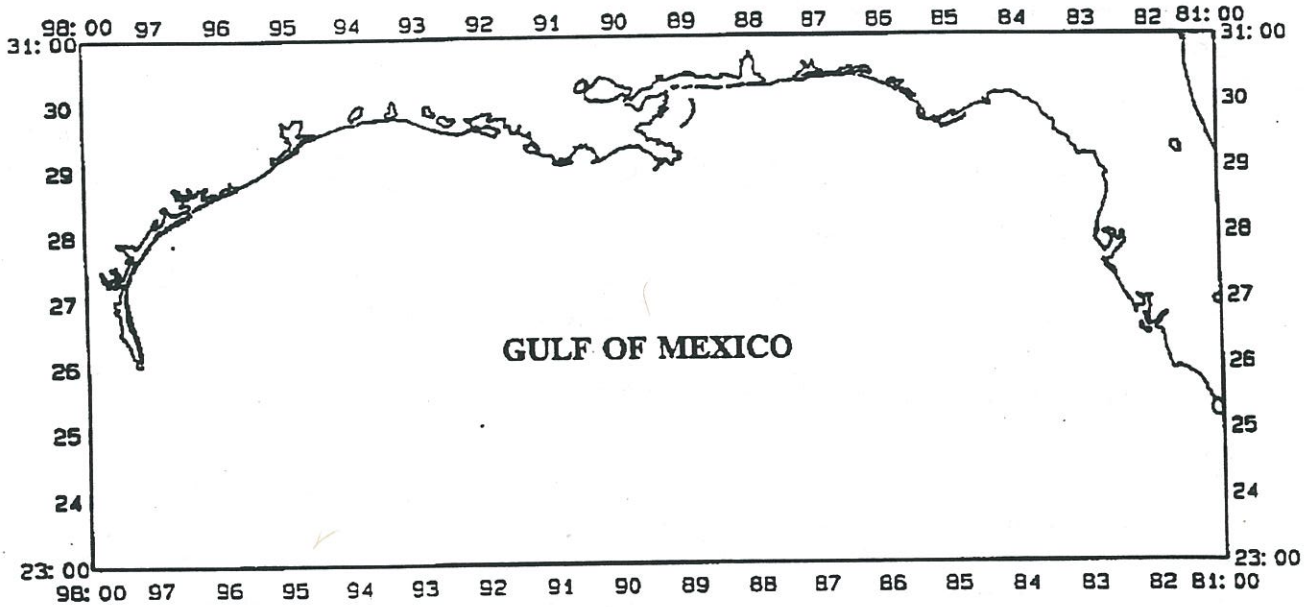
CRUISE RESULTS

Thirteenth Annual
Southeast Area Monitoring and Assessment Program (SEAMAP)
Spring Ichthyoplankton Survey

NOAA Ship OREGON II Cruise OT-95-03 (216)
04/18-06/08/95



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OREGON II Cruise 95-03 (216)
April 18 - June 8, 1995

INTRODUCTION

The NOAA Ship OREGON II departed Pascagoula, Mississippi on April 18, 1995, to conduct its thirteenth annual Southeast Area Monitoring and Assessment Program (SEAMAP) Spring Ichthyoplankton Survey across the northern Gulf of Mexico. The SEAMAP Program is a cooperative State/Federal/University program designed to collect biological and environmental data in waters across the southeastern region.

OBJECTIVES

1. Collect ichthyoplankton samples, particularly bluefin tuna eggs and larvae, for distribution and abundance of commercial and recreational important species.

2. Collect associated environmental and oceanographic data at all designated ichthyoplankton stations.

3. Train cooperators in marine mammal survey techniques.

METHODS

The survey was divided into three legs: Leg 1, April 18 to May 1; Leg 2, May 3-20 and Leg 3, May 22 to June 8. Ichthyoplankton samples were collected at stations arranged on a systematic grid spaced approximately 30 nm apart across the U.S. Gulf of Mexico EEZ. Seventy-six ichthyoplankton stations were targeted for Leg 1 and 95 stations each for Legs 2 and 3. Stations at whole degrees of longitude and latitude were sampled using a 61 cm bongo with a 0.333 mm nets and a double frame (two 1x2m neuston frames welded together) neuston net with a 0.950 mm net. Bongo tows were deployed to maximum depth or 200 meters at a rate of 40 meters/minute and a retrieval rate of 20 meters/minute with a wire angle of 45 degrees. Stations at half degrees of longitude and latitude were sampled only with the double neuston gear. Double neuston frame nets were towed with half the frame submerged for ten minutes. Standard SEAMAP protocol was followed for handling and preserving the sample. The bongo and right neuston samples were preserved in 10% formaldehyde and transferred 48 hr later to ethanol, the left neuston sample was preserved in ethanol.

Two hundred meter vertical profiles were made using a SEABIRD SBE-25 SEALOGGER CTD unit, equipped with dissolved oxygen, fluorometer, transmissometer and sensors at each ichthyoplankton station. Additional temperature data were collected on the second leg using expendable bathythermograph (XBT's). In conjunction with the CTD, a General Oceanic Model 1016 Rosette with Niskin bottles attached were used to collect multiple depth water samples for environmental reference data. Reference data consists of collecting water samples to measure chlorophyll a, salinity and dissolved oxygen. In daylight hours a secchi disk and forel-ule color scale were used for transparency and water color measurements.

Results

The number of ichthyoplankton stations sampled for each leg are summarized in Table 1. The location of ichthyoplankton stations for each leg can be found in Figures 1, 2, and 3.

Table 1. Summary of ichthyoplankton samples collected during OREGON II Cruise 216

	Bongo		Double Neuston	
	Left	Right	Left	Right
Leg I	37	37	73	76
Leg II	45	44	95	92
Leg III	45	43	92	95
Total	127	124	260	263

After assignment of SEAMAP numbers to the samples, the right bongo and right neuston samples were shipped to Zisop, Szczecin, Poland for sorting. The left bongo and neuston samples were deposited at the Mississippi Gulf Coast Research Laboratory (GCRL), Ocean Springs, Mississippi for processing, analysis and storage.

Environmental data were collected at each ichthyoplankton station. A summary of environmental data collected for each leg is presented in Table 2. Location of environmental stations for each leg are shown in Figures 1, 2 and 3. CTD profiles, XBT data, chlorophyll and salinity samples were returned to NMFS Mississippi Laboratory, Pascagoula, Mississippi for editing, archiving, comparison and analysis.

Table 2. Environmental stations sampled by leg during OREGON II Cruise 216.

	CTD	Reference Sample	XBT
Leg I	76	10	0
Leg II	95	15	43
Leg III	95	39	0
Total	266	64	43

Opportunistic marine mammal observations were made on Legs 1 and 3. The species number of encounters are summarized in Table 3. Two biopsy attempts were made. The successful attempt was taken from an adult Stenella attenuata.

Table 3. Marine Mammal species encountered during Leg 3 of OREGON II Cruise 216.

Species	Encounters
Stenella attenuata	16
Stenella clymene	3
Stenella longirostris	3
Stenella coeruleoalba	1
Stenella spp.	16
Tursiops truncatus	9
Grampus griseus	1
Feresa/Peponocephala	1
Pseudorca crassidens	1
Orcinus orca	1
Mesoplodon	1
Physeter macrocephalus	5
Unidentified small dolphin	2
Unidentified large dolphin	1
Unidentified Odontocete	4
Unidentified Ziphiidae	1
Unidentified small whale	3
Unidentified medium whale	1
Unidentified large whale	2

CRUISE PARTICIPANTS

Leg 1 (April 18-May 1, 1995)

Name	Title	Organization
Alonzo Hamilton, Jr.	Field Party Chief	NMFS, Pascagoula, Miss.
Sean O'Sullivan	Fishery Biologist	NMFS, Pascagoula, Miss.
Denice Drass	Res. Fish. Biol	NMFS, Pascagoula, Miss.
Todd Fairley	Fishery Biologist	NMFS, Beaufort, NC
Jack Javech	Scientific Illus.	NMFS, Miami, Fla.
Amy Woodhead	Res. Fish. Biol.	NMFS, Miami, Fla.

Leg 2 (May 3-20, 1995)

Name	Title	Organization
Alonzo Hamilton, Jr.	Field Party Chief	NMFS, Pascagoula, Miss.
Robert Ford, Jr.	Res. Fish. Biol.	NMFS, Pascagoula, Miss.
Denice Drass	Res. Fish. Biol	NMFS, Pascagoula, Miss.
Lisa Mills	Res. Fish. Biol.	NMFS, Pascagoula, Miss.
Joseph Contillo	Res. Fish. Biol.	NMFS, Miami, Fla.
Inta Berzins	Secretary	NMFS, Miami, Fla.

Leg 3 (May 22-June 8, 1995)

Name	Title	Organization
Alonzo Hamilton, Jr.	Field Party Chief	NMFS, Pascagoula, Miss.
Sean O'Sullivan	Fishery Biologist	NMFS, Pascagoula, Miss.
Denice Drass	Res. Fish. Biol	NMFS, Pascagoula, Miss.
Jim Tobias	Res. Fish. Biol.	NMFS, Miami, Fla.
Todd Pusser	Cooperator	NMFS, Pascagoula, Miss.
Vivienne Lochhead	Cooperator	NMFS, Pascagoula, Miss.
Joshua Lewis	Cooperator	NMFS, Pascagoula, Miss.

Submitted By:

Alonzo N. Hamilton, Jr. for
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Approved By:

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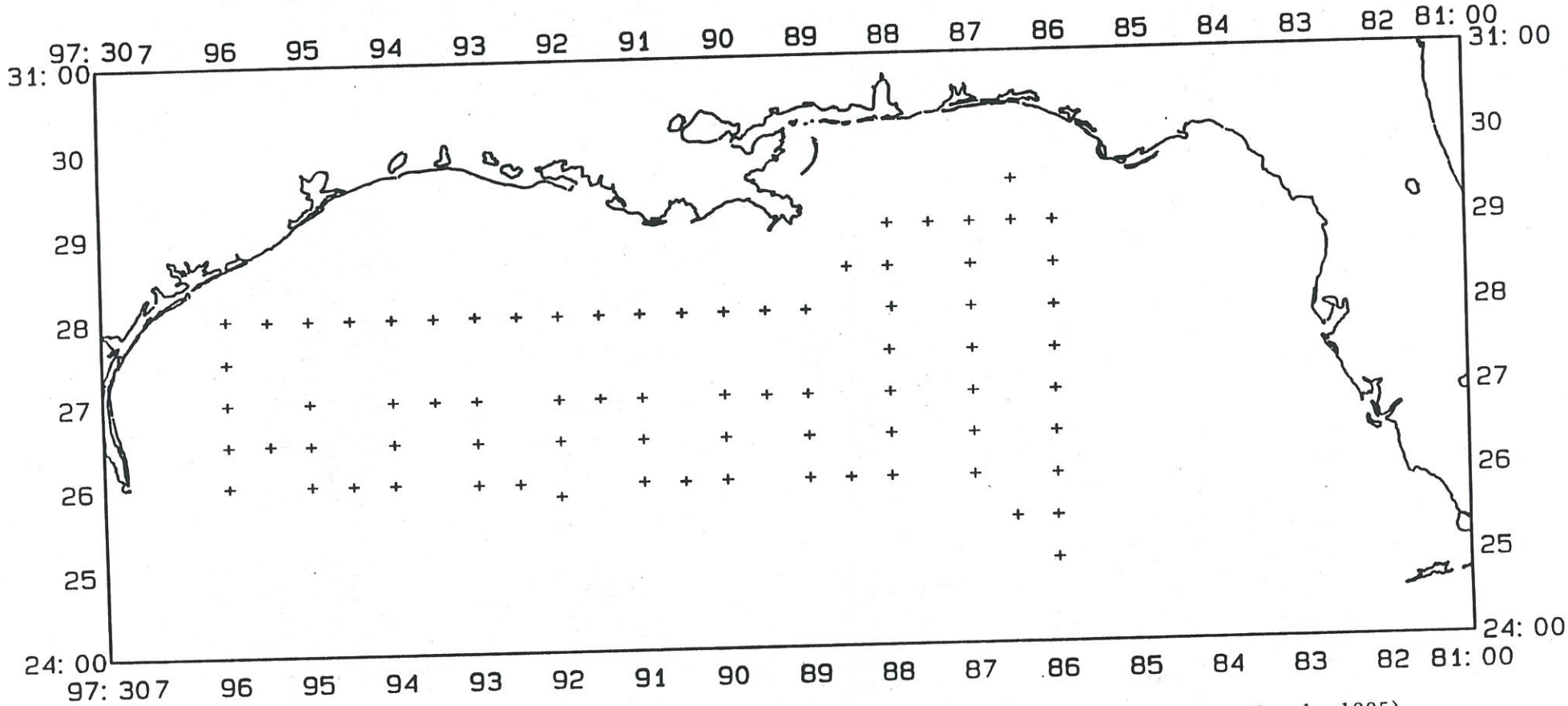

Figure 1. Ichthyoplankton and environmental stations sampled during Leg 1 (April 18 to May 1, 1995) of OREGON II Cruise 216.

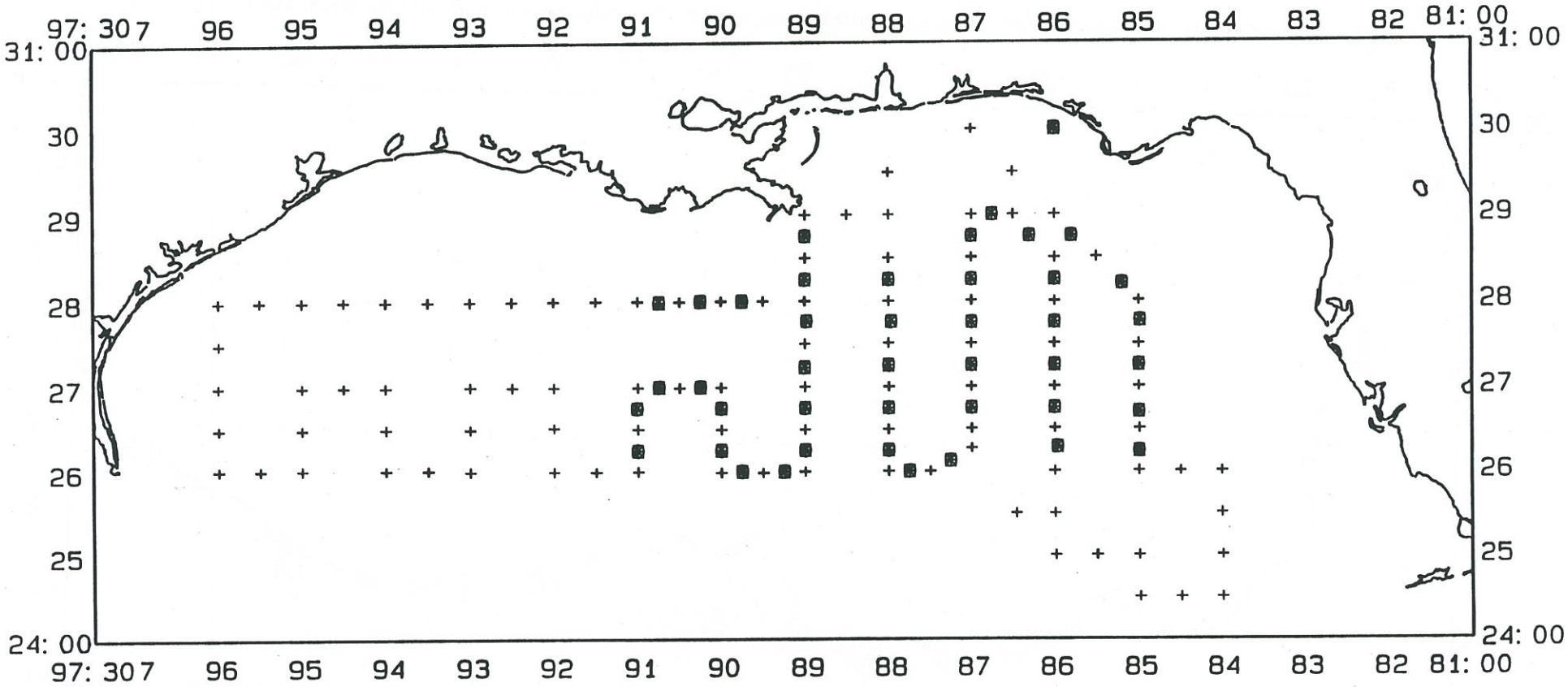

Figure 2. Ichthyoplankton (+) and XBT (⊕) stations sampled during Leg 2 (May 3-20, 1995) of OREGON II Cruise 216.

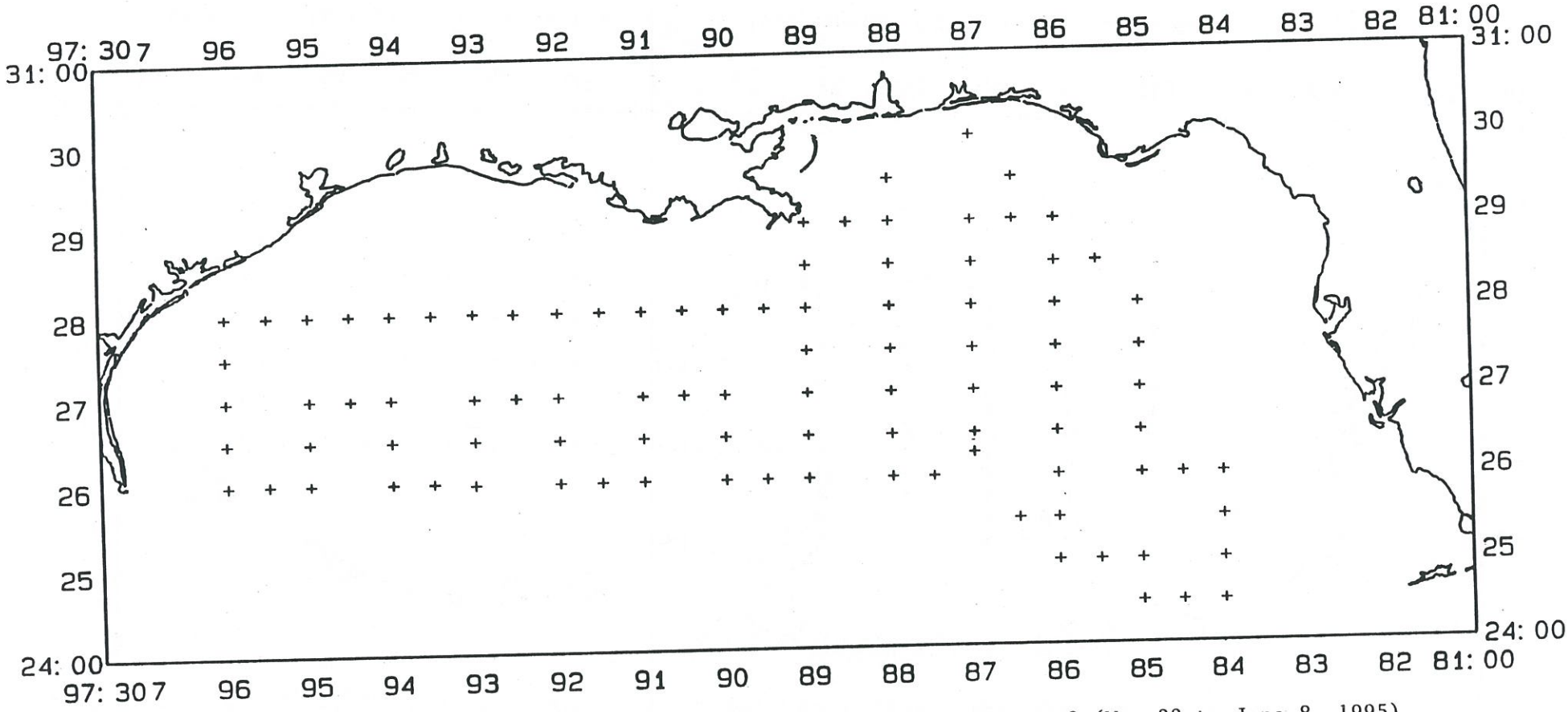

Figure 3. Ichthyoplankton and environmental stations sampled during Leg 3 (May 22 to June 8, 1995) of OREGON II Cruise 216.