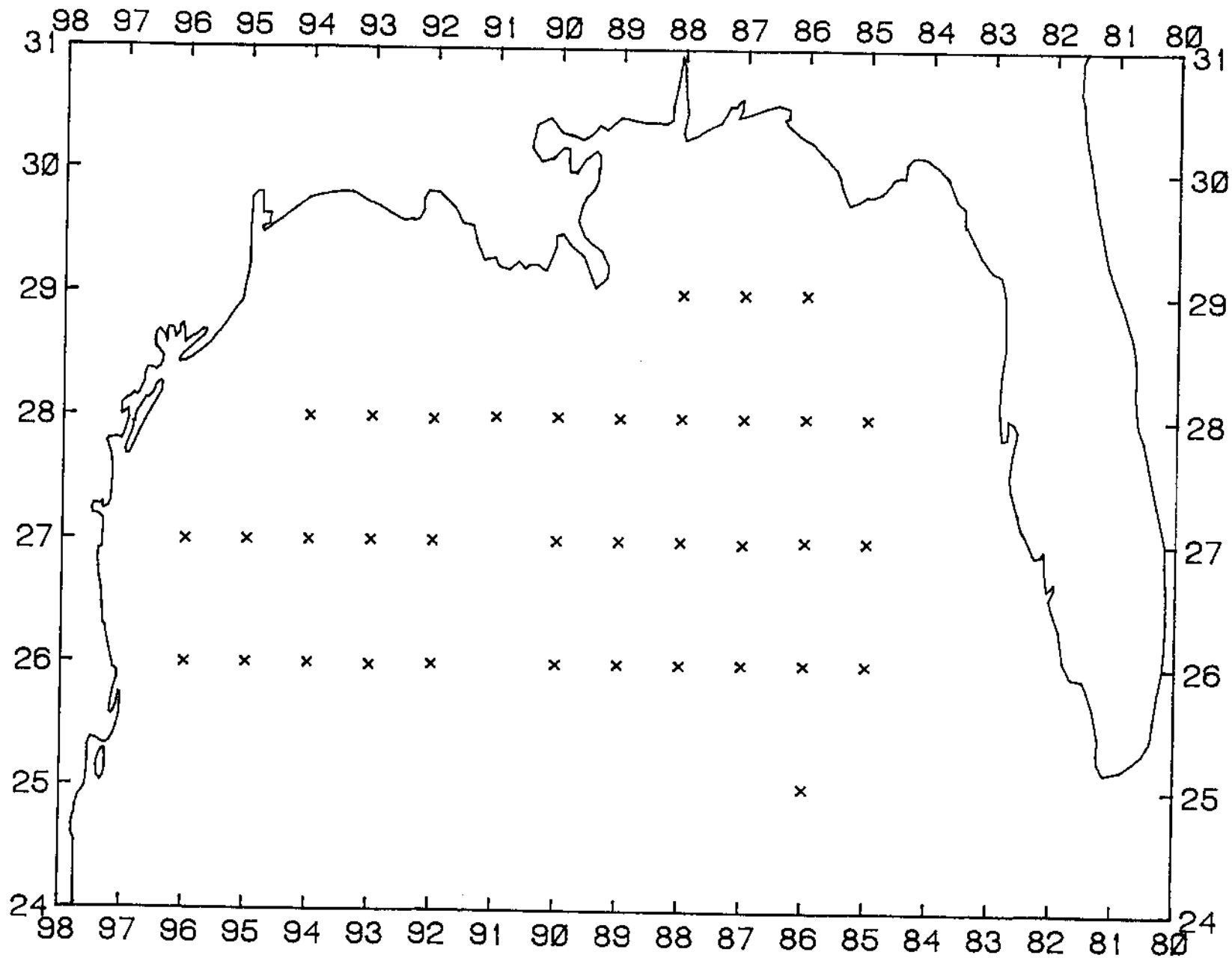


Figure 1. Cruise track for cruise 149.