

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

FRS OREGON II Cruise 126
4/14 - 5/26/82

INTRODUCTION

The FRS OREGON II departed Pascagoula, Miss. April 14, to conduct a 43-day ichthyoplankton survey in the northern Gulf of Mexico. This was the first cruise conducted under the Southeast Area Monitoring and Assessment Program (SEAMAP) in which the survey was coordinated with a similar survey conducted off the Florida west coast by the Florida Department of Natural Resources (FDNR).

The cruise was originally scheduled to be conducted throughout the Gulf of Mexico, but a request for clearance to work in Mexican waters was denied and the study area was restricted to the U. S. fishery conservation zone.

Approximately seven working days were lost due to the following reasons. On April 19 an abandoned lifeboat was sited at 26°33' N and 86°59' W. Since it presented a potential hazard to navigation, the lifeboat was taken aboard the OREGON II and later released to the Coast Guard at the Port Isabel, Texas sea buoy. Additional time was lost due to a severe cold front on April 22, a failure in the OREGON II's air conditioning system, and offloading an ill crewman.

OBJECTIVES

- 1) Collect ichthyoplankton samples for distribution and abundance studies of recreationally and commercially important fishes.
- 2) Collect temperature, salinity and chlorophyll data in the upper 200 m. of the water column to relate to biological samples.
- 3) Conduct comparative ichthyoplankton tows with the RV HERNAN CORTEZ of the Florida Department of Natural Resources and the RV ONJUKU of the Instituto Nacional de Pesca of Mexico.

MATERIALS AND METHODS

Plankton samples were collected with bongo and neuston samplers. The bongo sampler consisted of two 61 centimeter diameter nets of .333 mm. mesh. A time-depth recorder was used to determine depth profiles during each tow, and a flow meter was used to determine the quantity of water filtered. Oblique bongo tows were made at 1.5 knots with a setting rate of 50 m. per minute and a retrieval rate of 20 m. per minute. Towing depth varied with water depth to a maximum of 200 m. Neuston tows, using a 1 x 2 m. net with .947 mm. mesh size, were made simultaneously with bongo tows. Neuston tows were of 10 minutes duration with 1/2 of the frame submerged in the water.

The survey was conducted in two phases (Figures 1 and 2) with one bongo and one neuston tow made at each sample site. At four stations during Phase II a second neuston tow was made to 200 m. for 30 minutes in an attempt to capture transforming organisms (Figure 2).

Water temperature profiles were collected with expendable bathythermographs (XBTs). Chlorophyll and salinity samples were taken at the surface, 100 m. and 200 m. except in depths less than 200 m. where samples were taken at the surface, middle and maximum depths.

RESULTS

One hundred twenty-eight stations were completed including 79 stations during Phase I (4/15-5/5/82) and 49 stations during Phase II (5/6-5/25/82). Plankton samples will be shipped to the Polish Sorting Center in Szczecin, Poland for sorting and identification, therefore, results are not yet available.

Ninety-six XBT's were dropped during both phases (Figures 3 and 4). Sea surface temperatures are presented in Figures 5 and 6. Strip recordings of depth/temperature profiles were returned to Pascagoula for interpretation.

Sixty-six salinity and chlorophyll samples were also taken (Figures 3 and 4). Salinity samples were returned to Pascagoula for determinations with a salinometer and fluorometer strip chart readings were likewise returned to Pascagoula for interpretation. Forty-five chlorophyll filtrations were also made for calibration of fluorometer readings.

Due to mechanical difficulties, the HERNAN CORTEZ was forced to return to port early and the OREGON II was unable to meet them. A rendezvous was made with the ONJUKU on May 25 and ten comparative bongo and neuston tows were conducted at 26°N and 87°W. Catch comparisons will be made subsequent to sorting and identification of samples from the respective vessels.

As time permitted, a bridge watch was maintained during the cruise for sightings of marine mammals and endangered species. Approximately 15-20 saddleback dolphins (Delphinus delphus) were sighted at 27°30'N and 86°53'W. Two whales, species undetermined, were sighted at 26°00'N and 89°05'W.

CRUISE PARTICIPANTS

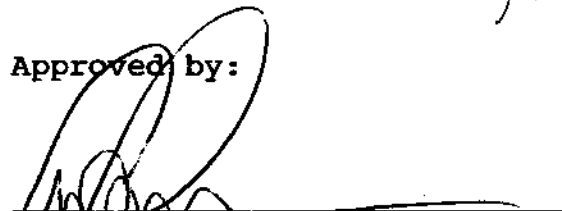
- G. Pellegrin, Jr., Chief Scientist, NMFS, Pascagoula, Miss.
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- D. Harper, Watch Leader, NMFS, Miami, Fla.
- A. Bertolino, Watch Leader, NMFS, Miami, Fla.
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4/15-5/15
5/16-25

Submitted by:

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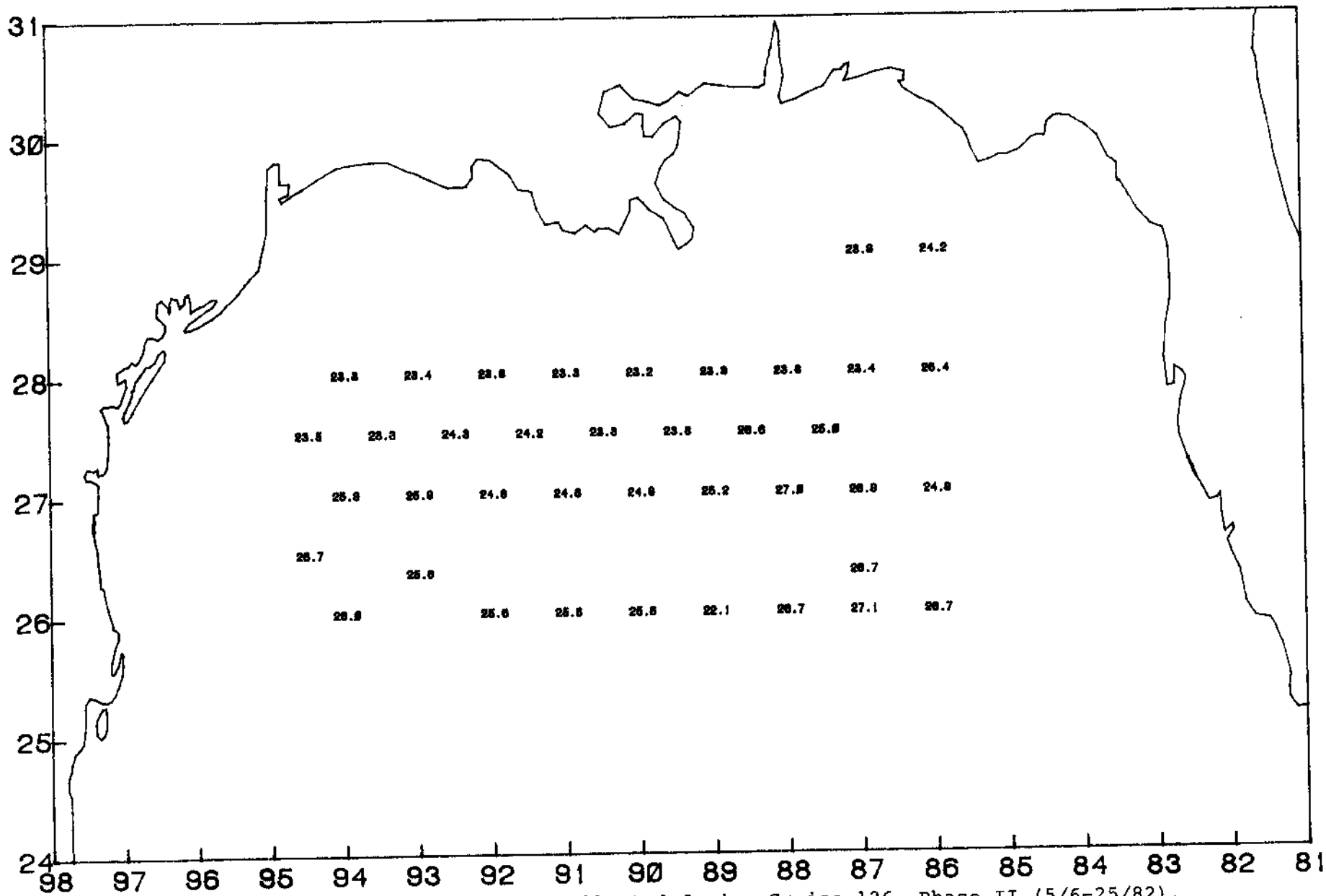


Figure 6.--Surface temperature readings collected during Cruise 126, Phase II (5/6-25/82).

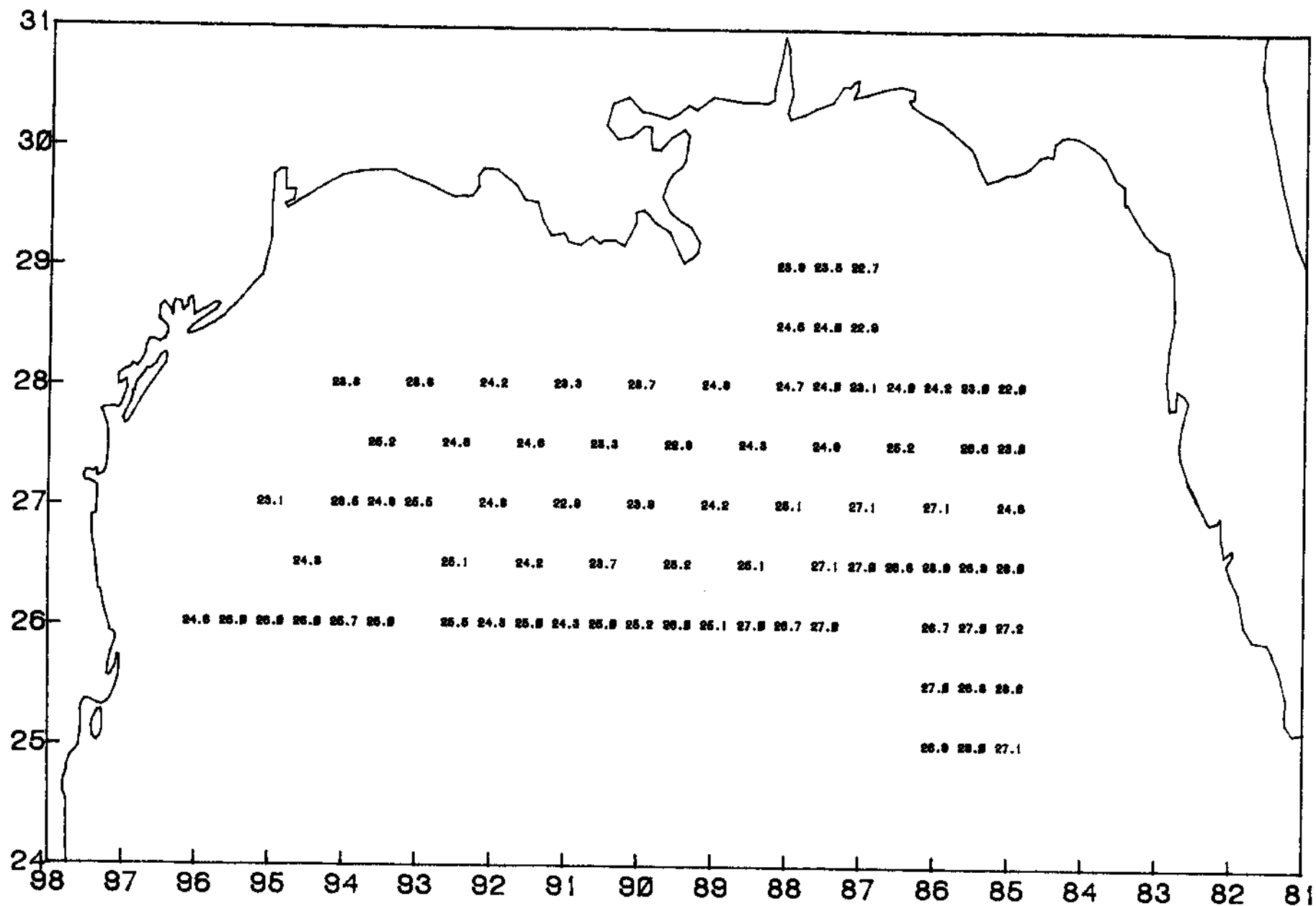


Figure 5.--Surface temperature readings collected during Cruise 126, Phase 1 (4/15-5/5/82).

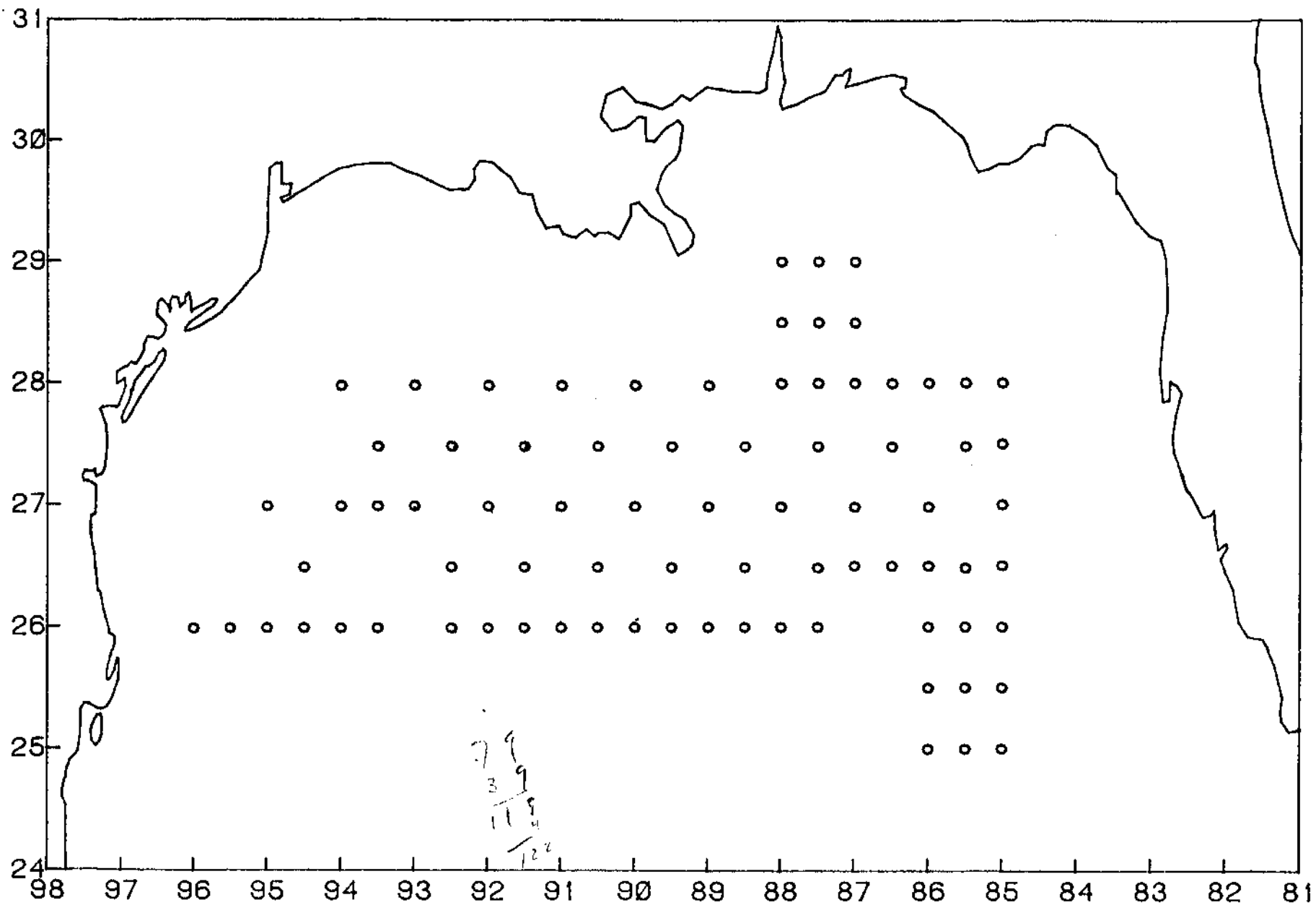


Figure 1.--Locations of stations occupied during Cruise 126, Phase I (4/15-5/5/82). Circles represent stations where standard bongo and neuston tows were made.

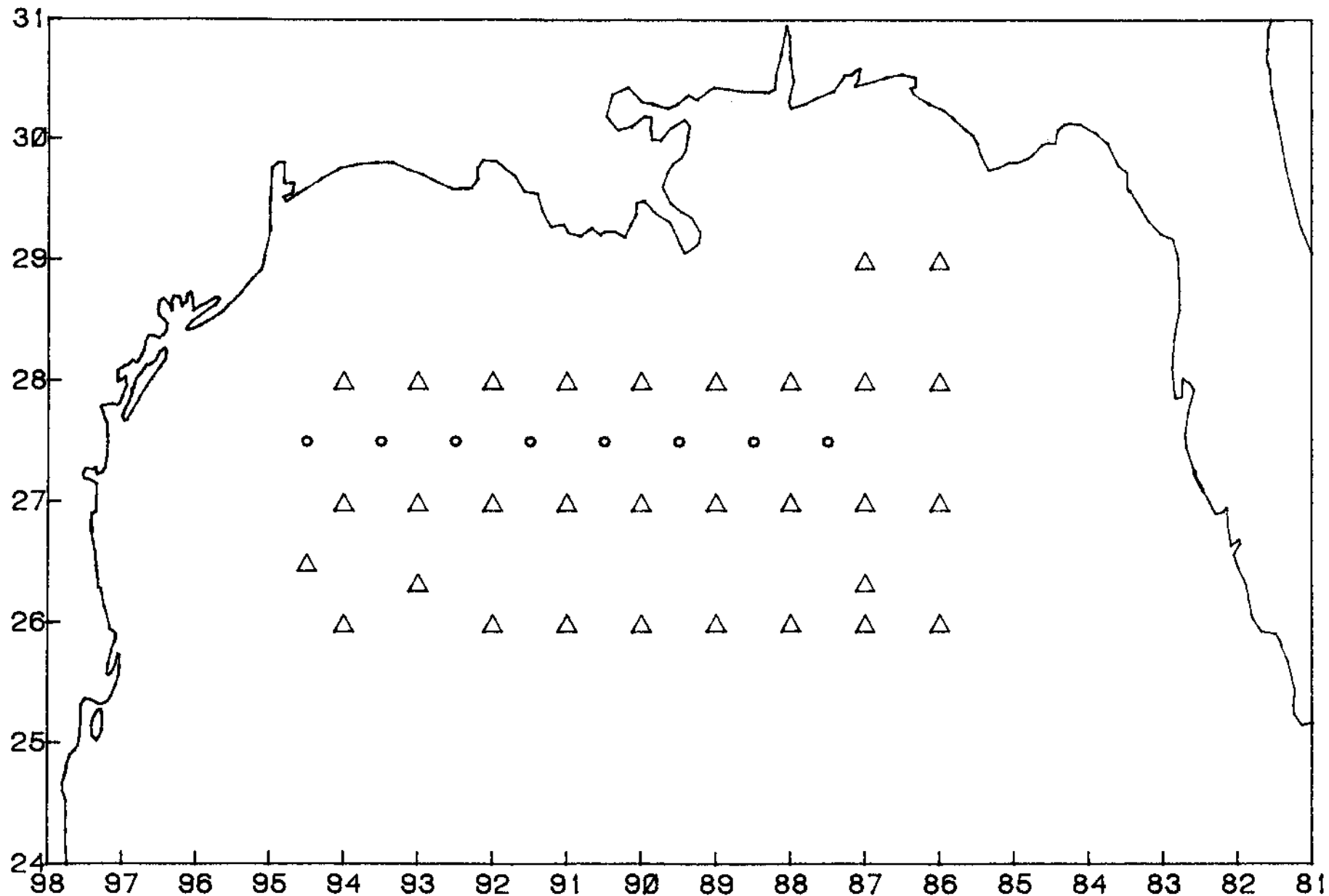


Figure 4.--Environmental sampling stations occupied during Cruise 126, Phase I (4/15-5/5/82). Circles represent stations where XBT's were dropped. Triangles represent stations where XBT's were dropped and surface, mid-depth and maximum depth water samples were taken for salinity and chlorophyll determinations.

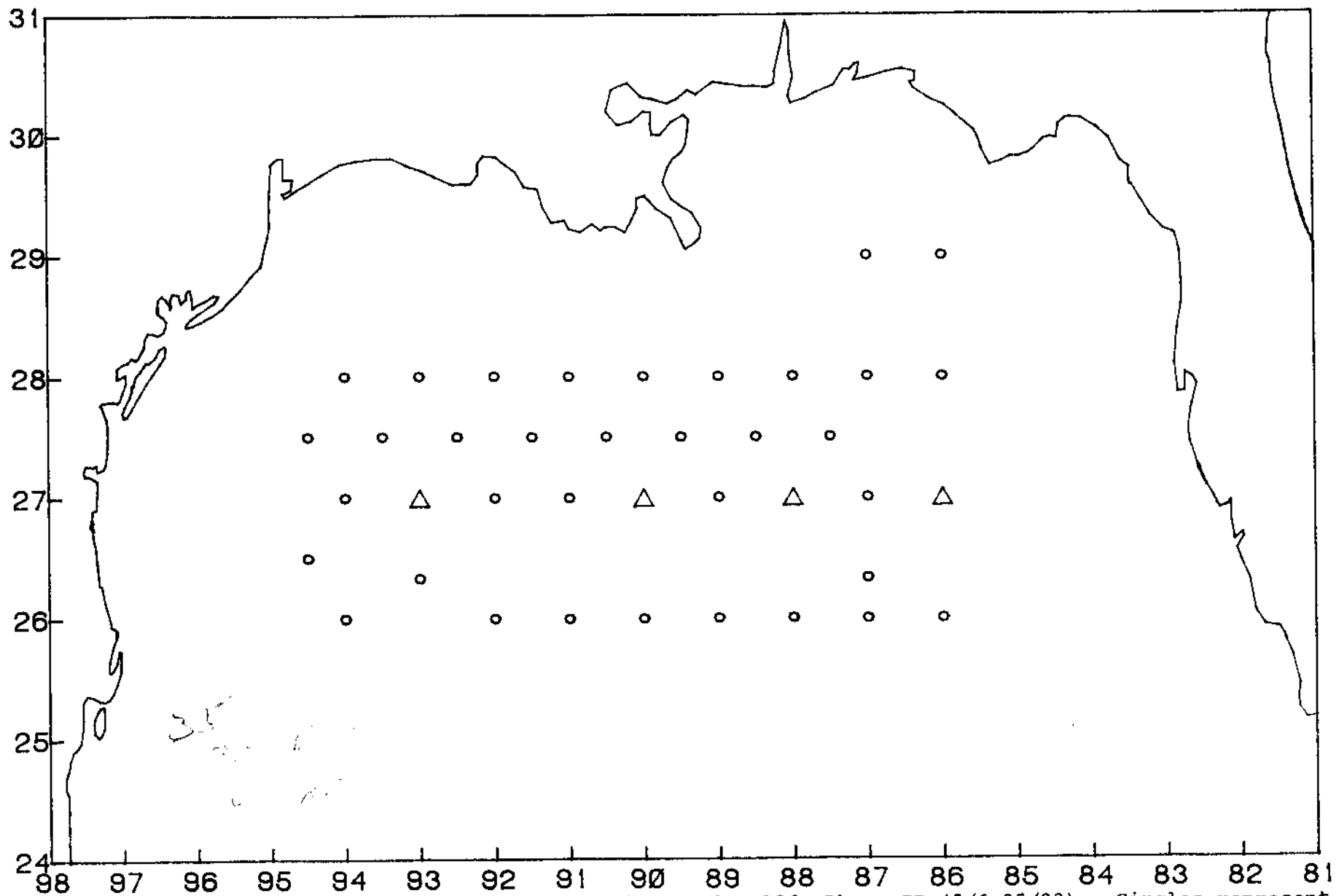


Figure 2.--Locations of stations occupied during Cruise 126, Phase II (5/6-25/82). Circles represent standard bongo and neuston tows and triangles represent standard bongo and neuston tows, and an additional neuston tow to 200 meters.

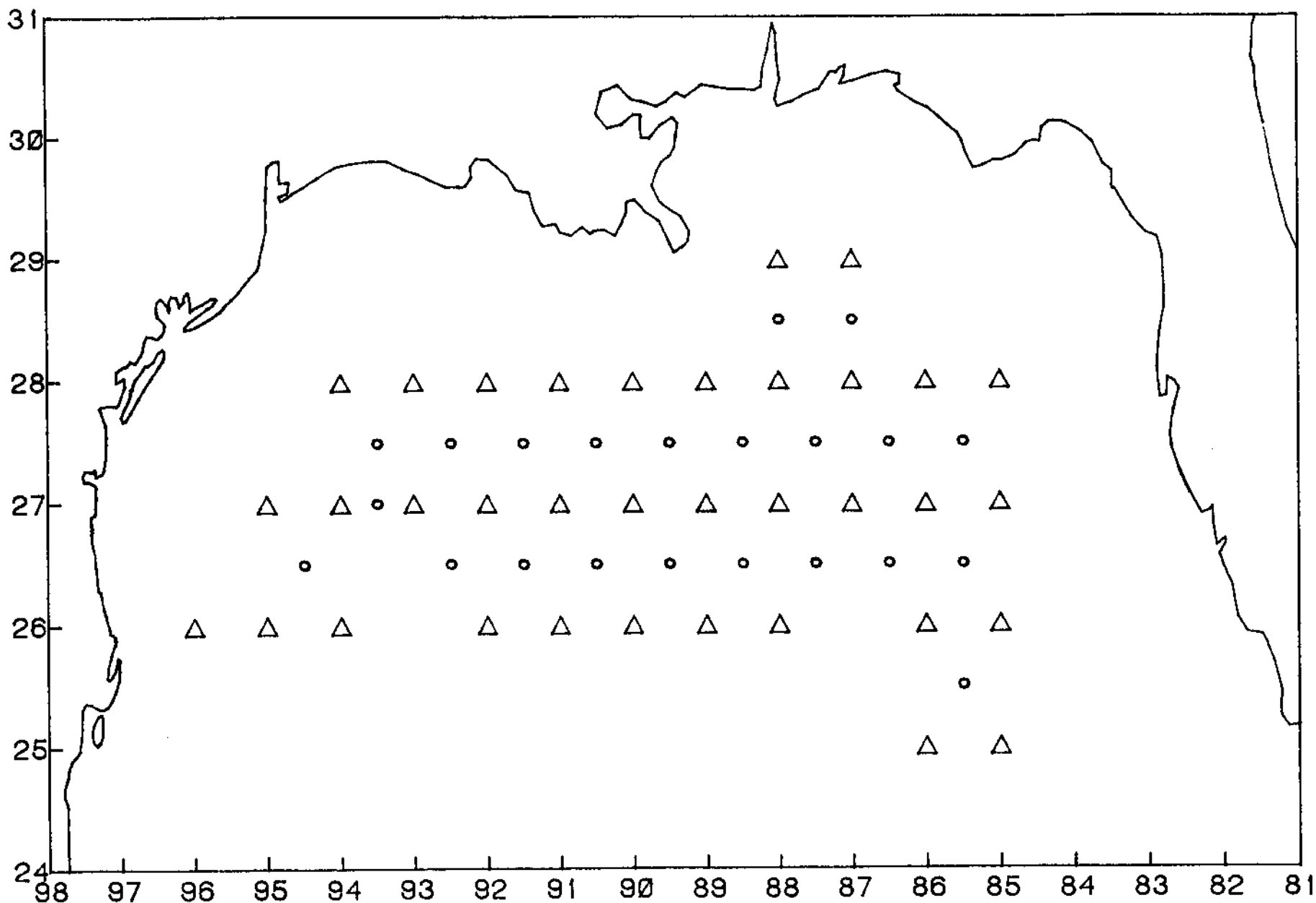


Figure 3.--Environmental sampling stations occupied during Cruise 126, Phase I (4/15-5/5/82). Circles represent stations where XBT's were dropped. Triangles represent stations where XBT's were dropped and surface, mid-depth and maximum depth water samples were taken for salinity and chlorophyll determinations.