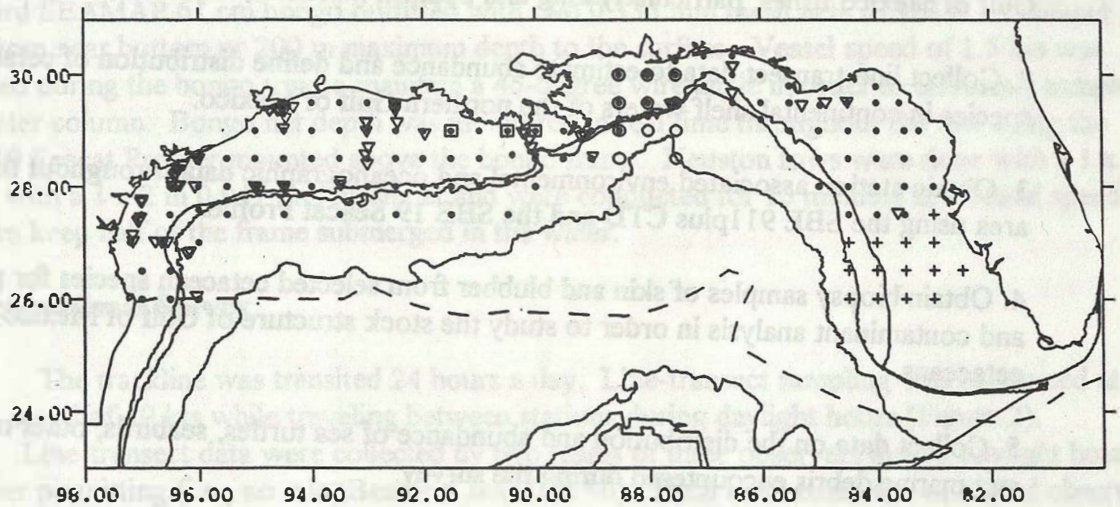
CRUISE RESULTS

Fall Southeast Area Monitoring and Assessment Program (SEAMAP)
Ichthyoplankton Survey
and
Cetacean Survey

NOAA Ship *Oregon II* Cruise 00-06(242)
5 September - 2 October 2000



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NOAA Ship *Oregon II* Cruise 00-06 (242)
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INTRODUCTION

The NOAA Ship *Oregon II* departed Pascagoula, MS on 5 September 2000 to initiate the Southeast Area Monitoring and Assessment Program (SEAMAP) fall ichthyoplankton survey and marine mammal survey in the northern Gulf of Mexico. A total of 25 successful sea days were worked over two legs during the cruise: Leg 1, September 5-21 and Leg 2, September 25-October 2.

OBJECTIVES

1. Collect ichthyoplankton samples with bongo and neuston gear for the purpose of estimating abundance and defining the distribution of eggs, larvae, and small juveniles of Gulf of Mexico fishes, particularly king and Spanish mackerel, lutjanids and sciaenids.

2. Collect line-transect data to estimate abundance and define distribution of cetacean species in continental shelf waters of the northern Gulf of Mexico.

3. Obtain station associated environmental and oceanographic data throughout the survey area using the SBE 911plus CTD and the SBE 19 Seacat Profiler.

4. Obtain biopsy samples of skin and blubber from selected cetacean species for genetic and contaminant analysis in order to study the stock structure of Gulf of Mexico cetaceans.

5. Collect data on the distribution and abundance of sea turtles, seabirds, other marine life and marine debris encountered during the survey.

METHODS

The survey was scheduled to complete the cruise track in two legs from the 51.8 m NOAA Ship *Oregon II*. Leg 1 was scheduled for September 5-22 and Leg 2, September 25-October 6. This survey was conducted along a predetermined trackline at stations uniformly spaced throughout continental shelf waters of the U.S. Gulf of Mexico (Figure 1).e

Ichthyoplankton

All cruise objectives, environmental and ichthyoplankton, were implemented in accordance with procedures outlined in the SEAMAP data collections manual.

A predefined cruise track of 112 SEAMAP stations approximately 30 nautical miles apart were targeted for the survey. Leg 1 targeted 66 stations and Leg 2 targeted 46 stations. Primary station operations were to consist of a Seabird SBE 911plus CTD profile, a bongo tow with a Seabird SBE 19 Seacat Profiler and a neuston tow. Larval fish samples were taken with the standard SEAMAP 61 cm bongo outfitted with two 0.335 mm mesh nets towed in an oblique path from near bottom or 200 m maximum depth to the surface. Vessel speed of 1.5 kts was adjusted during the bongo tow to maintain a 45-degree wire angle in order to uniformly sample the water column. Bongo net depth was monitored in real time throughout the tow using the SBE 19 Seacat Profiler mounted above the bongo frame. Neuston tows were done with a 1 x 2 m frame with a 1 x 2 m 0.947 mm mesh net and were conducted for 10 minutes at a vessel speed of 2 kts to keep half of the frame submerged in the water.

Cetacean Visual Survey

The trackline was transited 24 hours a day. Line-transect sampling was conducted at a ship's speed of 10 kts while traveling between stations during daylight hours (Figure 2).

Line-transect data were collected by two teams of three observers during daylight hours, weather permitting (i.e., no rain, Beaufort sea state <6). Each team consisted of skilled observers experienced in shipboard cetacean observation and identification techniques. Two observers searched for cetaceans using 25X "bigeye" binoculars mounted on the ship's flying bridge. The third observer recorded data and maintained a search of the area near the ship using unaided eye or 7X hand-held binoculars. Data were recorded on a laptop computer using a BASIC data acquisition program interfaced with a global positioning system (GPS). Environmental data included measures of sea state, weather, wind, and glare. Cetacean sighting data included species, group-size, presence of calves, bearing from the bow, linear distance from the ship, surface temperature, depth, and behavioral observations.

As required by Research Permit No. 779-1339-02 issued to the SEFSC by the National Marine Fisheries Service Office of Protected Resources, data on behavioral responses of cetaceans to the survey vessel were recorded. A complete set of these responses can be obtained from the Pascagoula Laboratory.

Cetacean Biopsy

In order to study cetacean stock structure, biopsy samples of skin and blubber were collected from selected species (designated by Permit No. 779-1339-02) for genetic and contaminant analysis. A pole spear and a modified .22 caliber dart rifle, fitted with specially designed heads that extract a small plug of tissue from animals, were used for obtaining samples. Samples were collected from animals riding at the bow of the *Oregon II*. As required by Permit No. 779-1339-02, data on each sampling attempt were recorded, including date, time, platform, sampler and recorder name, field number, device, species, location (GPS), number of hits and misses, body location struck, and whether a sample was taken. A complete log can be obtained from the Pascagoula Laboratory.

Environmental Data

Environmental data was collected at each designated ichthyoplankton station. Each SEAMAP station included a CTD cast to near bottom or 200 m maximum depth that recorded temperature, salinity, fluorescence, oxygen and turbidity. The SBE 911plus CTD was outfitted with a Beckman dissolved oxygen sensor, a Sea Tech Fluorometer and a C Star Transmissometer. The SBE 19 Seacat Profiler recorded temperature and salinity during the bongo tows. A continuous-flow SBE 21 thermosalinograph/fluorometer (TSG/F) was in use 24 hours/day. The Scientific Computer System (SCS) continuously displayed and recorded to disk the ship's position, heading and speed, wind direction and speed, barometric pressure, sea surface temperature, air temperature and water depth. The TSG/F data was also recorded to the SCS.

RESULTS

There were 2 additional port calls during the cruise. The first was a medical emergency to take the Chief Steward to a hospital in Ingleside, TX. Operations ceased around 6 pm on 8 September to head in to port. The ship departed Ingleside, TX around 11 am on 9 September and operations resumed around noon. The second port call was to switch out personnel in Galveston on 12 September. The ship was in port for approximately 3 hours and no operations were conducted during that time. The cruise ended 2 days early due to weather; a cold front hindered marine mammal operations and plankton operations so when the cruise track was completed the ship returned to port.

Ichthyoplankton

Over the course of this survey, ichthyoplankton samples were collected from 111 stations (Figure 1), 76 stations were sampled during Leg 1 and 35 stations were sampled during Leg 2. This resulted in the collection of 222 bongo samples (111 left, 111 right) and 104 neuston samples. A total of 111 SBE 19 Seacat profiles were taken during the cruise (Leg 1, 76; Leg 2, 35). At seven stations during the second leg, weather conditions prohibited neuston sampling and

at one station, only the CTD was completed.

After the assignment of SEAMAP numbers to all SEAMAP samples, the right bongos and neustons will be shipped to ZSIOP Szczecin, Poland for sorting. The left bongo samples will be deposited at Gulf Coast Research Laboratory (GCRL; Ocean Springs, MS) for processing, analysis and storage except for 41 left bongo samples initially preserved in EtOH (Table 1) that will be shipped to Poland with the right bongo and neuston samples.

Cetacean Visual Survey

During the 16 survey days, 1968 transect km were surveyed (Leg 1, 1599 km; Leg 2, 369 km) (Table 2 and Figure 2). Daily effort ranged up to 9.0 hours/day and 164 km/day and averaged 6.1 hours/day and 123 km/day. In total, 84 cetacean groups were sighted (Leg 1, 77 groups; Leg 2, 7 groups) (Tables 3, 4 and 5; Figure 3). Twelve of these groups were off-effort. At least four species were sighted (Table 4, Figures 4 and 5). The highest number of cetacean groups sighted on one day was 16 (Tables 2 and 5). The most commonly sighted species were bottlenose dolphins (46 sightings) and Atlantic spotted dolphins (11 sightings).

The largest groups recorded on this cruise were a group of 30 bottlenose dolphins and two groups of 28 Atlantic spotted dolphins. A summary of group size, water depth, and sea surface temperature for each species is presented in Table 4.

Cetaceans were encountered in all areas surveyed (Figure 3). Bottlenose dolphins and Atlantic spotted dolphins were the only species sighted in continental shelf waters (<100 m) except for one sighting of rough-toothed dolphins in 31 m of water. The dominance of these two species along the continental shelf was not surprising and has been well documented by other surveys in the Gulf of Mexico (i.e., GulfCet I and II).

Observations were recorded on the prevalence of bite wounds from cookie-cutter sharks (*Isistius* sp.) on Gulf of Mexico cetaceans. Of the 36 groups observed at close enough range to see the crater wounds or healed scars caused by cookie-cutter sharks, no individuals showed evidence of an *Isistius* attack.

Results from behavioral responses of cetaceans to the survey vessel were typical of those from previous surveys. Of 84 groups for which responses were recorded, 37 groups demonstrated no response to the vessel. Of the 47 groups for which a response was observed, 43 groups responded by either bow-riding or approaching the ship, 1 group dove and 2 groups were observed fleeing the ship.e

Cetacean Biopsy

Fifty biopsy samples were obtained during the cruise (Figure 6). All samples were collected from animals riding at the bow of the *Oregon II*. The biopsies represent three species: bottlenose dolphin (29), Atlantic spotted dolphin (16) and rough-toothed dolphin (5). Biopsies were collected throughout the waters of the U.S. Gulf of Mexico (Figure 6). Several samples were taken from different individuals of the same group. The skin and blubber samples were sent

to the NOS Charleston (South Carolina) Laboratory for analysis and storage. All other cetacean data were returned to the NMFS Mississippi Laboratories, Pascagoula for editing, analysis and archiving.

Environmental Data

Profiles from the SBE 911plus CTD and the SBE 19 Seacat Profiler, other environmental data and data from the ship's SCS were returned to the NMFS Pascagoula Laboratory for editing, analysis and archiving. The CTD oxygen sensor (SBE23b) was replaced with a different model oxygen sensor (SBE13) on September 8, oxygen data prior to that is inaccurate.

CRUISE PARTICIPANTS

Name	Title	Organization
Leg 1 (5 September - 21 September 2000)		
Mammal/Plankton		
Keith Mullin	Fishery Biologist	NMFS; Pascagoula, MS
Carrie Hubard	Fishery Biologist	NMFS; Pascagoula, MS
Andre DeBose	Fishery Biologist	NMFS; Pascagoula, MS
Joy Henne	Fishery Biologist	NMFS; Miami, FL
Jenny Litz	Fishery Biologist	NMFS; Miami, FL
Heather Adams	Fishery Biologist	NMFS; Miami, FL
Tony Martinez	Fishery Biologist	NMFS; Miami, FL
Plankton		
Denice Drass	Field Party Chief	NMFS; Pascagoula, MS
Alonzo Hamilton	Fishery Biologist	NMFS; Pascagoula, MS
Pam Bond	Fishery Biologist	NMFS; Pascagoula, MS
Kim Williams	Fishery Biologist	FMRI[1]; St. Petersburg, FL
Ed Scott (9/5-12)	Cooperator	Gautier, MS
Jim Bartlett (9/12-21)	Fishery Biologist	JCWS[2]; Pascagoula, MS

[1] - Florida Marine Research Institute
[2] - Johnson Controls World Services

Name	Title	Organization
Leg 2 (25 September - 2 October 2000)		
Mammal/Plankton		
Wayne Hoggard	Fishery Biologist	NMFS; Pascagoula, MS
Carol Roden	Fishery Biologist	NMFS; Pascagoula, MS
Carolyn Burks	Fishery Biologist	NMFS; Pascagoula, MS
Joy Henne	Fishery Biologist	NMFS; Miami, FL
Jenny Litz	Fishery Biologist	NMFS; Miami, FL
Neil Baertlein	Fishery Biologist	NMFS; Miami, FL
Sarah Stienessen	Fishery Biologist	Contractor; Seattle, WA
Plankton		
Denice Drass	Field Party Chief	NMFS; Pascagoula, MS
Alonzo Hamilton	Fishery Biologist	NMFS; Pascagoula, MS
Pam Bond	Fishery Biologist	NMFS; Pascagoula, MS
Dave Hanisko	Fishery Biologist	NMFS; Pascagoula, MS
Matt Rayl	Fishery Biologist	JCWS; Pascagoula, MS

Submitted by:

Denice M. Drass
Field Party Chief

Approved by:

Scott Nichols, Director
Mississippi Laboratories

Nancy Thompson, Director
Southeast Science and Research Center

Table 1. List of samples where left bongo was initially preserved in EtOH.

Number	Station number	SEAMAP station number	Number	Station number	SEAMAP station number
1	04002	B316	23	04057	B190
2	04004	B238	24	04059	B192
3	04007	B328	25	04063	B186
4	04008	B235	26	04065	B183
5	04009	B51	27	04067	B180
6	04010	B234	28	04069	B179
7	04011	B232	29	04071	B177
8	04013	B233	30	04075	B173
9	04017	B226	31	04077	B320
10	04022	B217	32	04078	B172
11	04024	B222	33	04081	B168
12	04026	B219	34	04082	B169
13	04030	B215	35	04083	B165
14	04033	B209	36	04087	B158
15	04035	B211	37	04096	B141
16	04039	B208	38	04097	B155
17	04042	B202	39	04099	B160
18	04044	B204	40	04108	B134
19	04047	B201	41	04110	B143
20	04050	B195			
21	04052	B197			
22	04054	B194			

Table 2. Effort, Beaufort sea state, and number of cetacean sightings for each day of NOAA Ship *Oregon II* Cruise 00-06 (242), September-October, 2000.

Leg Date	Effort hours	Transect kilometers	Average Sea State	Number of Sightings
Leg 1				
5 September	Depart Pascagoula, MS			
6 September	Transit			
7 September	1.9	32.5	4.0	1
8 September	6.9	121.6	3.2	6
arrive Ingleside, TX - medical emergency				
9 September	2.7	51.6	3.2	7
depart Ingleside, TX				
10 September	7.3	128.9	2.2	16
11 September	8.0	148.2	2.0	8
12 September	5.8	101.6	1.8	11
arrive\depart Galveston, TX - personnel switchout				
13 September	9.0	164.2	3.9	2
14 September	8.2	129.3	1.7	6
15 September	4.0	71.3	3.4	10
16 September	0.0	0.0	>4.0	0
17 September	0.0	0.0	>4.0	0
18 September	8.0	140.7	4.0	4
19 September	6.6	117.6	4.1	3
20 September	7.8	125.9	3.3	3
21 September	Arrive Pascagoula, MS			
Total	76.2	1599.2		77
Leg 2				
25 September	Depart Pascagoula, MS			
26 September	4.6	83.9	5.0	3
27 September	7.9	124.1	4.9	3
28 September	0.0	0.0	>5.0	0
29 September	0.0	0.0	>5.0	0
30 September	3.5	64.0	5.0	1
1 October	5.4	96.7	5.0	0
2 October	Arrive Pascagoula, MS			
Total	21.4	368.7		7
TOTAL	97.6	1967.9		84

Table 3. Number of cetacean group sightings for each leg of NOAA Ship *Oregon II* Cruise 00-06 (242) conducted in the U.S. Gulf of Mexico, September-October 2000.

Species	Leg 1	Leg 2	Total
Atlantic Spotted dolphin (*Stenella frontalis*)	8	3	11
Bottlenose dolphin (*Tursiops truncatus*)	43	3	46
Rough-tooth dolphin (*Steno bredanensis*)	2	0	2
Sperm whale (*Physeter macrocephalus*)	2	0	2
Unidentified dolphin	23	1	24
TOTAL	78	7	85

Table 4. Number of groups (n), mean group-size, water depth, and sea surface temperature for cetacean sightings in the U.S. Gulf of Mexico during NOAA Ship *Oregon II* Cruise 00-06(242), September-October 2000.

		Group Size (animals)		Water Depth (meters)		Sea Surface Temperature (^{0}C)	
Species	n	Mean (SE)	Range	Mean (SE)	Range	Mean (SE)	Range
Stenella frontalis	11	11.9 (1.78)	1 - 41	52 (8)	11 - 196	28.9 (0.20)	27.7 - 30.9
Tursiops truncatus	46	8.9 (0.98)	1 - 47	33 (4)	9 - 205	29.8 (0.40)	27.6 - 33.3
Steno bredanensis	2	7.0 (1.00)	6 - 8	173 (142)	31 - 315	29.1 (0.65)	28.4 - 29.7
Physeter macrocephalus	2	1.0 (0)	1 - 1	838 (144)	695 - 982	29.2 (0.15)	29.0 - 29.3
Unidentified dolphin	24	2.5 (0.50)	1 - 6	374 (361)	13 - 735	28.5 (0.55)	27.9 - 29.0

Table 5. Summary of cetacean sightings during NOAA Ship *Oregon II* Cruise 00-06 (242) in the U.S. Gulf of Mexico September-October 2000 (S = effort status of sighting, SST = Sea surface temperature).

Date	Species	Group size	Position		SST (°C)	Depth (m)	S
Leg 1							
2000 Sep 07	*Physeter macrocephalus*	1	26°02'	96°02'	29.3	970	on
2000 Sep 08	Unidentified dolphin	2	26°47'	96°12'	29.1	586	on
2000 Sep 08	Unidentified dolphin	1	26°49'	97°10'	29.1	695	on
2000 Sep 08	*Stenella frontalis*	2	27°00'	96°31'	29.2	106	on
2000 Sep 08	Unidentified dolphin	2	27°00'	96°35'	29.0	82	on
2000 Sep 08	*Tursiops truncatus*	2	26°59'	96°39'	29.0	81	off
2000 Sep 08	*Tursiops truncatus*	7	27°00'	96°43'	28.8	70	on
2000 Sep 09	*Tursiops truncatus*	4	27°45'	96°59'	27.9	13	off
2000 Sep 09	*Tursiops truncatus*	2	27°42'	97°00'	27.9	15	off
2000 Sep 09	*Tursiops truncatus*	25	27°26'	97°00'	28.5	24	on
2000 Sep 09	*Tursiops truncatus*	6	27°24'	97°02'	28.4	24	on
2000 Sep 09	*Tursiops truncatus*	12	27°22'	97°03'	28.2	22	on
2000 Sep 09	*Tursiops truncatus*	4	27°08'	97°09'	28.2	22	on
2000 Sep 09	*Tursiops truncatus*	4	27°00'	97°09'	28.6	24	on
2000 Sep 10	*Tursiops truncatus*	1	27°59'	96°03'	28.4	44	on
2000 Sep 10	*Steno bredanensis*	8	27°59'	96°20'	28.4	31	on
	Tursiops truncatus	4	27°59'	96°20'	28.4	31	on
2000 Sep 10	*Tursiops truncatus*	19	28°00'	96°20'	28.4	31	off
2000 Sep 10	*Tursiops truncatus*	27	28°00'	96°21'	28.3	29	on
2000 Sep 10	*Tursiops truncatus*	5	27°59'	96°26'	28.3	22	on
2000 Sep 10	*Tursiops truncatus*	7	28°02'	96°28'	28.8	22	on
2000 Sep 10	Unidentified dolphin	4	28°09'	96°25'	29.2	16	on
2000 Sep 10	*Tursiops truncatus*	14	28°11'	96°24'	29.3	16	on
2000 Sep 10	Unidentified dolphin	6	28°12'	96°23'	29.4	16	on
2000 Sep 10	Unidentified dolphin	4	28°13'	96°23'	29.5	18	on
2000 Sep 10	*Tursiops truncatus*	30	28°15'	96°21'	29.6	16	on
2000 Sep 10	*Tursiops truncatus*	1	28°17'	96°20'	29.9	15	on
2000 Sep 10	Unidentified dolphin	5	28°21'	96°16'	30.1	15	on
2000 Sep 10	*Tursiops truncatus*	2	28°22'	96°16'	29.9	15	on
2000 Sep 10	Unidentified dolphin	4	28°29'	96°02'	30.2	7	on
2000 Sep 10	*Tursiops truncatus*	6	28°29'	95°59'	30.1	15	on
2000 Sep 11	*Stenella frontalis*	28	27°59'	95°00'	28.8	81	off
2000 Sep 11	*Stenella frontalis*	15	27°57'	94°59'	28.8	88	on
2000 Sep 11	*Tursiops truncatus*	2	27°55'	94°57'	29.0	106	on
2000 Sep 11	*Steno bredanensis*	6	27°42'	94°30'	29.7	311	on
2000 Sep 11	Unidentified dolphin	4	27°57'	94°29'	29.2	92	on

continued

Table 5. continued

Date	Species	Group size	Position		SST (°C)	Depth (m)	S
2000 Sep 11	*Tursiops truncatus*	2	27°58'	94°30'	29.2	73	off
2000 Sep 11	Unidentified dolphin	3	27°57'	94°29'	29.2	66	on
2000 Sep 11	*Stenella frontalis*	24	28°10'	94°30'	29.2	55	off
2000 Sep 12	Unidentified dolphin	1	29°01'	94°30'	29.2	16	on
2000 Sep 12	Unidentified dolphin	3	29°12'	94°28'	28.9	18	on
2000 Sep 12	*Tursiops truncatus*	1	29°19'	94°29'	28.8	13	on
2000 Sep 12	Unidentified dolphin	3	29°26'	94°29'	29.1	9	on
2000 Sep 12	*Tursiops truncatus*	4	29°20'	94°45'	29.0	15	off
2000 Sep 12	*Tursiops truncatus*	3	29°20'	94°44'	29.4	13	off
2000 Sep 12	*Tursiops truncatus*	8	29°20'	94°38'	29.5	11	on
2000 Sep 12	*Tursiops truncatus*	7	29°21'	94°35'	29.4	11	on
2000 Sep 12	*Tursiops truncatus*	8	29°21'	94°32'	29.4	11	on
2000 Sep 12	*Tursiops truncatus*	3	29°21'	94°34'	29.3	13	on
2000 Sep 12	Unidentified dolphin	2	29°23'	94°23'	29.5	13	on
2000 Sep 13	*Tursiops truncatus*	7	27°59'	93°29'	29.2	81	on
2000 Sep 13	*Tursiops truncatus*	4	28°04'	93°28'	29.2	77	on
2000 Sep 14	Unidentified dolphin	2	29°09'	93°01'	29.2	18	on
2000 Sep 14	Unidentified dolphin	2	29°07'	93°01'	29.2	18	on
2000 Sep 14	*Tursiops truncatus*	3	28°59'	93°00'	29.2	22	on
2000 Sep 14	*Stenella frontalis*	28	28°41'	93°00'	29.5	31	on
2000 Sep 14	*Tursiops truncatus*	18	28°34'	92°59'	29.6	40	on
2000 Sep 14	*Tursiops truncatus*	8	28°25'	92°59'	29.7	48	on
2000 Sep 15	*Tursiops truncatus*	4	29°07'	92°28'	29.1	16	on
2000 Sep 15	*Tursiops truncatus*	3	29°19'	92°30'	28.7	9	on
2000 Sep 15	Unidentified dolphin	4	29°20'	92°30'	28.6	9	on
2000 Sep 15	*Tursiops truncatus*	9	29°22'	92°30'	28.9	9	on
2000 Sep 15	Unidentified dolphin	6	29°25'	92°30'	28.8	9	on
2000 Sep 15	*Tursiops truncatus*	6	29°26'	92°30'	28.8	9	on
2000 Sep 15	Unidentified dolphin	5	29°26'	92°30'	28.9	9	on
2000 Sep 15	*Tursiops truncatus*	17	29°27'	92°30'	29.1	9	on
2000 Sep 15	*Tursiops truncatus*	4	29°27'	92°30'	29.0	9	on
2000 Sep 15	*Tursiops truncatus*	2	28°55'	91°58'	29.6	20	off
2000 Sep 18	Unidentified dolphin	2	28°57'	90°13'	28.3	16	on
2000 Sep 18	Unidentified dolphin	1	28°57'	90°12'	28.2	18	on
2000 Sep 18	*Tursiops truncatus*	2	28°49'	90°05'	28.6	29	on
2000 Sep 18	Unidentified dolphin	2	28°41'	90°03'	29.0	51	on
2000 Sep 19	*Tursiops truncatus*	2	28°52'	89°12'	27.8	79	on
2000 Sep 19	Unidentified dolphin	2	28°54'	89°08'	28.0	62	off
2000 Sep 19	*Physeter macrocephalus*	1	28°31'	88°57'	29.0	686	on

continued

Table 5. continued.

Date	Species	Group size	Position		SST (°C)	Depth (m)	S
2000 Sep 20	*Stenella frontalis*	9	29°17'	87°49'	28.4	135	on
2000 Sep 20	*Stenella frontalis*	25	29°26'	87°35'	28.4	66	on
2000 Sep 20	*Stenella frontalis*	8	29°28'	87°33'	28.4	62	on
Leg 2							
2000 Sep 26	*Stenella frontalis*	12	30°09'	86°29'	27.8	35	on
2000 Sep 26	*Tursiops truncatus*	7	30°07'	86°29'	27.8	38	off
2000 Sep 26	*Stenella frontalis*	2	29°39'	86°30'	27.9	145	off
2000 Sep 27	*Tursiops truncatus*	4	29°26'	85°18'	27.7	27	on
2000 Sep 27	*Tursiops truncatus*	1	29°29'	84°53'	27.3	16	on
2000 Sep 27	Unidentified dolphin	1	29°29'	84°31'	27.4	26	on
2000 Sep 30	*Stenella frontalis*	5	27°30'	83°36'	28.2	42	on

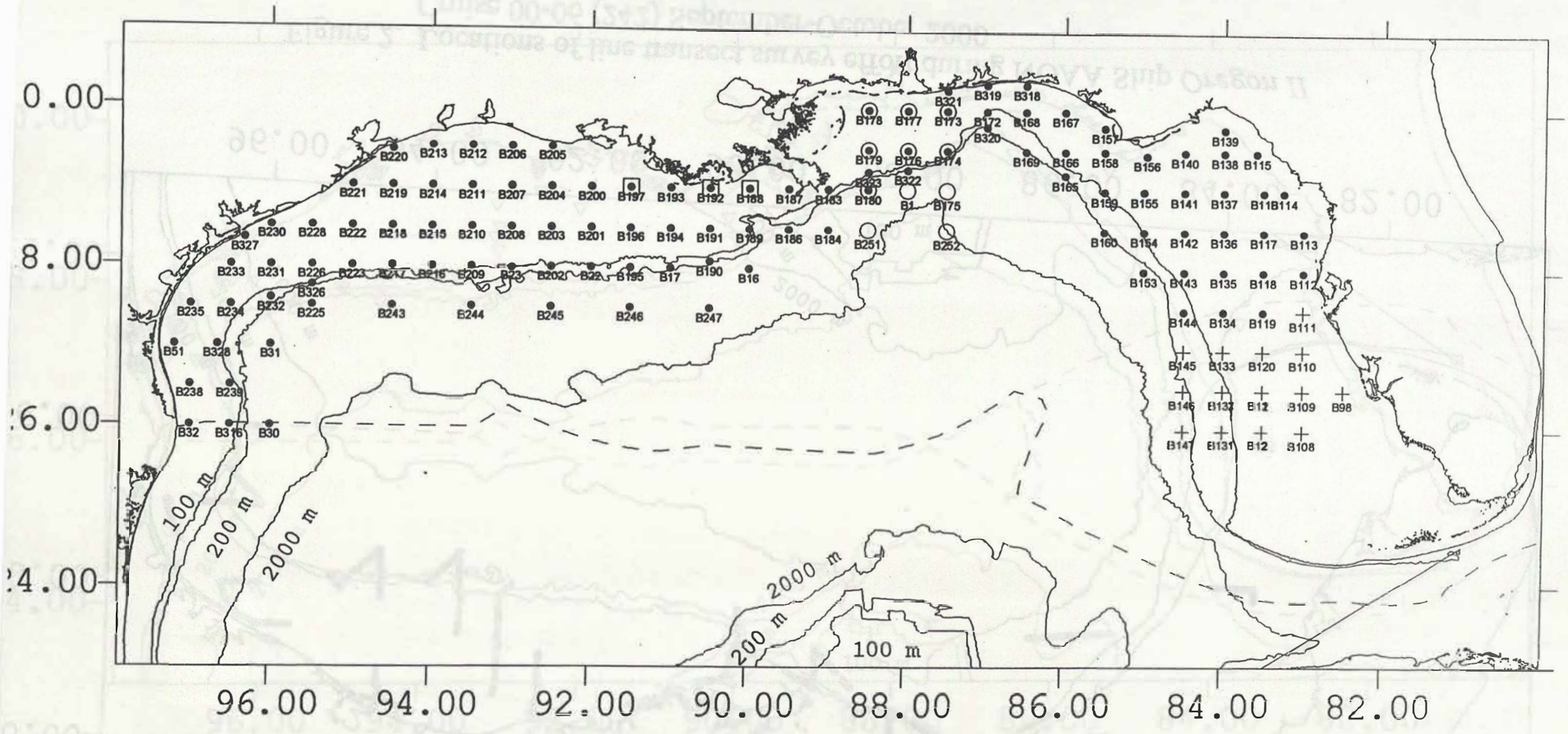

Figure 1. Cruise track with SEAMAP Ichthyoplankton stations for NOAA Ship *Oregon II* Cruise 00-06 (242) September - October 2000 including stations collected by Florida, Mississippi and Louisiana. dot = NMFS; plus = FL; circle = MS; square = LA

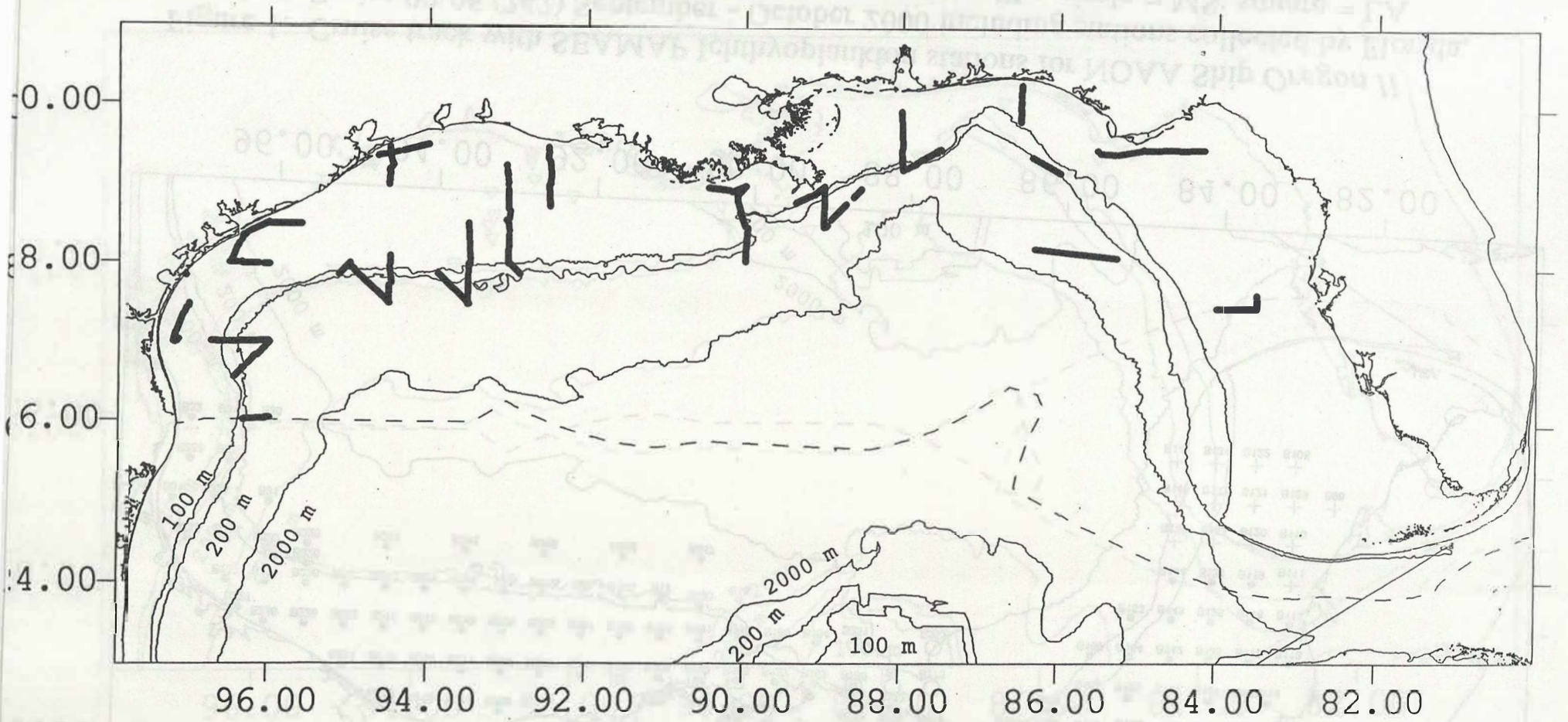

Figure 2. Locations of line transect survey effort during NOAA Ship *Oregon II* Cruise 00-06 (242) September-October 2000.

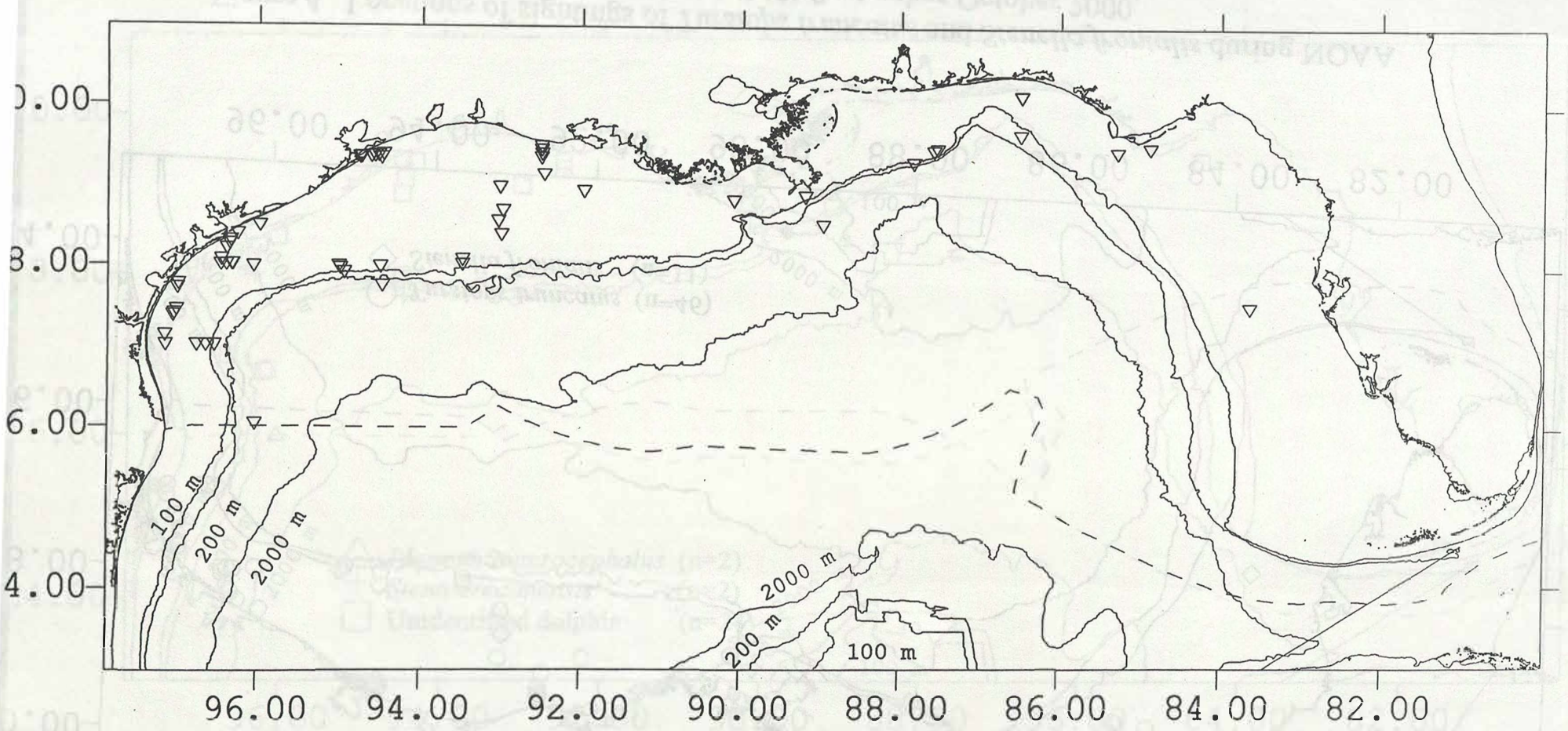

Figure 3. Locations of all cetacean group sightings (n=84) during NOAA Ship *Oregon II* Cruise 00-06 (242) September-October 2000.

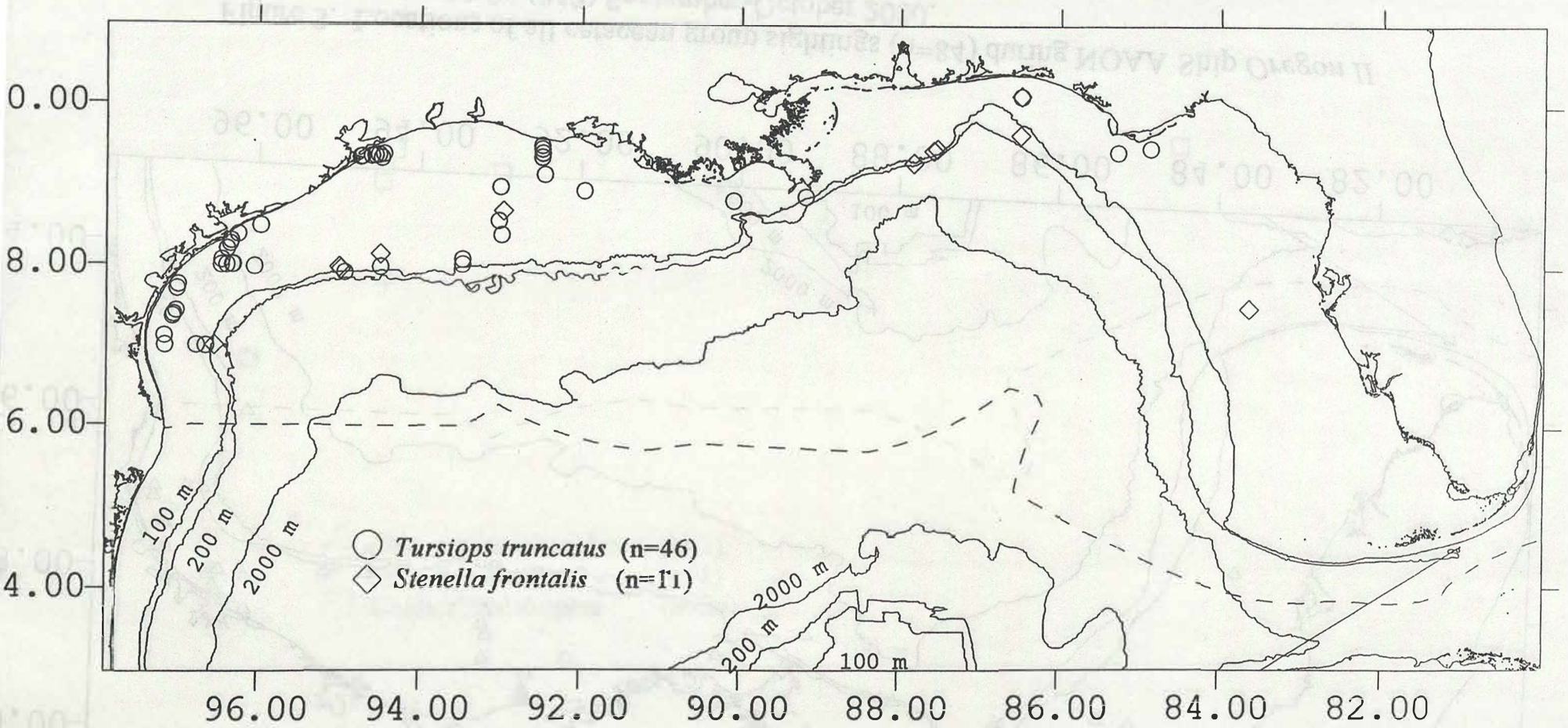

Figure 4. Locations of sightings of *Tursiops truncatus* and *Stenella frontalis* during NOAA Ship *Oregon II* Cruise 00-06 (242) September-October 2000.

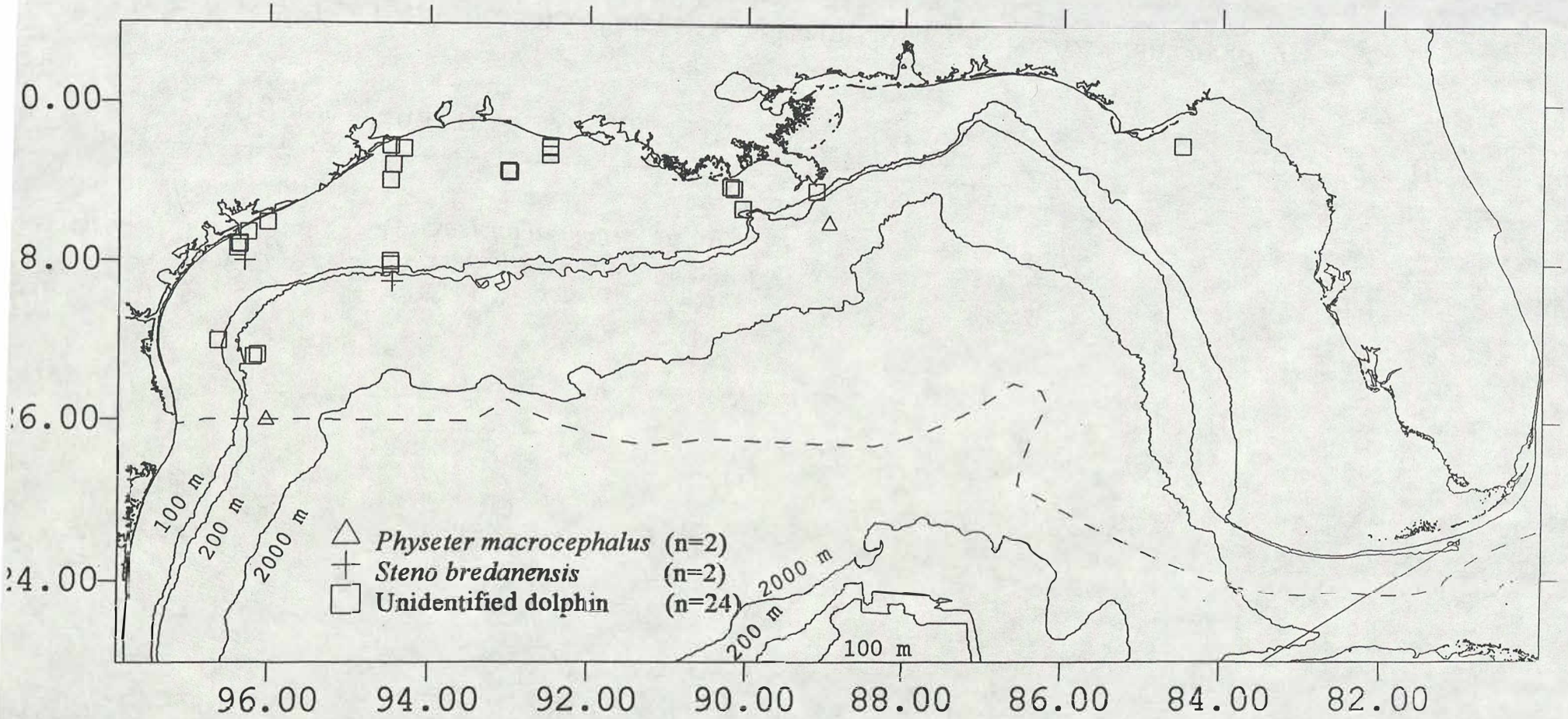

Figure 5. Locations of sightings of *Physeter macrocephalus* , *Steno bredanensis* and unidentified dolphins during NOAA Ship *Oregon II* Cruise 00-06 (242) September-October 2000.

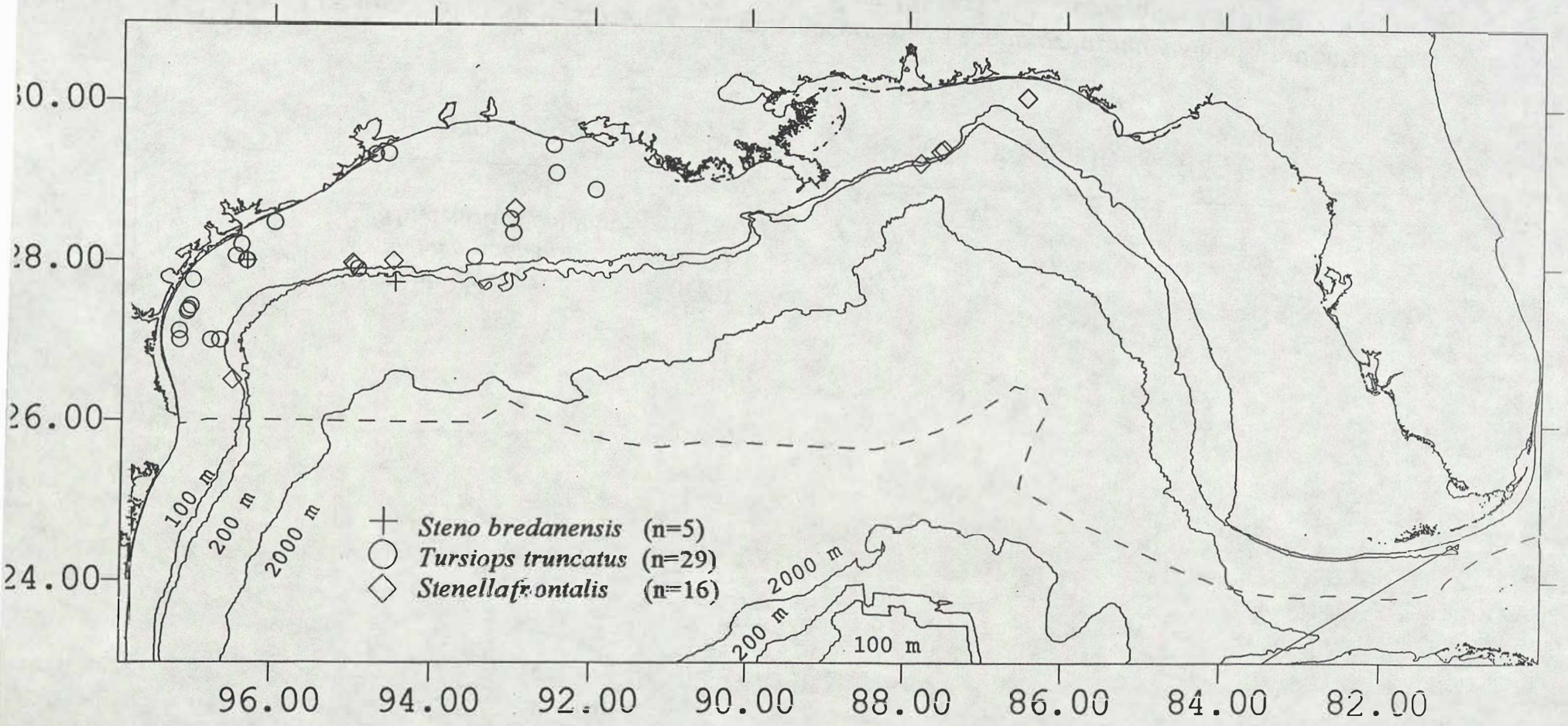

Figure 6. Locations of biopsy samples (n=50) during NOAA Ship *Oregon II* Cruise 00-06 (242) September-October 2000.