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SUMMARY OF SEABIRD, MARINE TURTLE, AND SURFACE FAUNA DATA COLLECTED DURING A SURVEY IN THE EASTERN TROPICAL PACIFIC OCEAN JULY 30 - DECEMBER 9, 1998

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Erratum:

Listing in Table 10 and distribution plot in Figure 12 for *Halobates sericeus* are in error. The species name for these should be *H. sobrinus*.

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SUMMARY OF SEABIRD, MARINE TURTLE, AND SURFACE FAUNA DATA COLLECTED DURING A SURVEY IN THE EASTERN TROPICAL PACIFIC OCEAN, JULY 30 – DECEMBER 9, 1998.

Paula A. Olson, Robert L. Pitman, Lisa T. Ballance, and Stephen B. Reilly

INTRODUCTION

In 1997, with the passage of the International Dolphin Conservation Program Act (Public Law 105-42), Congress directed the National Marine Fisheries Service to determine if the tuna purse-seine fishery in the eastern tropical Pacific (ETP) is having a significant adverse impact on depleted dolphin stocks. To aid in this determination, Congress mandated that dolphin population surveys be undertaken in each of the calendar years 1998, 1999, and 2000. The primary objective of these surveys is to estimate the absolute abundance of the dolphin populations, while the secondary objective is to collect additional data in order to characterize biological and physical features of the ETP pelagic ecosystem.

The Southwest Fisheries Science Center (SWFSC) conducted the first of the surveys, known as *Stenella* Population Abundance Monitoring (SPAM98), from July - December 1998. This report summarizes procedures used and data collected for seabirds, sea turtles, flyingfish, and marine insects in the ETP during the 1998 survey. Separate reports summarize the marine mammal data (Kinzey et al. 1999) and the oceanographic data (Philbrick et al., in prep) obtained during the same survey. The 1998 survey was conducted using three research vessels: the NOAA Ship *McArthur*, the NOAA Ship *David Starr Jordan* (hereafter referred to as the *Jordan*), and the UNOLS Ship *Endeavor*.

Data on seabirds, marine turtles, and surface fauna have been collected during dolphin surveys conducted by SWFSC in the ETP since the mid-1970's. Using these data, Au and Perryman (1985) found species-specific associations between birds and dolphins that helped define dolphin habitat. Analysis of data collected during surveys between 1979 and 1990 has led to a greater understanding of seabird foraging ecology (Pitman and Ballance 1990, 1992) and seabird community ecology (Ballance et al. 1997). Survey data from these years were also used to study the associations between seabirds and marine turtles (Pitman 1993). Au and Pitman (1986) examined the relationships between the species of seabirds, dolphins, and tunas that form large feeding aggregations. Estimates of the surface density of olive ridley turtles (*Lepidochelys olivacea*) in the ETP in 1989 and 1990 were based on data collected during SWFSC surveys (Beavers and Ramsey 1998).

OBJECTIVES

Data on seabirds, marine turtles, and surface fauna, sampled concurrently with the dolphin sighting survey, will aid in understanding of the ETP ecosystem and how variation within the system may affect the distribution and abundance of dolphins.

STUDY AREA AND ITINERARY

The study area extended from 33°N to 18°S and from the continental shores of the Americas to 153°W. Tracklines were designed to systematically sample the study area using line-transect methods to estimate dolphin abundance (Figures 1, 2, and 3).

The survey was conducted from July 30 to December 9, 1998. It was composed of five legs each on the *McArthur* and *Endeavor*, and six legs on the *Jordan*. Survey legs varied between 14 and 29 days in length, separated by 3 to 4 days in port. Itineraries are listed below. Scientific personnel are listed in Appendix 1.

NOAA Ship *McArthur*:

31 JUL	Depart San Diego, CA
31 JUL - 16 AUG	Leg I
16 AUG - 21 AUG	Puerto Quetzal, Guatemala
21 AUG - 08 SEP	Leg II
08 SEP - 13 SEP	Panama City, Panama
13 SEP - 07 OCT	Leg III
07 OCT - 12 OCT	Manzanillo, Mexico
12 OCT - 09 NOV	Leg IV
09 NOV - 14 NOV	Manzanillo, Mexico
14 NOV - 09 DEC	Leg V
09 DEC	Arrive San Diego, CA

UNOLS Ship *Endeavor*:

30 JUL	Depart Panama City, Panama
30 JUL - 27 AUG	Leg I
27 AUG - 01 SEP	Hilo, HI
01 SEP - 25 SEP	Leg II
25 SEP - 30 SEP	Manzanillo, Mexico
30 SEP - 24 OCT	Leg III
24 OCT - 28 OCT	Puntarenas, Costa Rica
28 OCT - 16 NOV	Leg IV
16 NOV - 21 NOV	Callao, Peru
21 NOV - 09 DEC	Leg V
09 DEC	Arrive Panama City, Panama

NOAA Ship *David Starr Jordan*:

31 JUL	Depart San Diego, CA
31 JUL - 14 AUG	Leg I
14 AUG - 18 AUG	Mazatlan, Mexico
18 AUG - 08 SEP	Leg II
08 SEP - 12 SEP	Panama City, Panama
12 SEP - 01 OCT	Leg III
01 OCT - 05 OCT	Manzanillo, Mexico
05 OCT - 24 OCT	Leg IV
24 OCT - 29 OCT	Puntarenas, Costa Rica
29 OCT - 16 NOV	Leg V
16 NOV - 22 NOV	Panama City, Panama
22 NOV - 09 DEC	Leg VI
09 DEC	Arrive San Diego, CA

METHODS

Seabirds

A seabird census was conducted using standard 300 meter strip-transect methods and hand-held binoculars. Bird observers stood shifts on the flying bridge throughout daylight hours when the ship was underway, weather permitting. Species identification, numbers, and behavior of birds were recorded, as well as associations with marine mammals, fish, or flotsam.

A separate census of feeding flocks was conducted using modified strip-transect methods. Mammal observers using 25X binoculars to detect marine mammals (Kinzey et al. 1999) reported the presence of all feeding flocks out to 4.5 kilometers (one binocular reticle). Seabird observers then quantified flock size and species composition.

Sea Turtles

Sightings of sea turtles by mammal and seabird observers were recorded in the marine mammal data file. Sightings were made with 25X binoculars, hand-held binoculars, and unaided eye. Species identification, numbers, approximate size, and associations with flotsam were recorded.

Live turtles were captured opportunistically for biological sampling. Turtles were caught by hand or net from an inflatable boat deployed from the ship, or, from the rail of the ship using a long pole with breakaway netting. Captured turtles were measured, weighed, and flipper-tagged. Blood samples for genetic and hormonal studies were also collected. On the *Jordan*, ultrasonography scans were performed on female turtles using a portable scanner. All turtles were subsequently released.

Flyingfish

A visual survey for flyingfish was conducted using modified strip transect methods. The survey was conducted by the seabird observers, concurrently with the survey for seabirds. All flyingfish flushed by the ship to a distance of 100 meters were recorded.

Surface organisms were collected every evening during a one-hour dipnet station to collect information on the relative abundance and distribution of flyingfishes. The station began approximately one hour after sunset. One or two 500-watt lamps were suspended over the side of the ship to attract animals and two persons using long-handled nets collected them. Information recorded during these stations included species observed, relative abundance, and environmental data (e.g. sea surface temperature and salinity, Beaufort state, and moon phase).

Marine Insects

Sea striders (*Halobates* spp.) were collected opportunistically during the evening dipnet station using a long-handled net.

RESULTS

Seabirds

A total of 2,361.7 hours during 298 days were spent on-effort for the seabird survey conducted from the three ships. During this time a total of 91 species were recorded from the *McArthur* (Table 1), the *Endeavor* (Table 2), and the *Jordan* (Table 3).

Abundance of seabirds varied according to the area surveyed and the month (Tables 1, 2, and 3). The most abundant seabirds were represented by the families Procellariidae (especially Juan Fernandez Petrels and Wedge-tailed Shearwaters) and Sulidae (especially Brown, Red-footed, Masked, Blue-footed, and Peruvian boobies), and by the genera *Sterna* (especially Sooty Terns) and *Chlidonias* (Black Terns).

Sea Turtles

The combined total of sea turtles sighted from the *McArthur*, the *Endeavor*, and the *Jordan* was 1433. This included 374 olive ridleys, 5 loggerheads (*Caretta caretta*), 3 greens (*Chelonia mydas*), 2 leatherbacks (*Dermochelys coriacea*), 171 unidentified hardshell turtles (family Cheloniidae), and 878 unidentified turtles. Figures 4 (*McArthur*), 5 (*Endeavor*), and 6 (*Jordan*) illustrate the distribution of sea turtle sightings in the study area. Olive ridleys were sighted throughout the area; loggerheads were seen west of Baja California and north of 20°N; leatherbacks were seen well offshore at 1°S; and greens were seen offshore between 5°N and 10°N.

A total of 152 olive ridley turtles were captured, sampled, and released; 150 of these were live. Flipper tags were attached to 146 turtles. Blood and/or skin and/or fecal samples were collected from 141 turtles. Sonography results are reported in Kopitsky, Pitman, and Plotkin (in press).

Flyingfish

Over 147,000 flyingfish were sighted from the *McArthur*, the *Endeavor*, and the *Jordan* (Tables 4, 5, and 6). Flyingfish of five genera were recorded, the most abundant represented by *Exocoetus*.

The locations of the 320 dipnet stations for the *McArthur*, the *Endeavor*, and the *Jordan* are shown in Figures 7, 8, and 9, respectively. Tables 7 (*McArthur*), 8 (*Endeavor*), and 9 (*Jordan*) summarize the data and specimens collected during the stations. A total of 1,159 flyingfish were collected.

Marine Insects

A total of 2,542 individual *Halobates* were collected during 166 of the dipnet stations. Locations are shown in Figures 10, 11, 12, and 13. Four species were sampled (Table 10). H. *sobrinus* and H. *micans* were the two most abundant species. H. *sobrinus* were collected primarily in coastal waters and H. *micans* were found primarily offshore in the North Equatorial Countercurrent.

ACKNOWLEDGMENTS

We are grateful to the many people who contributed to the success of this survey. We especially thank the following persons, whose efforts made this project possible: the officers and crew of the NOAA Ships *McArthur* and *David Starr Jordan* and the UNOLS Ship *Endeavor*; the personnel from the NOAA Aircraft Operations Center; the staff at the Southwest Fisheries Science Center, University of Rhode Island Graduate School of Oceanography, and Pacific Marine Center; the marine mammal observers, bird observers, oceanographers, and other cruise participants who collected data. Olive ridley turtles were sampled in collaboration with Dr. Pam Plotkin, University of Delaware. Dr. Lana Cheng of Scripps Institution of Oceanography identified all of the *Halobates* specimens. John Brandon, Katie Cramer, and Kathy Hough assisted with data entry for this report. Robert Holland prepared the plots.

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Table 1. Identity and numbers of seabirds recorded from the *McArthur*, 31 July – 9 December 1998.

Common Name	Scientific Name	Totals	Leg I	Leg II	Leg III	Leg IV	Leg V
Sooty Tern	*STERNA FUSCATA*	6956	0	419	2499	1001	3037
Juan Fernandez Petrel	*PTERODROMA EXTERNA*	3923	88	184	1758	639	1254
Brown Booby	*SULA LEUCOGASTER*	2365	13	54	551	1297	450
Leach's Storm-petrel (light-rumped)	*OCEANODROMA LEUCORHOA*	1346	154	2	153	477	560
Wedge-tailed Shearwater (light phase)	*PUFFINUS PACIFICUS*	1168	82	283	295	63	445
Wedge-tailed Shearwater (dark phase)	*PUFFINUS PACIFICUS*	1058	17	7	664	155	215
Red-footed Booby	*SULA SULA*	595	66	115	258	129	27
Masked Booby	*SULA DACTYLATRA*	584	16	7	485	42	34
Arctic Tern	*STERNA PARADISAEA*	442	0	22	413	6	1
Pink-footed Shearwater	*PUFFINUS CREATOPUS*	400	39	121	32	187	21
Juan Fernandez/White-necked Petrel		383	0	0	378	1	4
Leach's Storm-petrel (dark-rumped)	*OCEANODROMA LEUCORHOA*	350	71	269	0	6	4
Wedge-rumped Storm-petrel	*OCEANODROMA TETHYS*	306	57	75	96	64	14
Tahiti Petrel	*PSEUDOBULWERIA ROSTRATA*	255	48	55	89	20	43
Nazca Booby	*SULA GRANTI*	196	29	115	22	22	8
Audubon's Shearwater	*PUFFINUS LHERMINIERI*	183	125	13	39	6	0
Masked/Nazca Booby		158	2	24	112	14	6
Black Storm-petrel	*OCEANODROMA MELANIA*	137	60	52	4	8	13
Black Tern	*CHLIDONIAS NIGER*	135	2	18	65	19	31
Pomarine Jaeger	*STERCORARIUS POMARINUS*	132	4	1	10	79	38
White Tern	*GYGIS ALBA*	96	0	28	30	6	32
Red Phalarope	*PHALAROPUS FULICARIUS*	95	12	34	18	21	10
Northern Phalarope	*PHALAROPUS LOBATUS*	85	0	0	10	39	36
Great Frigatebird	*FREGATA MINOR*	83	0	32	49	1	1
Leach's Storm-petrel (intermediate-rumped)	*OCEANODROMA LEUCORHOA*	55	36	0	0	10	9
Sooty Shearwater	*PUFFINUS GRISEUS*	54	0	1	0	4	49
Shorebirds		50	7	19	13	11	0
Harcourt's Storm-petrel	*OCEANODROMA CASTRO*	44	1	28	11	4	0
Passerines		44	2	14	12	13	3
Least Storm-petrel	*OCEANODROMA MICROSOMA*	43	0	0	0	4	39

Table 1 (*McArthur* seabirds) continued.

Common Name	Scientific Name	Totals	Leg I	Leg II	Leg III	Leg IV	Leg V
Bridled Tern	*STERNA ANAETHETUS*	41	0	3	38	0	0
Red-billed Tropicbird	*PHAETHON AETHEREUS*	40	14	6	10	2	8
Kermadec Petrel	*PTERODROMA NEGLECTA*	38	4	13	16	3	2
Parasitic Jaeger	*STERCORARIUS PARASITICUS*	33	0	2	24	3	4
Christmas Shearwater	*PUFFINUS NATIVITATUS*	30	6	13	9	0	2
Magnificent Frigatebird	*FREGATA MAGNIFICENS*	27	0	5	9	11	2
Red-tailed Tropicbird	*PHAETHON RUBRICAUDA*	26	0	0	2	6	18
Long-tailed Jaeger	*STERCORARIUS LONGICAUDUS*	23	1	5	15	2	0
Leach's Storm-petrel	*OCEANODROMA LEUCORHOA*	21	14	0	0	1	6
Unidentified Frigatebird	*FREGATA SP.*	19	0	6	12	1	0
White-Winged Petrel	*PTERODROMA LEUCOPTERA*	16	0	0	13	0	3
Sabine's Gull	*LARUS SABINI*	15	0	4	1	1	9
Cook's Petrel	*PTERODROMA COOKII*	14	7	0	2	4	1
Brown Noddy	*ANOUS STOLIDUS*	14	0	3	10	0	1
Black-footed Albatross	*DIOMEDEA NIGRIPES*	12	2	0	0	0	10
Parkinson's Petrel	*PROCELLARIA PARKINSONI*	12	6	2	4	0	0
Dark-rumped Petrel	*PTERODROMA PHAEOPYGIA*	11	0	3	7	0	1
Black-winged Petrel	*PTERODROMA NIGRIPENNIS*	11	0	0	1	8	2
Townsend's Shearwater	*PUFFINUS AURICULARIS*	11	0	0	8	1	2
Newell's Shearwater	*PUFFINUS NEWELLI*	10	0	1	5	2	2
South Polar Skua	*CATHARACTA MACCORMICKI*	8	3	2	1	1	1
Common Tern	*STERNA HIRUNDO*	8	0	0	0	0	8
Stejneger's Petrel	*PTERODROMA LONGIROSTRIS*	6	0	0	0	4	2
Buller's Shearwater	*PUFFINUS BULLERI*	6	0	1	0	0	5
Markham's Storm-Petrel	*OCEANODROMA MARKHAMI*	6	2	0	3	1	0
Jaeger spp.	*STERCORARIUS SPP.*	6	0	1	1	3	1
Mottled Petrel	*PTERODROMA INEXPECTATA*	5	0	0	0	0	5
Phalarope spp.	*PHALAROPUS SPP.*	4	2	1	0	1	0
Glaucous-winged Gull	*LARUS GLAUCESCENS*	4	0	0	0	0	4
Northern Fulmar (dark phase)	*FULMARUS GLACIALIS*	3	0	0	0	0	3
Phoenix Petrel	*PTERODROMA ALBA*	3	0	0	0	1	2

Table 1 (*McArthur* seabirds) continued.

Common Name	Scientific Name	Totals	Leg I	Leg II	Leg III	Leg IV	Leg V
Kermadec/Herald Petrel		3	1	0	1	1	0
Pycroft's Petrel	*PTERODROMA PYCROFTI*	3	0	0	3	0	0
Least Tern	*STERNA ANTILLARUM*	3	0	2	1	0	0
Herald Petrel	*PTERODROMA HERALDICA*	2	0	0	2	0	0
Flesh-footed Shearwater	*PUFFINUS CARNEIPES*	2	0	0	0	0	2
Leach's/Harcourt's Storm-petrel		2	0	0	1	0	1
Parasitic/Long-tailed Jaeger		2	0	1	0	1	0
Heermann's Gull	*LARUS HEERMANNI*	2	0	0	0	0	2
Western Gull	*LARUS OCCIDENTALIS*	2	1	0	0	0	1
Craveri's Murrelet	*SYNTHLIBORAMPHUS CRAVERI*	2	0	0	0	2	0
Laysan Albatross	*DIOMEDEA IMMUTABILIS*	1	0	0	0	0	1
Northern Fulmar (light phase)	*FULMARUS GLACIALIS*	1	0	0	0	0	1
Slender-billed Shearwater	*PUFFINUS TENUIROSTRIS*	1	0	0	0	0	1
Brown Pelican	*PELECANUS OCCIDENTALIS*	1	0	1	0	0	0
Skua spp.	*CATHARACTA SPP.*	1	1	0	0	0	0
California Gull	*LARUS CALIFORNICUS*	1	0	0	0	0	1
Laughing Gull	*LARUS ATRICILLA*	1	0	1	0	0	0
Black-legged Kittiwake	*RISSA TRIDACTYLA*	1	0	0	0	0	1
Swallow-tailed Gull	*LARUS FURCATUS*	1	0	0	1	0	0
	TOTALS	22236	995	2068	8266	4408	6499

Table 2. Identity and numbers of seabirds recorded from the *Endeavor*, 30 July – 9 December 1998. (There was no census Leg I.)

Common Name	Scientific Name	Total	Leg II	Leg III	Leg IV	Leg V
Sooty Tern	*STERNA FUSCATA*	6313	3875	2403	15	20
Peruvian Booby	*SULA VARIEGATA*	5786	0	0	0	5786
Sooty Shearwater	*PUFFINUS GRISEUS*	1976	35	0	0	1941
Wedge-tailed Shearwater (dark phase)	*PUFFINUS PACIFICUS*	1673	1435	234	3	1
Blue-footed Booby	*SULA NEBOUXII*	1557	0	0	17	1540
Guanay Cormorant	*PHALACROCORAX BOUGAINVILLII*	1522	0	0	0	1522
Red Phalarope	*PHALAROPUS FULICARIUS*	1365	11	10	113	1231
Red-footed Booby	*SULA SULA*	1338	77	359	896	6
Juan Fernandez Petrel	*PTERODROMA EXTERNA*	1252	0	1207	45	0
Wedge-rumped Storm-petrel	*OCEANODROMA TETHYS*	1205	137	155	188	725
Leach's Storm-petrel (light-rumped)	*OCEANODROMA LEUCORHOA*	1144	180	561	170	233
Franklin's Gull	*LARUS PIPIXCAN*	662	0	0	1	661
Brown Booby	*SULA LEUCOGASTER*	612		368	236	8
Phalarope spp.	*PHALAROPUS SPP.*	506	2	18	6	480
Black Tern	*CHLIDONIAS NIGER*	393	79	287	0	27
Markham's Storm-petrel	*OCEANODROMA MARKHAMI*	384	0	0	277	107
Wedge-tailed Shearwater (light phase)	*PUFFINUS PACIFICUS*	359	38	261	39	21
Sabine's Gull	*LARUS SABINI*	358	1	0	0	357
Laughing Gull	*LARUS ATRICILLA*	294	0	0	8	286
Inca Tern	*LAROSTERNA INCA*	284	0	0	0	284
Nazca Booby	*SULA GRANTI*	192	13	24	99	56
Masked Booby	*SULA DACTYLATRA*	169	15	122	32	0
Masked/Nazca Booby		119	3	67	0	49
Pink-footed Shearwater	*PUFFINUS CREATOPUS*	114	27	52	20	15
Pomarine Jaeger	*STERCORARIUS POMARINUS*	113	5	12	4	92
Wedge-tailed Shearwater	*PUFFINUS PACIFICUS*	106	43	59	4	0
Frigatebird spp.	*FREGATA SPP.*	100	0	35	7	58
Audubon's Shearwater	*PUFFINUS LHERMINIERI*	96	21	21	54	0
White-bellied Storm-petrel	*FREGETTA GRALLARIA*	91	0	0	91	0
Black Storm-petrel	*OCEANODROMA MELANIA*	85	24	55	3	3
Shorebirds		80	76	2	0	2

Table 2 (*Endeavor* seabirds) continued.

Common Name	Scientific Name	Total	Leg II	Leg III	Leg IV	Leg V
Dark-rumped Petrel	*PTERODROMA PHAEOPYGIA*	70	4	1	65	0
Leach's Storm-petrel (dark-rumped)	*OCEANODROMA LEUCORHOA*	69	11	43	8	7
Tahiti Petrel	*PSEUDOBULWERIA ROSTRATA*	65	22	35	8	0
Arctic Tern	*STERNA PARADISAEA*	64	42	8	2	12
Waved Albatross	*DIOMEDEA IRRORATA*	62	0	0	8	54
Least Storm-petrel	*OCEANODROMA MICROSOMA*	61	11	46	4	0
Harcourt's Storm-petrel	*OCEANODROMA CASTRO*	50	1	1	25	23
White-vented Storm-petrel	*OCEANITES GRACILIS*	48	0	0	48	0
Royal Tern	*STERNA MAXIMA*	46	0	0	0	46
Buller's Shearwater	*PUFFINUS BULLERI*	42	42	0	0	0
Hornby's Storm-petrel	*OCEANODROMA HORNBYI*	40	0	0	1	39
Parasitic Jaeger	*STERCORARIUS PARASITICUS*	33	9	10	2	12
Red-billed Tropicbird	*PHAETHON AETHEREUS*	32	1	10	14	7
Kermadec Petrel	*PTERODROMA NEGLECTA*	30	12	2	15	1
White Tern	*GYGIS ALBA*	28	24	3	1	0
Leach's Storm-petrel	*OCEANODROMA LEUCORHOA*	27	9	13	0	5
Defilippe's Petrel	*PTERODROMA DEFILIPPIANA*	25	0	0	25	0
Swallow-tailed Gull	*LARUS FURCATUS*	24	0	0	7	17
Great Frigatebird	*FREGATA MINOR*	22	3	9	7	3
Phoenix Petrel	*PTERODROMA ALBA*	21	21	0	0	0
Black-winged Petrel	*PTERODROMA NIGRIPENNIS*	20	20	0	0	0
Wilson's Storm-petrel	*OCEANITES OCEANICUS*	17	0	1	3	13
Cook's Petrel	*PTERODROMA COOKII*	16	15	0	1	0
Magnificent Frigatebird	*FREGATA MAGNIFICENS*	16	0	4	7	5
Brown Noddy	*ANOUS STOLIDUS*	16	0	5	6	5
Red-tailed Tropicbird	*PHAETHON RUBRICAUDA*	15	7	2	6	0
South Polar Skua	*CATHARACTA MACCORMICKI*	13	1	2	0	10
White-Winged Petrel	*PTERODROMA LEUCOPTERA*	10	3	2	5	0
Christmas Shearwater	*PUFFINUS NATIVITATUS*	10	4	6	0	0
Stejneger's Petrel	*PTERODROMA LONGIROSTRIS*	9	0	1	8	0
Passerines		9	1	1	0	7

Table 2 (*Endeavor* seabirds) continued.

Common Name	Scientific Name	Total	Leg II	Leg III	Leg IV	Leg V
Pycroft's Petrel	*PTERODROMA PYCROFTI*	8	7	1	0	0
Jaeger spp.	*STERCORARIUS SPP.*	8	1	2	0	5
Murphy's Petrel	*PTERODROMA ULTIMA*	7	1	1	5	0
Herald Petrel	*PTERODROMA HERALDICA*	7	4	0	3	0
Townsend's Shearwater	*PUFFINUS AURICULARIS*	7	4	2	1	0
Long-tailed Jaeger	*STERCORARIUS LONGICAUDUS*	7	1	1	3	2
Parkinson's Petrel	*PROCELLARIA PARKINSONI*	6	0	1	1	4
Newell's Shearwater	*PUFFINUS NEWELLI*	6	6	0	0	0
Common Tern	*STERNA HIRUNDO*	6	0	3	0	3
White-tailed Tropicbird	*PHAETHON LEPTURUS*	5	4	1	0	0
Band-tailed Gull	*LARUS BELCHERI*	5	0	0	0	5
Humboldt Penguin	*SPHENISCUS HUMBOLDTI*	3	0	0	0	3
Bulwer's Petrel	*BULWERIA BULWERII*	3	3	0	0	0
Northern Phalarope	*PHALAROPUS LOBATUS*	3	0	0	0	3
Black-vented Shearwater	*PUFFINUS OPISTHOMELAS*	2	2	0	0	0
Leach's/Harcourt's Storm-petrel		2	0	0	2	0
Parasitic/Long-tailed Jaeger		2	1	0	0	1
Peruvian Diving Petrel	*PELECANOIDES GARNOTI*	1	0	0	0	1
Collared Petrel	*PTERODROMA BREVIPES*	1	1	0	0	0
Flesh-footed Shearwater	*PUFFINUS CARNEIPES*	1	1	0	0	0
Bridled Tern	*STERNA ANAETHETUS*	1	0	1	0	0
Sandwich Tern	*STERNA SANDVICENSIS*	1	0	0	0	1
	TOTALS	31350	6396	6530	2619	15805

Table 3. Identity and numbers of seabirds recorded from the *Jordan*, 31 July – 9 December 1998.

Common Name	Scientific Name	Total	Leg I	Leg II	Leg III	Leg IV	Leg V	Leg VI
Juan Fernandez/White-necked Petrel		2860	0	0	2271	542	47	0
Brown Booby	*SULA LEUCOGASTER*	2544	150	886	432	366	299	411
Black Tern	*CHLIDONIAS NIGER*	1424	70	756	0	254	182	162
Red-footed Booby	*SULA SULA*	1412	90	94	603	112	461	52
Least Storm-petrel	*OCEANODROMA MICROSOMA*	1141	569	545	0	14	0	13
Black Storm-petrel	*OCEANODROMA MELANIA*	877	420	439	8	5	1	4
Wedge-tailed Shearwater (light phase)	*PUFFINUS PACIFICUS*	845	132	128	167	52	20	346
Wedge-tailed Shearwater (dark phase)	*PUFFINUS PACIFICUS*	795	9	6	572	183	23	2
Sooty Tern	*STERNA FUSCATA*	788	0	63	37	585	103	0
Northern Phalarope	*PHALAROPUS LOBATUS*	745	672	46	5	14	1	7
0	*PTERODROMA EXTERNA*	645	0	0	398	156	91	0
Masked Booby	*SULA DACTYLATRA*	533	1	3	471	13	1	44
Arctic Tern	*STERNA PARADISAEA*	396	0	2	300	93	1	0
Leach's Storm-petrel (light-rumped)	*OCEANODROMA LEUCORHOA*	371	1	0	75	154	53	88
Pink-footed Shearwater	*PUFFINUS CREATOPUS*	370	73	114	101	43	11	28
Audubon's Shearwater	*PUFFINUS LHERMINIERI*	363	1	331	2	5	19	5
Brown Noddy	*ANOUS STOLIDUS*	355	0	343	0	2	8	2
Red Phalarope	*PHALAROPUS FULICARIUS*	338	147	63	16	2	69	41
Nazca Booby	*SULA GRANTI*	293	13	164	17	19	58	22
Wedge-rumped Storm-petrel	*OCEANODROMA TETHYS*	259	21	99	81	28	29	1
Franklin's Gull	*LARUS PIPIXCAN*	222	0	0	0	2	219	1
Magnificent Frigatebird	*FREGATA MAGNIFICENS*	205	25	167	4	1	6	2
Phalarope spp.	*PHALAROPUS SPP.*	162	81	7	6	21	24	23
Brown Pelican	*PELECANUS OCCIDENTALIS*	151	13	42	35	0	5	56
Leach's Storm-Petrel	*OCEANODROMA LEUCORHOA*	129	128	1	0	0	0	0
Western Gull	*LARUS OCCIDENTALIS*	127	103	0	0	0	0	24
Parkinson's Petrel	*PROCELLARIA PARKINSONI*	125	0	118	0	2	5	0
Blue-footed Booby	*SULA NEBOUXII*	121	15	19	3	0	84	0
Townsend's Shearwater	*PUFFINUS AURICULARIS*	115	14	97	0	0	0	4
Leach's/Harcourt's Storm-petrel		110	0	0	38	44	23	5
Least Tern	*STERNA ANTILLARUM*	106	36	11	0	0	0	59

Table 3 (*Jordan* seabirds) continued.

Common Name	Scientific Name	Total	Leg I	Leg II	Leg III	Leg IV	Leg V	Leg VI
Sabine's Gull	*LARUS SABINI*	97	4	79	0	1	6	7
Tahiti Petrel	*PSEUDOBULWERIA ROSTRATA*	94	0	31	40	13	4	6
Frigatebird spp.	*FREGATA SPP.*	91	0	0	29	22	23	17
Leach's Storm-Petrel (dark-rumped)	*OCEANODROMA LEUCORHOA*	90	69	17	2	0	0	2
Pomarine Jaeger	*STERCORARIUS POMARINUS*	88	4	4	9	11	9	51
Masked/Nazca Booby		83	9	30	20	18	2	4
Black-vented Shearwater	*PUFFINUS OPISTHOMELAS*	79	63	12	0	0	0	4
Shorebirds		76	48	21	7	0	0	0
Red-billed Tropicbird	*PHAETHON AETHEREUS*	56	7	9	4	3	16	17
Common Tern	*STERNA HIRUNDO*	49	18	1	0	0	21	9
Sooty Shearwater	*PUFFINUS GRISEUS*	48	32	4	0	0	9	3
Jaeger spp.	*STERCORARIUS SPP.*	48	0	5	12	11	8	12
Bridled Tern	*STERNA ANAETHETUS*	44	0	40	2	0	1	1
Passerines		39	11	1	9	10	6	2
Craveri's/Xantus' Murrelet		38	38	0	0	0	0	0
White-Winged Petrel	*PTERODROMA LEUCOPTERA*	25	0	0	0	25	0	0
Christmas Shearwater	*PUFFINUS NATIVITATUS*	22	0	15	2	4	1	0
Harcourt's Storm-petrel	*OCEANODROMA CASTRO*	22	0	1	0	0	21	0
Waved Albatross	*DIOMEDEA IRRORATA*	18	0	0	0	0	18	0
Black/Marham's Storm-petrel		18	0	5	10	0	0	3
Parasitic/Long-tailed Jaeger		18	0	1	3	12	1	1
Parasitic Jaeger	*STERCORARIUS PARASITICUS*	15	1	5	5	2	1	1
Dark-rumped Petrel	*PTERODROMA PHAEOPYGIA*	13	0	0	0	0	13	0
Heermann's Gull	*LARUS HEERMANNI*	12	12	0	0	0	0	0
Royal Tern	*STERNA MAXIMA*	11	2	4	0	0	3	2
Kermadec Petrel	*PTERODROMA NEGLECTA*	10	0	3	2	5	0	0
Long-tailed Jaeger	*STERCORARIUS LONGICAUDUS*	10	0	2	4	1	3	0
Wedge-tailed Shearwater	*PUFFINUS PACIFICUS*	9	0	0	8	0	1	0
Laughing Gull	*LARUS ATRICILLA*	9	0	1	0	0	6	2
Markham's Storm-petrel	*OCEANODROMA MARKHAMI*	7	0	6	0	0	0	1
Red-tailed Tropicbird	*PHAETHON RUBRICAUDA*	7	0	0	0	7	0	0

Table 3 (*Jordan* seabirds) continued.

Common Name	Scientific Name	Total	Leg I	Leg II	Leg III	Leg IV	Leg V	Leg VI
White Tern	*GYGIS ALBA*	6	0	0	0	0	5	1
Black-footed Albatross	*DIOMEDEA NIGRIPES*	5	5	0	0	0	0	0
Northern Fulmar	*FULMARUS GLACIALIS*	5	1	0	0	0	0	4
White-vented Storm-petrel	*OCEANITES GRACILIS*	5	0	0	0	0	5	0
South Polar Skua	*CATHARACTA MACCORMICKI*	4	3	0	0	0	1	0
Xantus' Murrelet	*SYNTHLIBORAMPHUS HYPOLEUCA*	4	4	0	0	0	0	0
Craveri's Murrelet	*SYNTHLIBORAMPHUS CRAVERI*	4	4	0	0	0	0	0
Bulwer's Petrel	*BULWERIA BULWERII*	3	0	0	0	0	0	3
California Gull	*LARUS CALIFORNICUS*	3	0	0	0	0	0	3
Swallow-tailed Gull	*LARUS FURCATUS*	3	0	0	0	1	2	0
Leach's Storm-petrel (intermediate-rumped)	*OCEANODROMA LEUCORHOA*	2	0	0	1	0	0	1
Skua spp.	*CATHARACTA SP.*	2	0	1	0	0	0	1
Yellow-footed Gull	*LARUS LIVENS*	2	2	0	0	0	0	0
Black-legged Kittiwake	*RISSA TRIDACTYLA*	2	0	0	0	0	0	2
Black Noddy	*ANOUS MINUTUS*	2	0	2	0	0	0	0
Kermadec/Herald Petrel		1	0	0	0	1	0	0
Cook's Petrel	*PTERODROMA COOKII*	1	0	0	0	1	0	0
Townsend's/Newell's Shearwater		1	0	0	0	1	0	0
Wilson's Storm-Petrel	*OCEANITES OCEANICUS*	1	0	0	0	0	1	0
White-throated Storm-Petrel	*NESOFREGETTA ALBIGULARIS*	1	0	0	0	1	0	0
	TOTALS	20230	3121	4844	5811	2862	2030	1562

Table 4. Identity and numbers of flyingfish sighted from the flying bridge of the *McArthur*, 31 July - 9 December 1998.

	Unidentified	**Four-Winged**	***Exocoetus***	**Other**	**Total**
Leg 1	396	475	16,330	11	17,212
Leg 2	261	165	885	0	1311
Leg 3	333	589	12,807	1	13,730
Leg 4	56	848	40,942	0	41,846
Leg 5	34	667	24,080	0	24,781
Total	1080	2744	95,044	12	98,880

Table 5. Identity and numbers of flyingfish sighted from the flying bridge of the *Endeavor*, 30 July - 9 December 1998. (No effort Leg 1.)

	Unidentified	**Four-Winged**	***Exocoetus***	**Other**	**Total**
Leg 2	542	553	9353	0	10,448
Leg 3	13	616	6866	0	7495
Leg 4	0	280	3948	0	4228
Leg 5	1	113	140	0	254
Total	556	1562	20,307	0	22,425

Table 6. Identity and numbers of flyingfish sighted from the flying bridge of the *Jordan*, 31 July – 9 December 1998.

	Unidentified	**4-Wing**	***Exocoetus* sp.**	***Prognichthys* sp.**	***Hirundichthys* sp.**	***Cheilopogon* sp.**	***Cypselurus calopterus***	***Cypselurus pinnatibarbatus***	**Total**
Leg 1	945	219	1689	0	1	287	20	125	3286
Leg 2	291	311	0	0	0	400	2	0	1004
Leg 3	333	346	8530	1	224	312	2	0	9748
Leg 4	436	224	6198	1	331	288	1	0	7479
Leg 5	168	96	1370	5	35	139	5	0	1818
Leg 6	523	129	2103	4	59	334	16	0	3168
Total	2696	1325	19,890	11	650	1760	46	125	26,503

Table 7. Results of night-light dipnet sampling, *McArthur*, 31 July – 9 December 1998.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (psu)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
1	98 08 02	0.5	24.45	-118.10	3.0	3	1	23.7	33.64	0	0	0	2	2	0
2	98 08 03	0.5	21.75	-116.43	2.0	3	1	26.9	33.99	5	1	0	2	2	0
2	98 08 03	0.5	21.75	-116.43	2.0	3	1	26.9	33.99	100	2	3	0	0	0
2	98 08 03	0.5	21.75	-116.43	2.0	3	1	26.9	33.99	500	1	0	0	0	0
2	98 08 03	0.5	21.75	-116.43	2.0	3	1	26.9	33.99	500	3	0	0	0	0
2	98 08 03	0.5	21.75	-116.43	2.0	3	1	26.9	33.99	500	4	0	0	0	0
3	98 08 04	0.5	18.73	-114.65	2.0	3	2	27.3	34.12	100	1	1	2	3	0
3	98 08 04	0.5	18.73	-114.65	2.0	3	2	27.3	34.12	500	1	0	0	0	0
4	98 08 05	0.5	15.92	-113.05	3.0	5	4	26.1	34.02	5	2	0	2	4	0
4	98 08 05	0.5	15.92	-113.05	3.0	5	4	26.1	34.02	100	1	0	0	0	0
4	98 08 05	0.5	15.92	-113.05	3.0	5	4	26.1	34.02	500	1	0	0	0	0
4	98 08 05	0.5	15.92	-113.05	3.0	5	4	26.1	34.02	500	1	0	0	0	0
5	98 08 06	0.5	14.28	-111.25	3.0	4	2	28.4	33.69	5	2	0	2	1	0
5	98 08 06	0.5	14.28	-111.25	3.0	4	2	28.4	33.69	100	1	0	0	0	0
5	98 08 06	0.5	14.28	-111.25	3.0	4	2	28.4	33.69	300	1	0	0	0	0
6	98 08 07	0.5	13.90	-109.40	2.0	4	2	28.5	33.37	30	4	1	0	0	0
6	98 08 07	0.5	13.90	-109.40	2.0	4	2	28.5	33.37	300	1	1	0	0	0
6	98 08 07	0.5	13.90	-109.40	2.0	4	2	28.5	33.37	500	1	0	0	0	0
7	98 08 08	0.5	13.63	-107.90	1.0	4	2	29.0	33.41	5	1	0	2	3	0
7	98 08 08	0.5	13.63	-107.90	1.0	4	2	29.0	33.41	20	1	1	0	0	0
7	98 08 08	0.5	13.63	-107.90	1.0	4	2	29.0	33.41	80	2	4	0	0	0
7	98 08 08	0.5	13.63	-107.90	1.0	4	2	29.0	33.41	900	1	0	0	0	0
8	98 08 09	0.5	13.12	-105.07	4.0	5	2	28.8	33.39	5	3	0	2	4	0
8	98 08 09	0.5	13.12	-105.07	4.0	5	2	28.8	33.39	300	1	0	0	0	0
9	98 08 10	0.5	12.40	-101.97	3.0	5	3	28.9	32.95	10	4	4	2	3	0
9	98 08 10	0.5	12.40	-101.97	3.0	5	3	28.9	32.95	300	1	0	0	0	0
9	98 08 10	0.5	12.40	-101.97	3.0	5	3	28.9	32.95	500	1	0	0	0	0
10	98 08 11	0.5	12.72	-99.37	2.0	5	2	28.5	33.01	10	2	1	2	3	0
10	98 08 11	0.5	12.72	-99.37	2.0	5	2	28.5	33.01	20	3	2	0	0	0
10	98 08 11	0.5	12.72	-99.37	2.0	5	2	28.5	33.01	30	2	2	0	0	0
11	98 08 12	0.5	14.93	-98.07	2.0	5	1	30.2	33.26	10	4	9	1	1	0
11	98 08 12	0.5	14.93	-98.07	2.0	5	1	30.2	33.26	30	1	0	2	1	1
11	98 08 12	0.5	14.93	-98.07	2.0	5	1	30.2	33.26	500	1	1	0	0	0
12	98 08 13	0.5	13.95	-95.35	3.0	5	1	29.6	33.30	10	3	3	0	0	0
12	98 08 13	0.5	13.95	-95.35	3.0	5	1	29.6	33.30	30	1	0	0	0	0
12	98 08 13	0.5	13.95	-95.35	3.0	5	1	29.6	33.30	500	1	1	0	0	0
13	98 08 14	0.5	13.20	-93.37	2.0	5	1	30.2	33.29	10	2	1	2	3	0
13	98 08 14	0.5	13.20	-93.37	2.0	5	1	30.2	33.29	80	1	1	0	0	0
13	98 08 14	0.5	13.20	-93.37	2.0	5	1	30.2	33.29	500	1	1	0	0	0
13	98 08 14	0.5	13.20	-93.37	2.0	5	1	30.2	33.29	500	1	1	0	0	0
14	98 08 15	0.5	13.43	-91.38	1.0	5	1	33.6	33.01	30	1	1	0	0	0
14	98 08 15	0.5	13.43	-91.38	1.0	5	1	33.6	33.01	100	1	1	0	0	0
14	98 08 15	0.5	13.43	-91.38	1.0	5	1	33.6	33.01	200	2	3	0	0	0
14	98 08 15	0.5	13.43	-91.38	1.0	5	1	33.6	33.01	500	6	0	0	0	0

Table 7 (*McArthur* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
15	98 08 21	0.5	12.93	-90.53	3.0	5	3	29.4	33.17	10	4	6	1	3	0
15	98 08 21	0.5	12.93	-90.53	3.0	5	3	29.4	33.17	30	1	0	2	3	0
15	98 08 21	0.5	12.93	-90.53	3.0	5	3	29.4	33.17	500	1	0	3	1	1
16	98 08 22	0.5	11.72	-91.30	2.0	5	1	28.9	32.90	10	4	17	2	1	0
16	98 08 22	0.5	11.72	-91.30	2.0	5	1	28.9	32.90	20	1	1	0	0	0
16	98 08 22	0.5	11.72	-91.30	2.0	5	1	28.9	32.90	30	2	1	0	0	0
16	98 08 22	0.5	11.72	-91.30	2.0	5	1	28.9	32.90	100	2	0	0	0	0
	98 08 23	0.0	12.57	-90.47	-	-	-	-	-	30	0	1	0	0	0
17	98 08 23	0.5	12.75	-94.30	3.0	5	2	29.0	32.79	10	3	1	1	2	0
17	98 08 23	0.5	12.75	-94.30	3.0	5	2	29.0	32.79	80	1	1	2	4	0
17	98 08 23	0.5	12.75	-94.30	3.0	5	2	29.0	32.79	500	1	1	3	2	0
18	98 08 24	0.5	11.58	-97.30	4.0	5	3	29.1	33.22	10	2	1	1	1	0
18	98 08 24	0.5	11.58	-97.30	4.0	5	3	29.1	33.22	20	2	2	2	2	0
18	98 08 24	0.5	11.58	-97.30	4.0	5	3	29.1	33.22	30	1	0	3	1	0
18	98 08 24	0.5	11.58	-97.30	4.0	5	3	29.1	33.22	100	1	1	0	0	0
18	98 08 24	0.5	11.58	-97.30	4.0	5	3	29.1	33.22	300	1	1	0	0	0
18	98 08 24	0.5	11.58	-97.30	4.0	5	3	29.1	33.22	500	1	0	0	0	0
19	98 08 25	0.5	9.20	-100.03	4.0	1	2	28.5	32.84	10	1	1	2	2	0
19	98 08 25	0.5	9.20	-100.03	4.0	1	2	28.5	32.84	20	2	2	0	0	0
19	98 08 25	0.5	9.20	-100.03	4.0	1	2	28.5	32.84	30	2	1	0	0	0
19	98 08 25	0.5	9.20	-100.03	4.0	1	2	28.5	32.84	100	1	0	0	0	0
19	98 08 25	0.5	9.20	-100.03	4.0	1	2	28.5	32.84	300	1	0	0	0	0
20	98 08 26	0.5	6.92	-102.65	4.0	1	2	28.0	33.16	10	2	2	2	1	0
20	98 08 26	0.5	6.92	-102.65	4.0	1	2	28.0	33.16	20	2	5	0	0	0
20	98 08 26	0.5	6.92	-102.65	4.0	1	2	28.0	33.16	30	1	1	0	0	0
20	98 08 26	0.5	6.92	-102.65	4.0	1	2	28.0	33.16	100	2	3	0	0	0
21	98 08 27	0.5	5.32	-103.55	4.0	1	2	27.6	32.92	20	1	1	2	2	0
21	98 08 27	0.5	5.32	-103.55	4.0	1	2	27.6	32.92	30	1	0	3	1	0
21	98 08 27	0.5	5.32	-103.55	4.0	1	2	27.6	32.92	100	4	5	0	0	0
21	98 08 27	0.5	5.32	-103.55	4.0	1	2	27.6	32.92	300	1	1	0	0	0
22	98 08 28	0.5	5.30	-100.42	5.0	1	2	27.8	33.00	10	1	0	2	3	0
22	98 08 28	0.5	5.30	-100.42	5.0	1	2	27.8	33.00	30	1	0	0	0	0
22	98 08 28	0.5	5.30	-100.42	5.0	1	2	27.8	33.00	100	4	2	0	0	0
22	98 08 28	0.5	5.30	-100.42	5.0	1	2	27.8	33.00	300	1	0	0	0	0
23	98 08 29	0.5	5.33	-97.08	3.0	2	2	27.8	32.97	20	2	3	2	3	0
23	98 08 29	0.5	5.33	-97.08	3.0	2	2	27.8	32.97	100	4	6	0	0	0
23	98 08 29	0.5	5.33	-97.08	3.0	2	2	27.8	32.97	500	1	1	0	0	0
24	98 08 30	0.5	5.05	-94.78	4.0	5	3	27.6	32.91	5	1	0	2	3	0
24	98 08 30	0.5	5.05	-94.78	4.0	5	3	27.6	32.91	80	1	1	0	0	0
24	98 08 30	0.5	5.05	-94.78	4.0	5	3	27.6	32.91	100	3	3	0	0	0
25	98 08 31	0.4	5.33	-91.65	5.0	2	3	27.3	32.58	5	1	0	1	1	0
25	98 08 31	0.4	5.33	-91.65	5.0	2	3	27.3	32.58	20	1	0	2	2	0
25	98 08 31	0.4	5.33	-91.65	5.0	2	3	27.3	32.58	100	2	1	0	0	0
	98 09 01	0.0	5.32	-91.07	-	-	-	-	-	20	0	1	0	0	0

Table 7 (*McArthur* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
26	98 09 01	0.5	5.32	-88.25	5.0	2	2	27.8	32.40	100	1	1	2	1	0
27	98 09 02	0.5	5.30	-86.78	4.0	3	2	27.5	32.50	5	1	0	0	0	0
27	98 09 02	0.5	5.30	-86.78	4.0	3	2	27.5	32.50	100	2	1	0	0	0
27	98 09 02	0.5	5.30	-86.78	4.0	3	2	27.5	32.50	500	1	0	0	0	0
28	98 09 03	0.5	5.30	-83.68	5.0	3	2	27.4	32.34	5	1	0	2	2	0
28	98 09 03	0.5	5.30	-83.68	5.0	3	2	27.4	32.34	20	2	0	0	0	0
28	98 09 03	0.5	5.30	-83.68	5.0	3	2	27.4	32.34	100	3	1	0	0	0
28	98 09 03	0.5	5.30	-83.68	5.0	3	2	27.4	32.34	300	1	0	0	0	0
29	98 09 04	0.5	5.30	-81.03	2.0	4	2	27.8	30.56	20	3	1	2	4	2
29	98 09 04	0.5	5.30	-81.03	2.0	4	2	27.8	30.56	30	1	0	0	0	0
29	98 09 04	0.5	5.30	-81.03	2.0	4	2	27.8	30.56	80	1	1	0	0	0
29	98 09 04	0.5	5.30	-81.03	2.0	4	2	27.8	30.56	100	3	2	0	0	0
29	98 09 04	0.5	5.30	-81.03	2.0	4	2	27.8	30.56	500	1	1	0	0	0
	98 09 04	0.0	5.03	-83.42	-	-	-	-	-	20	0	1	0	0	0
30	98 09 05	0.5	5.32	-78.90	2.0	4	2	27.6	30.84	20	1	1	3	1	0
30	98 09 05	0.5	5.32	-78.90	2.0	4	2	27.6	30.84	80	2	2	0	0	0
30	98 09 05	0.5	5.32	-78.90	2.0	4	2	27.6	30.84	100	4	2	0	0	0
30	98 09 05	0.5	5.32	-78.90	2.0	4	2	27.6	30.84	500	2	3	0	0	0
31	98 09 06	0.5	7.38	-78.93	3.0	4	2	28.5	30.39	30	1	1	1	1	1
31	98 09 06	0.5	7.38	-78.93	3.0	4	2	28.5	30.39	90	1	0	2	5	0
31	98 09 06	0.5	7.38	-78.93	3.0	4	2	28.5	30.39	100	1	0	3	2	1
31	98 09 06	0.5	7.38	-78.93	3.0	4	2	28.5	30.39	500	1	2	0	0	0
31	98 09 06	0.5	7.38	-78.93	3.0	4	2	28.5	30.39	500	1	1	0	0	0
31	98 09 06	0.5	7.38	-78.93	3.0	4	2	28.5	30.39	500	1	1	0	0	0
31	98 09 06	0.5	7.38	-78.93	3.0	4	2	28.5	30.39	900	8	0	0	0	0
32	98 09 13	0.8	6.22	-80.27	4.0	5	2	28.0	30.92	10	1	2	1	3	0
32	98 09 13	0.8	6.22	-80.27	4.0	5	2	28.0	30.92	20	1	0	3	2	0
32	98 09 13	0.8	6.22	-80.27	4.0	5	2	28.0	30.92	30	1	2	0	0	0
32	98 09 13	0.8	6.22	-80.27	4.0	5	2	28.0	30.92	300	1	0	0	0	0
32	98 09 13	0.8	6.22	-80.27	4.0	5	2	28.0	30.92	500	5	17	0	0	0
32	98 09 13	0.8	6.22	-80.27	4.0	5	2	28.0	30.92	900	1	0	0	0	0
33	98 09 14	0.8	6.55	-83.68	4.5	5	3	27.9	30.94	10	3	10	1	3	0
33	98 09 14	0.8	6.55	-83.68	4.5	5	3	27.9	30.94	20	1	2	2	2	0
33	98 09 14	0.8	6.55	-83.68	4.5	5	3	27.9	30.94	100	1	1	3	2	0
33	98 09 14	0.8	6.55	-83.68	4.5	5	3	27.9	30.94	300	2	0	0	0	0
33	98 09 14	0.8	6.55	-83.68	4.5	5	3	27.9	30.94	500	1	1	0	0	0
34	98 09 15	1.0	6.73	-86.75	5.0	5	3	28.4	32.74	10	2	1	2	3	0
34	98 09 15	1.0	6.73	-86.75	5.0	5	3	28.4	32.74	20	2	2	3	3	0
34	98 09 15	1.0	6.73	-86.75	5.0	5	3	28.4	32.74	30	2	2	0	0	0
34	98 09 15	1.0	6.73	-86.75	5.0	5	3	28.4	32.74	100	2	1	0	0	0
34	98 09 15	1.0	6.73	-86.75	5.0	5	3	28.4	32.74	300	1	0	0	0	0
35	98 09 16	0.9	7.05	-89.95	5.0	5	2	27.7	32.54	10	2	0	1	1	0
35	98 09 16	0.9	7.05	-89.95	5.0	5	2	27.7	32.54	20	1	1	2	2	0
35	98 09 16	0.9	7.05	-89.95	5.0	5	2	27.7	32.54	30	1	2	3	2	0

Table 7 (*McArthur* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
35	98 09 16	0.9	7.05	-89.95	5.0	5	2	27.7	32.54	100	2	1	0	0	0
35	98 09 16	0.9	7.05	-89.95	5.0	5	2	27.7	32.54	300	1	0	0	0	0
35	98 09 16	0.9	7.05	-89.95	5.0	5	2	27.7	32.54	400	3	0	0	0	0
	98 09 17	0.0	7.03	-90.45	-	-	-	-	-	30	0	1	0	0	0
36	98 09 17	0.8	7.30	-93.22	4.0	5	1	27.6	32.76	10	3	4	1	1	0
36	98 09 17	0.8	7.30	-93.22	4.0	5	1	27.6	32.76	20	2	3	2	2	0
36	98 09 17	0.8	7.30	-93.22	4.0	5	1	27.6	32.76	100	3	2	3	3	0
36	98 09 17	0.8	7.30	-93.22	4.0	5	1	27.6	32.76	400	1	1	0	0	0
37	98 09 18	0.8	7.57	-96.72	5.0	5	2	28.0	32.87	10	3	3	2	4	0
37	98 09 18	0.8	7.57	-96.72	5.0	5	2	28.0	32.87	20	2	2	3	3	0
37	98 09 18	0.8	7.57	-96.72	5.0	5	2	28.0	32.87	30	1	0	0	0	0
37	98 09 18	0.8	7.57	-96.72	5.0	5	2	28.0	32.87	100	3	1	0	0	0
37	98 09 18	0.8	7.57	-96.72	5.0	5	2	28.0	32.87	300	1	0	0	0	0
38	98 09 19	0.9	7.75	-99.82	5.0	5	3	27.5	33.24	10	2	2	2	4	0
38	98 09 19	0.9	7.75	-99.82	5.0	5	3	27.5	33.24	20	2	3	3	3	0
38	98 09 19	0.9	7.75	-99.82	5.0	5	3	27.5	33.24	100	3	1	0	0	0
38	98 09 19	0.9	7.75	-99.82	5.0	5	3	27.5	33.24	300	1	0	0	0	0
39	98 09 20	1.0	7.92	-103.05	5.0	5	3	27.5	33.01	10	1	1	2	4	0
39	98 09 20	1.0	7.92	-103.05	5.0	5	3	27.5	33.01	20	3	6	3	3	0
39	98 09 20	1.0	7.92	-103.05	5.0	5	3	27.5	33.01	30	2	3	0	0	0
39	98 09 20	1.0	7.92	-103.05	5.0	5	3	27.5	33.01	100	2	0	0	0	0
39	98 09 20	1.0	7.92	-103.05	5.0	5	3	27.5	33.01	300	1	0	0	0	0
39	98 09 20	1.0	7.92	-103.05	5.0	5	3	27.5	33.01	400	1	1	0	0	0
39	98 09 20	1.0	7.92	-103.05	5.0	5	3	27.5	33.01	500	1	0	0	0	0
40	98 09 21	1.0	8.15	-106.40	4.0	5	3	27.6	32.83	10	1	0	2	4	0
40	98 09 21	1.0	8.15	-106.40	4.0	5	3	27.6	32.83	20	3	8	3	2	0
40	98 09 21	1.0	8.15	-106.40	4.0	5	3	27.6	32.83	30	1	1	0	0	0
40	98 09 21	1.0	8.15	-106.40	4.0	5	3	27.6	32.83	100	2	1	0	0	0
40	98 09 21	1.0	8.15	-106.40	4.0	5	3	27.6	32.83	300	1	0	0	0	0
41	98 09 22	0.3	8.03	-107.72	2.0	5	2	27.4	32.90	30	2	2	0	0	0
42	98 09 22	0.8	6.62	-109.22	3.0	1	2	27.7	32.98	10	1	1	2	2	0
42	98 09 22	0.8	6.62	-109.22	3.0	1	2	27.7	32.98	20	2	2	0	0	0
42	98 09 22	0.8	6.62	-109.22	3.0	1	2	27.7	32.98	30	1	1	0	0	0
42	98 09 22	0.8	6.62	-109.22	3.0	1	2	27.7	32.98	100	2	0	0	0	0
42	98 09 22	0.8	6.62	-109.22	3.0	1	2	27.7	32.98	300	1	0	0	0	0
	98 09 23	0.0	6.50	-109.07	-	-	-	-	-	20	0	1	0	0	0
43	98 09 23	0.6	6.17	-108.68	3.0	5	2	27.5	32.91	10	1	4	0	0	0
43	98 09 23	0.6	6.17	-108.68	3.0	5	2	27.5	32.91	20	1	1	0	0	0
43	98 09 23	0.6	6.17	-108.68	3.0	5	2	27.5	32.91	30	2	2	0	0	0
43	98 09 23	0.6	6.17	-108.68	3.0	5	2	27.5	32.91	400	1	0	0	0	0
43	98 09 23	0.6	6.17	-108.68	3.0	5	2	27.5	32.91	500	3	1	0	0	0
44	98 09 23	1.0	5.00	-109.98	6.0	5	2	27.3	33.09	20	2	0	2	2	0
44	98 09 23	1.0	5.00	-109.98	6.0	5	2	27.3	33.09	100	2	1	0	0	0
44	98 09 23	1.0	5.00	-109.98	6.0	5	2	27.3	33.09	300	1	0	0	0	0

Table 7 (*McArthur* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
44	98 09 23	1.0	5.00	-109.98	6.0	5	2	27.3	33.09	400	4	0	0	0	0
45	98 09 24	0.9	5.50	-112.88	6.0	5	3	27.4	32.96	20	1	0	2	3	0
45	98 09 24	0.9	5.50	-112.88	6.0	5	3	27.4	32.96	30	1	1	3	1	0
45	98 09 24	0.9	5.50	-112.88	6.0	5	3	27.4	32.96	100	2	1	0	0	0
45	98 09 24	0.9	5.50	-112.88	6.0	5	3	27.4	32.96	300	1	0	0	0	0
45	98 09 24	0.9	5.50	-112.88	6.0	5	3	27.4	32.96	400	1	1	0	0	0
	98 09 25	0.0	5.37	-113.58	-	-	-	-	-	20	0	1	0	0	0
46	98 09 25	1.0	6.52	-115.88	5.0	1	3	26.3	33.46	20	1	1	2	2	0
46	98 09 25	1.0	6.52	-115.88	5.0	1	3	26.3	33.46	30	1	1	0	0	0
46	98 09 25	1.0	6.52	-115.88	5.0	1	3	26.3	33.46	100	4	7	0	0	0
46	98 09 25	1.0	6.52	-115.88	5.0	1	3	26.3	33.46	300	1	0	0	0	0
46	98 09 25	1.0	6.52	-115.88	5.0	1	3	26.3	33.46	400	1	1	0	0	0
47	98 09 27	1.0	7.47	-117.13	4.0	5	3	27.4	33.26	10	2	5	1	2	0
47	98 09 27	1.0	7.47	-117.13	4.0	5	3	27.4	33.26	20	2	4	2	4	0
47	98 09 27	1.0	7.47	-117.13	4.0	5	3	27.4	33.26	30	2	2	3	2	0
47	98 09 27	1.0	7.47	-117.13	4.0	5	3	27.4	33.26	100	4	11	0	0	0
48	98 09 28	0.8	7.78	-116.00	4.0	5	3	27.7	32.70	10	1	1	0	0	0
48	98 09 28	0.8	7.78	-116.00	4.0	5	3	27.7	32.70	20	2	5	0	0	0
48	98 09 28	0.8	7.78	-116.00	4.0	5	3	27.7	32.70	30	1	0	0	0	0
48	98 09 28	0.8	7.78	-116.00	4.0	5	3	27.7	32.70	500	1	0	0	0	0
49	98 09 28	1.0	7.87	-113.72	3.0	5	3	27.1	32.13	20	2	2	1	1	0
49	98 09 28	1.0	7.87	-113.72	3.0	5	3	27.1	32.13	30	2	2	2	2	0
49	98 09 28	1.0	7.87	-113.72	3.0	5	3	27.1	32.13	100	4	7	3	1	0
50	98 09 29	0.6	7.97	-112.27	4.0	5	3	27.4	32.81	10	2	3	1	1	0
50	98 09 29	0.6	7.97	-112.27	4.0	5	3	27.4	32.81	20	2	3	2	2	0
50	98 09 29	0.6	7.97	-112.27	4.0	5	3	27.4	32.81	30	2	2	0	0	0
50	98 09 29	0.6	7.97	-112.27	4.0	5	3	27.4	32.81	400	1	0	0	0	0
	98 09 29	0.0	9.92	-112.98	-	-	-	-	-	5	0	1	0	0	0
51	98 09 29	1.0	8.78	-110.58	2.0	5	3	27.7	32.60	20	2	2	1	2	0
51	98 09 29	1.0	8.78	-110.58	2.0	5	3	27.7	32.60	30	1	1	2	3	0
51	98 09 29	1.0	8.78	-110.58	2.0	5	3	27.7	32.60	100	3	6	3	2	0
51	98 09 29	1.0	8.78	-110.58	2.0	5	3	27.7	32.60	300	1	0	0	0	0
51	98 09 29	1.0	8.78	-110.58	2.0	5	3	27.7	32.60	400	1	0	0	0	0
52	98 09 30	0.7	9.30	-110.13	3.0	5	3	27.9	32.68	10	4	7	2	1	0
52	98 09 30	0.7	9.30	-110.13	3.0	5	3	27.9	32.68	20	3	5	3	1	0
52	98 09 30	0.7	9.30	-110.13	3.0	5	3	27.9	32.68	30	2	2	0	0	0
52	98 09 30	0.7	9.30	-110.13	3.0	5	3	27.9	32.68	400	1	0	0	0	0
53	98 09 30	1.0	10.30	-109.20	3.0	2	2	28.0	32.66	500	6	0	0	0	0
	98 09 30	3.0	10.30	-109.20	4.0	2	2	28.0	32.66	30	2	4	0	0	0
54	98 09 30	3.0	10.30	-109.20	4.0	2	2	28.0	32.66	90	2	0	0	0	0
55	98 10 01	1.0	10.38	-108.97	3.0	2	2	27.9	33.14	10	1	1	2	2	0
55	98 10 01	1.0	10.38	-108.97	3.0	2	2	27.9	33.14	20	1	0	1	1	0
55	98 10 01	1.0	10.38	-108.97	3.0	2	2	27.9	33.14	80	1	1	0	0	0
55	98 10 01	1.0	10.38	-108.97	3.0	2	2	27.9	33.14	100	1	0	0	0	0

Table 7 (*McArthur* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
55	98 10 01	1.0	10.38	-108.97	3.0	2	2	27.9	33.14	400	1	1	0	0	0
55	98 10 01	1.0	10.38	-108.97	3.0	2	2	27.9	33.14	30	2	4	0	0	0
56	98 10 02	0.5	10.97	-107.85	4.0	5	2	28.3	33.22	10	2	1	1	1	0
56	98 10 02	0.5	10.97	-107.85	4.0	5	2	28.3	33.22	20	2	2	2	4	0
56	98 10 02	0.5	10.97	-107.85	4.0	5	2	28.3	33.22	30	2	2	3	1	0
57	98 10 02	0.7	11.83	-106.07	1.0	3	2	28.9	32.98	10	1	2	0	0	0
57	98 10 02	0.7	11.83	-106.07	1.0	3	2	28.9	32.98	20	1	0	0	0	0
58	98 10 03	0.3	12.10	-104.77	0.0	5	2	28.9	33.04	5	1	0	3	1	0
58	98 10 03	0.3	12.10	-104.77	0.0	5	2	28.9	33.04	10	1	1	0	0	0
58	98 10 03	0.3	12.10	-104.77	0.0	5	2	28.9	33.04	20	1	0	0	0	0
58	98 10 03	0.3	12.10	-104.77	0.0	5	2	28.9	33.04	30	1	1	0	0	0
58	98 10 03	0.3	12.10	-104.77	0.0	5	2	28.9	33.04	500	1	1	0	0	0
59	98 10 03	0.8	13.52	-103.15	2.0	4	2	29.4	32.83	100	1	0	2	3	0
59	98 10 03	0.8	13.52	-103.15	2.0	4	2	29.4	32.83	300	1	0	0	0	0
60	98 10 04	0.4	13.93	-101.92	0.0	5	1	29.3	33.04	0	0	0	3	1	0
61	98 10 04	1.0	14.80	-100.17	2.0	4	2	29.8	33.23	10	1	0	2	4	0
61	98 10 04	1.0	14.80	-100.17	2.0	4	2	29.8	33.23	20	2	1	3	2	0
61	98 10 04	1.0	14.80	-100.17	2.0	4	2	29.8	33.23	30	2	2	0	0	0
61	98 10 04	1.0	14.80	-100.17	2.0	4	2	29.8	33.23	100	1	1	0	0	0
61	98 10 04	1.0	14.80	-100.17	2.0	4	2	29.8	33.23	300	1	0	0	0	0
62	98 10 05	0.3	15.55	-100.28	2.0	2	4	29.7	33.03	20	1	2	3	1	0
63	98 10 05	1.0	16.45	-101.80	1.0	4	2	30.3	33.21	10	3	7	2	3	0
63	98 10 05	1.0	16.45	-101.80	1.0	4	2	30.3	33.21	5	1	1	3	2	0
63	98 10 05	1.0	16.45	-101.80	1.0	4	2	30.3	33.21	300	1	0	0	0	0
63	98 10 05	1.0	16.45	-101.80	1.0	4	2	30.3	33.21	400	1	0	0	0	0
63	98 10 05	1.0	16.45	-101.80	1.0	4	2	30.3	33.21	500	1	1	0	0	0
64	98 10 06	0.6	17.35	-103.15	0.0	4	2	0.0	0.00	5	1	0	2	1	0
64	98 10 06	0.6	17.35	-103.15	0.0	4	2	0.0	0.00	10	1	0	0	0	0
65	98 10 06	1.0	18.88	-104.43	3.0	4	2	29.8	33.51	100	3	0	1	1	0
65	98 10 06	1.0	18.88	-104.43	3.0	4	2	29.8	33.51	500	1	0	2	2	0
65	98 10 06	1.0	18.88	-104.43	3.0	4	2	29.8	33.51	0	0	0	3	1	0
66	98 10 12	1.0	18.18	-105.32	3.0	5	3	29.2	33.30	10	3	2	2	3	0
66	98 10 12	1.0	18.18	-105.32	3.0	5	3	29.2	33.30	20	2	0	3	3	0
66	98 10 12	1.0	18.18	-105.32	3.0	5	3	29.2	33.30	30	1	1	0	0	0
66	98 10 12	1.0	18.18	-105.32	3.0	5	3	29.2	33.30	300	1	0	0	0	0
67	98 10 13	0.6	17.48	-106.00	5.0	1	2	29.4	33.41	20	2	0	3	2	0
67	98 10 13	0.6	17.48	-106.00	5.0	1	2	29.4	33.41	5	1	0	0	0	0
68	98 10 13	1.0	15.65	-106.98	0.0	5	1	29.5	32.85	10	2	2	3	3	0
68	98 10 13	1.0	15.65	-106.98	0.0	5	1	29.5	32.85	20	2	3	0	0	0
68	98 10 13	1.0	15.65	-106.98	0.0	5	1	29.5	32.85	300	1	0	0	0	0
68	98 10 13	1.0	15.65	-106.98	0.0	5	1	29.5	32.85	400	4	0	0	0	0
	98 10 15	0.0	12.78	-109.50	-	-	-	-	-	20	0	1	0	0	0
69	98 10 15	1.0	11.27	-110.72	5.0	5	2	28.3	33.67	10	2	0	2	2	0
69	98 10 15	1.0	11.27	-110.72	5.0	5	2	28.3	33.67	20	2	0	3	2	0

Table 7 (*McArthur* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
69	98 10 15	1.0	11.27	-110.72	5.0	5	2	28.3	33.67	30	1	1	0	0	0
69	98 10 15	1.0	11.27	-110.72	5.0	5	2	28.3	33.67	300	1	0	0	0	0
69	98 10 15	1.0	11.27	-110.72	5.0	5	2	28.3	33.67	400	1	0	0	0	0
	98 10 16	0.0	10.88	-111.10	-	-	-	-	-	30	0	1	0	0	0
70	98 10 16	1.0	8.93	-111.93	5.0	5	3	27.7	32.99	10	1	0	1	2	0
70	98 10 16	1.0	8.93	-111.93	5.0	5	3	27.7	32.99	5	1	0	3	1	0
70	98 10 16	1.0	8.93	-111.93	5.0	5	3	27.7	32.99	30	1	0	0	0	0
70	98 10 16	1.0	8.93	-111.93	5.0	5	3	27.7	32.99	100	1	0	0	0	0
71	98 10 17	1.0	5.52	-112.43	5.0	5	2	27.3	32.83	10	2	3	1	2	0
71	98 10 17	1.0	5.52	-112.43	5.0	5	2	27.3	32.83	20	4	7	2	3	0
71	98 10 17	1.0	5.52	-112.43	5.0	5	2	27.3	32.83	30	2	1	3	3	0
71	98 10 17	1.0	5.52	-112.43	5.0	5	2	27.3	32.83	100	3	3	0	0	0
71	98 10 17	1.0	5.52	-112.43	5.0	5	2	27.3	32.83	300	1	0	0	0	0
71	98 10 17	1.0	5.52	-112.43	5.0	5	2	27.3	32.83	400	1	0	0	0	0
72	98 10 18	0.6	4.55	-112.62	4.0	1	1	26.4	33.25	5	1	0	1	2	0
72	98 10 18	0.6	4.55	-112.62	4.0	1	1	26.4	33.25	10	1	1	3	2	0
72	98 10 18	0.6	4.55	-112.62	4.0	1	1	26.4	33.25	20	2	2	0	0	0
72	98 10 18	0.6	4.55	-112.62	4.0	1	1	26.4	33.25	100	3	0	0	0	0
72	98 10 18	0.6	4.55	-112.62	4.0	1	1	26.4	33.25	300	1	0	0	0	0
72	98 10 18	0.6	4.55	-112.62	4.0	1	1	26.4	33.25	500	1	0	0	0	0
73	98 10 18	1.0	3.07	-112.93	5.0	5	1	24.6	33.50	5	1	0	1	2	0
73	98 10 18	1.0	3.07	-112.93	5.0	5	1	24.6	33.50	100	3	2	2	1	0
73	98 10 18	1.0	3.07	-112.93	5.0	5	1	24.6	33.50	300	1	0	3	2	0
73	98 10 18	1.0	3.07	-112.93	5.0	5	1	24.6	33.50	400	1	0	0	0	0
73	98 10 18	1.0	3.07	-112.93	5.0	5	1	24.6	33.50	500	1	0	0	0	0
74	98 10 19	1.0	1.33	-113.87	3.0	5	1	21.6	34.39	100	4	8	2	3	0
74	98 10 19	1.0	1.33	-113.87	3.0	5	1	21.6	34.39	300	1	0	3	4	0
75	98 10 20	1.0	1.33	-116.82	3.0	5	3	21.6	34.48	20	1	1	2	3	0
75	98 10 20	1.0	1.33	-116.82	3.0	5	3	21.6	34.48	100	4	10	3	2	0
75	98 10 20	1.0	1.33	-116.82	3.0	5	3	21.6	34.48	300	1	0	0	0	0
76	98 10 21	1.0	1.35	-119.88	2.0	6	1	22.3	34.41	100	4	18	1	2	0
76	98 10 21	1.0	1.35	-119.88	2.0	6	1	22.3	34.41	300	1	0	2	2	0
76	98 10 21	1.0	1.35	-119.88	2.0	6	1	22.3	34.41	0	0	0	3	2	0
77	98 10 22	1.0	1.33	-122.90	3.0	1	1	23.0	34.21	100	4	7	1	1	0
77	98 10 22	1.0	1.33	-122.90	3.0	1	1	23.0	34.21	300	1	0	2	2	0
78	98 10 23	1.0	3.77	-123.35	3.0	1	2	27.3	33.24	10	2	0	1	2	0
78	98 10 23	1.0	3.77	-123.35	3.0	1	2	27.3	33.24	20	3	4	2	3	0
78	98 10 23	1.0	3.77	-123.35	3.0	1	2	27.3	33.24	100	3	5	0	0	0
78	98 10 23	1.0	3.77	-123.35	3.0	1	2	27.3	33.24	300	1	0	0	0	0
79	98 10 24	0.6	4.57	-123.33	4.0	5	3	27.2	33.23	5	1	0	2	2	0
79	98 10 24	0.6	4.57	-123.33	4.0	5	3	27.2	33.23	10	1	2	0	0	0
79	98 10 24	0.6	4.57	-123.33	4.0	5	3	27.2	33.23	20	2	1	0	0	0
79	98 10 24	0.6	4.57	-123.33	4.0	5	3	27.2	33.23	30	1	1	0	0	0
80	98 10 24	1.0	6.55	-123.33	3.0	1	2	27.5	33.23	20	2	0	1	2	0

Table 7 (*McArthur* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
80	98 10 24	1.0	6.55	-123.33	3.0	1	2	27.5	33.23	30	1	0	2	2	0
80	98 10 24	1.0	6.55	-123.33	3.0	1	2	27.5	33.23	100	4	9	0	0	0
80	98 10 24	1.0	6.55	-123.33	3.0	1	2	27.5	33.23	300	1	0	0	0	0
81	98 10 25	0.6	7.53	-123.32	4.0	5	3	27.6	33.07	10	1	2	1	2	0
81	98 10 25	0.6	7.53	-123.32	4.0	5	3	27.6	33.07	20	1	2	3	2	0
81	98 10 25	0.6	7.53	-123.32	4.0	5	3	27.6	33.07	300	1	0	0	0	0
82	98 10 25	1.0	9.65	-123.32	0.0	1	2	28.1	32.79	10	3	6	2	3	0
82	98 10 25	1.0	9.65	-123.32	0.0	1	2	28.1	32.79	20	2	0	3	2	0
82	98 10 25	1.0	9.65	-123.32	0.0	1	2	28.1	32.79	300	1	0	0	0	0
82	98 10 25	1.0	9.65	-123.32	0.0	1	2	28.1	32.79	500	1	0	0	0	0
82	98 10 25	1.0	9.65	-123.32	0.0	1	2	28.1	32.79	500	1	0	0	0	0
83	98 10 26	0.6	10.62	-123.33	0.0	5	1	27.7	33.32	5	1	0	1	1	0
83	98 10 26	0.6	10.62	-123.33	0.0	5	1	27.7	33.32	30	1	1	2	2	0
83	98 10 26	0.6	10.62	-123.33	0.0	5	1	27.7	33.32	0	0	0	3	2	0
84	98 10 26	1.0	12.48	-123.35	3.0	2	2	26.9	33.82	20	2	0	2	2	0
84	98 10 26	1.0	12.48	-123.35	3.0	2	2	26.9	33.82	30	2	1	0	0	0
84	98 10 26	1.0	12.48	-123.35	3.0	2	2	26.9	33.82	100	3	1	0	0	0
85	98 10 27	0.7	13.50	-123.30	5.0	5	1	26.3	34.15	30	1	0	1	2	0
85	98 10 27	0.7	13.50	-123.30	5.0	5	1	26.3	34.15	100	1	0	0	0	0
86	98 10 27	1.0	15.63	-123.33	4.0	2	2	25.7	33.33	20	2	4	1	2	0
86	98 10 27	1.0	15.63	-123.33	4.0	2	2	25.7	33.33	30	2	2	2	2	0
86	98 10 27	1.0	15.63	-123.33	4.0	2	2	25.7	33.33	100	4	11	0	0	0
86	98 10 27	1.0	15.63	-123.33	4.0	2	2	25.7	33.33	400	2	2	0	0	0
87	98 10 28	0.7	16.73	-123.32	4.0	5	2	25.5	34.22	5	1	0	0	0	0
87	98 10 28	0.7	16.73	-123.32	4.0	5	2	25.5	34.22	10	1	1	0	0	0
88	98 10 28	1.0	18.73	-122.47	5.0	2	2	24.3	34.24	100	1	0	1	2	0
88	98 10 28	1.0	18.73	-122.47	5.0	2	2	24.3	34.24	400	2	0	0	0	0
89	98 10 29	0.5	19.82	-121.87	4.0	5	2	23.7	34.30	0	0	0	2	2	0
90	98 10 29	1.0	21.78	-120.70	5.0	2	2	23.2	34.23	10	1	0	2	1	0
91	98 10 30	1.0	21.07	-119.27	5.0	2	2	22.6	33.77	100	1	0	2	1	0
	98 10 31	0.0	20.53	-119.05	-	-	-	-	-	30	0	3	0	0	0
92	98 10 31	0.7	19.87	-118.78	5.0	5	1	23.7	34.23	30	1	0	0	0	0
93	98 10 31	1.0	17.85	-118.05	5.0	3	2	26.8	33.99	20	4	4	1	2	0
93	98 10 31	1.0	17.85	-118.05	5.0	3	2	26.8	33.99	100	2	0	2	2	0
93	98 10 31	1.0	17.85	-118.05	5.0	3	2	26.8	33.99	400	3	0	3	1	0
93	98 10 31	1.0	17.85	-118.05	5.0	3	2	26.8	33.99	500	1	0	0	0	0
	98 11 01	0.0	17.35	-117.83	-	-	-	-	-	30	0	2	0	0	0
	98 11 01	0.0	17.35	-117.83	-	-	-	-	-	20	0	1	0	0	0
94	98 11 01	0.6	17.72	-117.60	4.0	5	2	26.7	34.01	20	4	4	1	2	0
94	98 11 01	0.6	17.72	-117.60	4.0	5	2	26.7	34.01	30	1	1	0	0	0
95	98 11 01	1.0	19.93	-117.43	5.0	3	2	24.2	34.24	10	1	0	1	2	0
95	98 11 01	1.0	19.93	-117.43	5.0	3	2	24.2	34.24	30	1	0	2	2	0
95	98 11 01	1.0	19.93	-117.43	5.0	3	2	24.2	34.24	100	2	1	3	2	0
96	98 11 02	0.6	20.17	-116.22	3.0	5	1	24.6	34.31	5	1	0	2	2	0

Table 7 (*McArthur* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
96	98 11 02	0.6	20.17	-116.22	3.0	5	1	24.6	34.31	20	1	1	3	1	0
97	98 11 02	1.0	22.27	-115.78	5.0	3	2	23.5	34.12	10	1	0	2	1	0
97	98 11 02	1.0	22.27	-115.78	5.0	3	2	23.5	34.12	30	1	0	0	0	0
97	98 11 02	1.0	22.27	-115.78	5.0	3	2	23.5	34.12	100	1	0	0	0	0
98	98 11 03	0.4	23.00	-115.28	4.0	4	2	23.0	34.09	30	1	0	1	1	0
98	98 11 03	0.4	23.00	-115.28	4.0	4	2	23.0	34.09	0	0	0	3	1	0
99	98 11 03	1.0	21.53	-114.00	4.0	4	2	24.7	34.33	30	2	1	1	2	0
99	98 11 03	1.0	21.53	-114.00	4.0	4	2	24.2	34.33	100	2	3	2	3	0
99	98 11 03	1.0	21.53	-114.00	4.0	4	2	24.2	34.33	0	0	0	3	1	0
100	98 11 04	0.7	20.53	-112.70	2.0	4	2	25.0	34.33	20	1	0	0	0	0
100	98 11 04	0.7	20.53	-112.70	2.0	4	2	25.0	34.33	30	1	1	0	0	0
101	98 11 04	1.0	21.27	-112.17	3.0	4	2	27.0	34.17	5	1	0	1	1	0
101	98 11 04	1.0	21.27	-112.17	3.0	4	2	27.0	34.17	20	1	0	2	2	0
101	98 11 04	1.0	21.27	-112.17	3.0	4	2	27.0	34.17	100	2	2	3	1	0
101	98 11 04	1.0	21.27	-112.17	3.0	4	2	27.0	34.17	300	1	0	0	0	0
101	98 11 04	1.0	21.27	-112.17	3.0	4	2	27.0	34.17	400	1	0	0	0	0
101	98 11 04	1.0	21.27	-112.17	3.0	4	2	27.0	34.17	500	1	0	0	0	0
102	98 11 05	0.5	22.02	-111.18	2.0	4	2	27.0	34.34	30	1	0	3	1	0
103	98 11 05	1.0	20.50	-111.00	4.0	5	2	26.6	34.34	10	2	2	1	1	0
103	98 11 05	1.0	20.50	-111.00	4.0	5	2	26.6	34.34	20	2	3	2	3	0
103	98 11 05	1.0	20.50	-111.00	4.0	5	2	26.6	34.34	30	3	3	3	2	0
103	98 11 05	1.0	20.50	-111.00	4.0	5	2	26.6	34.34	100	4	2	0	0	0
	98 11 06	0.0	20.35	-110.28	-	-	-	-	-	30	0	1	0	0	0
104	98 11 06	0.6	20.20	-109.67	3.0	4	2	27.4	34.14	20	1	1	2	2	0
104	98 11 06	0.6	20.20	-109.67	3.0	4	2	27.4	34.14	30	3	1	3	2	0
105	98 11 06	1.0	22.17	-109.67	4.0	5	2	27.1	34.16	10	4	8	1	3	0
105	98 11 06	1.0	22.17	-109.67	4.0	5	2	27.1	34.16	20	1	0	2	4	0
105	98 11 06	1.0	22.17	-109.67	4.0	5	2	27.1	34.16	80	1	0	3	2	0
105	98 11 06	1.0	22.17	-109.67	4.0	5	2	27.1	34.16	300	1	0	0	0	0
106	98 11 07	1.0	20.57	-108.37	5.0	5	2	27.6	33.85	10	4	3	1	2	0
106	98 11 07	1.0	20.57	-108.37	5.0	5	2	27.6	33.85	20	3	1	2	4	0
106	98 11 07	1.0	20.57	-108.37	5.0	5	2	27.6	33.85	30	2	2	3	2	0
106	98 11 07	1.0	20.57	-108.37	5.0	5	2	27.6	33.85	100	3	0	0	0	0
106	98 11 07	1.0	20.57	-108.37	5.0	5	2	27.6	33.85	300	1	0	0	0	0
107	98 11 08	0.7	20.30	-107.72	1.0	2	2	28.6	34.24	30	3	6	2	2	0
107	98 11 08	0.7	20.30	-107.72	1.0	2	2	28.6	34.24	80	1	1	1	1	0
107	98 11 08	0.7	20.30	-107.72	1.0	2	2	28.6	34.24	10	1	1	0	0	0
107	98 11 08	0.7	20.30	-107.72	1.0	2	2	28.6	34.24	400	1	0	0	0	0
108	98 11 08	1.0	19.60	-106.05	0.0	5	1	29.5	33.68	5	3	0	1	1	0
108	98 11 08	1.0	19.60	-106.05	0.0	5	1	29.5	33.68	30	2	4	2	4	0
108	98 11 08	1.0	19.60	-106.05	0.0	5	1	29.5	33.68	80	2	3	3	4	0
108	98 11 08	1.0	19.60	-106.05	0.0	5	1	29.5	33.68	200	5	1	0	0	0
109	98 11 14	1.0	18.65	-105.42	5.0	5	1	28.8	33.23	5	1	0	2	2	0
109	98 11 14	1.0	18.65	-105.42	5.0	5	1	28.8	33.23	10	2	0	3	1	0

Table 7 (*McArthur* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
109	98 11 14	1.0	18.65	-105.42	5.0	5	1	28.8	33.23	20	3	1	0	0	0
109	98 11 14	1.0	18.65	-105.42	5.0	5	1	28.8	33.23	30	1	1	0	0	0
109	98 11 14	1.0	18.65	-105.42	5.0	5	1	28.8	33.23	100	2	1	0	0	0
109	98 11 14	1.0	18.65	-105.42	5.0	5	1	28.8	33.23	300	1	0	0	0	0
	98 11 15	0.0	18.37	-105.70	-	-	-	-	-	20	0	1	0	0	0
110	98 11 15	1.0	17.00	-107.67	2.0	5	1	28.1	33.56	5	1	0	2	2	0
110	98 11 15	1.0	17.00	-107.67	2.0	5	1	28.1	33.56	20	1	0	3	3	0
110	98 11 15	1.0	17.00	-107.67	2.0	5	1	28.1	33.56	30	2	3	0	0	0
110	98 11 15	1.0	17.00	-107.67	2.0	5	1	28.1	33.56	100	1	0	0	0	0
110	98 11 15	1.0	17.00	-107.67	2.0	5	1	28.1	33.56	300	1	0	0	0	0
110	98 11 15	1.0	17.00	-107.67	2.0	5	1	28.1	33.56	500	1	0	0	0	0
	98 11 16	0.0	16.72	-108.07	-	-	-	-	-	20	0	1	0	0	0
111	98 11 16	0.6	15.15	-110.22	5.0	5	2	27.8	33.31	10	1	0	3	1	0
111	98 11 16	0.6	15.15	-110.22	5.0	5	2	27.8	33.31	20	1	1	0	0	0
111	98 11 16	0.6	15.15	-110.22	5.0	5	2	27.8	33.31	30	1	1	0	0	0
111	98 11 16	0.6	15.15	-110.22	5.0	5	2	27.8	33.31	300	1	0	0	0	0
112	98 11 17	1.0	13.85	-113.00	4.0	5	3	27.5	33.67	5	3	0	2	2	0
112	98 11 17	1.0	13.85	-113.00	4.0	5	3	27.5	33.67	10	2	4	0	0	0
112	98 11 17	1.0	13.85	-113.00	4.0	5	3	27.5	33.67	20	2	2	0	0	0
112	98 11 17	1.0	13.85	-113.00	4.0	5	3	27.5	33.67	30	4	11	0	0	0
112	98 11 17	1.0	13.85	-113.00	4.0	5	3	27.5	33.67	100	1	0	0	0	0
112	98 11 17	1.0	13.85	-113.00	4.0	5	3	27.5	33.67	300	1	0	0	0	0
113	98 11 18	1.0	12.72	-115.93	4.0	5	2	27.6	33.81	10	2	0	2	2	0
113	98 11 18	1.0	12.75	-115.93	4.0	5	2	27.6	33.81	20	1	1	3	1	0
113	98 11 18	1.0	12.75	-115.93	4.0	5	2	27.6	33.81	30	2	3	0	0	0
113	98 11 18	1.0	12.75	-115.93	4.0	5	2	27.6	33.81	100	1	0	0	0	0
113	98 11 18	1.0	12.75	-115.93	4.0	5	2	27.6	33.81	300	1	0	0	0	0
113	98 11 18	1.0	12.75	-115.93	4.0	5	2	27.6	33.81	500	6	0	0	0	0
	98 11 19	0.0	12.53	-116.48	-	-	-	-	-	20	0	2	0	0	0
	98 11 19	0.0	12.53	-116.48	-	-	-	-	-	30	0	2	0	0	0
114	98 11 19	1.0	11.53	-119.00	3.0	5	1	27.6	33.07	10	1	1	2	4	0
114	98 11 19	1.0	11.53	-119.00	3.0	5	1	27.6	33.07	20	1	0	3	1	0
114	98 11 19	1.0	11.53	-119.00	3.0	5	1	27.6	33.07	30	2	4	0	0	0
114	98 11 19	1.0	11.53	-119.00	3.0	5	1	27.6	33.07	100	2	2	0	0	0
114	98 11 19	1.0	11.53	-119.00	3.0	5	1	27.6	33.07	500	8	0	0	0	0
114	98 11 19	1.0	11.53	-119.00	3.0	5	1	27.6	33.07	500	8	0	0	0	0
115	98 11 20	0.6	10.47	-119.00	5.0	5	3	27.8	32.98	20	5	2	1	1	0
115	98 11 20	0.6	10.47	-119.00	5.0	5	3	27.8	32.98	300	1	0	0	0	0
	98 11 20	0.0	11.10	-119.00	-	-	-	-	-	20	0	6	0	0	0
116	98 11 20	1.0	8.72	-119.32	2.0	6	2	27.6	33.16	20	2	2	1	1	0
116	98 11 20	1.0	8.72	-119.32	2.0	6	2	27.6	33.16	30	2	1	2	3	0
116	98 11 20	1.0	8.72	-119.32	2.0	6	2	27.6	33.16	100	4	5	1	2	0
117	98 11 21	0.7	9.00	-120.28	3.0	5	2	27.6	32.80	30	1	1	1	1	0
117	98 11 21	0.7	9.00	-120.28	3.0	5	2	27.6	32.80	100	2	0	2	2	0

Table 7 (*McArthur* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
118	98 11 21	1.0	8.05	-121.77	3.0	1	2	27.6	32.93	5	1	0	1	2	0
118	98 11 21	1.0	8.05	-121.77	3.0	1	2	27.6	32.93	10	1	1	2	3	0
118	98 11 21	1.0	8.05	-121.77	3.0	1	2	27.6	32.93	100	2	4	3	1	0
118	98 11 21	1.0	8.05	-121.77	3.0	1	2	27.6	32.93	300	1	0	0	0	0
118	98 11 21	1.0	8.05	-121.77	3.0	1	2	27.6	32.93	500	3	0	0	0	0
119	98 11 22	0.5	7.62	-122.85	3.0	5	3	27.3	32.92	10	1	0	2	1	0
119	98 11 22	0.5	7.62	-122.85	3.0	5	3	27.3	32.92	500	1	0	0	0	0
120	98 11 22	1.0	6.63	-124.62	4.0	1	2	27.3	33.41	20	1	0	1	2	0
120	98 11 22	1.0	6.63	-124.62	4.0	1	2	27.3	33.41	30	1	0	2	2	0
120	98 11 22	1.0	6.63	-124.62	4.0	1	2	27.3	33.41	100	5	7	0	0	0
120	98 11 22	1.0	6.63	-124.62	4.0	1	2	27.3	33.41	300	1	0	0	0	0
120	98 11 22	1.0	6.63	-124.62	4.0	1	2	27.3	33.41	500	2	0	0	0	0
121	98 11 23	1.0	5.07	-127.62	4.0	1	2	26.6	33.40	20	1	1	1	1	0
121	98 11 23	1.0	5.07	-127.62	4.0	1	2	26.6	33.40	100	3	3	2	3	0
121	98 11 23	1.0	5.07	-127.62	4.0	1	2	26.6	33.40	300	1	0	3	1	0
121	98 11 23	1.0	5.07	-127.62	4.0	1	2	26.6	33.40	500	1	0	0	0	0
122	98 11 24	0.8	4.52	-128.68	4.0	5	1	26.5	33.35	20	1	0	2	2	0
122	98 11 24	0.8	4.52	-128.68	4.0	5	1	26.5	33.35	30	1	1	0	0	0
122	98 11 24	0.8	4.52	-128.68	4.0	5	1	26.5	33.35	100	3	0	0	0	0
123	98 11 24	1.0	6.50	-129.27	2.0	1	2	26.6	33.35	5	2	0	1	1	0
123	98 11 24	1.0	6.50	-129.27	2.0	1	2	26.6	33.35	10	1	1	2	3	0
123	98 11 24	1.0	6.50	-129.27	2.0	1	2	26.6	33.35	20	1	1	3	2	0
124	98 11 25	0.7	7.47	-129.58	4.0	5	4	25.8	33.04	5	4	0	0	0	0
124	98 11 25	0.7	7.47	-129.58	4.0	5	4	25.8	33.04	20	1	0	0	0	0
124	98 11 25	0.7	7.47	-129.58	4.0	5	4	25.8	33.04	30	2	0	0	0	0
125	98 11 25	1.0	9.45	-130.23	5.0	2	2	27.6	33.12	5	1	0	1	3	0
125	98 11 25	1.0	9.45	-130.23	5.0	2	2	27.6	33.12	30	1	0	2	1	0
125	98 11 25	1.0	9.45	-130.23	5.0	2	2	27.6	33.12	100	1	1	0	0	0
126	98 11 26	1.0	11.60	-130.85	5.0	5	2	26.4	33.12	5	1	0	2	2	0
126	98 11 26	1.0	11.60	-130.85	5.0	5	2	26.4	33.12	20	4	4	0	0	0
126	98 11 26	1.0	11.60	-130.85	5.0	5	2	26.4	33.12	30	1	1	0	0	0
126	98 11 26	1.0	11.60	-130.85	5.0	5	2	26.4	33.12	100	2	1	0	0	0
126	98 11 26	1.0	11.60	-130.85	5.0	5	2	26.4	33.12	400	3	0	0	0	0
	98 11 27	0.0	12.17	-131.13	-	-	-	-	-	30	0	1	0	0	0
	98 11 27	0.0	12.17	-131.13	-	-	-	-	-	20	0	2	0	0	0
127	98 11 27	1.0	14.85	-132.00	5.0	2	2	25.1	34.22	5	1	0	1	2	0
127	98 11 27	1.0	14.85	-132.00	5.0	2	2	25.1	34.22	30	1	0	3	1	0
127	98 11 27	1.0	14.85	-132.00	5.0	2	2	25.1	34.22	100	1	0	0	0	0
	98 11 28	0.0	15.30	-132.13	-	-	-	-	-	20	0	3	0	0	0
	98 11 28	0.0	15.30	-132.13	-	-	-	-	-	30	0	2	0	0	0
	98 11 28	0.0	16.48	-132.07	-	-	-	-	-	30	0	2	0	0	0
	98 11 29	0.0	16.30	-130.62	-	-	-	-	-	30	0	1	0	0	0
	98 11 30	0.0	16.55	-127.73	-	-	-	-	-	20	0	4	0	0	0
128	98 11 30	1.0	15.72	-125.97	5.0	5	4	24.6	34.28	5	2	0	0	0	0

Table 7 (*McArthur* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
128	98 11 30	1.0	15.72	-125.97	5.0	5	4	24.6	34.28	20	2	2	0	0	0
	98 12 01	0.0	15.65	-125.40	-	-	-	-	-	20	0	2	0	0	0
129	98 12 03	0.3	21.90	-123.27	5.0	5	3	21.3	34.21	0	0	0	0	0	0
130	98 12 03	1.0	23.52	-122.32	5.0	5	2	20.3	34.01	0	0	0	0	0	0
131	98 12 04	1.0	24.20	-120.27	5.0	5	3	20.6	34.00	100	1	0	2	2	0
132	98 12 06	0.4	26.25	-122.42	5.0	3	2	19.1	33.73	0	0	0	0	0	0
133	98 12 06	1.0	27.53	-123.18	5.0	5	2	18.9	33.74	100	2	0	0	0	0

[1] Records without Station Numbers reflect opportunistic or non-standard specimen collections.

[2] 1 = quarter moon; 2 = half moon; 3 = 3/4 moon; 4 = full moon; 5 = no moon; 6 = new moon.

[3] 1 = clear; 2 = partly cloudy; 3 = overcast; 4 = rain; 5 = other or unknown.

[4] SST = Sea Surface Temperature (Celsius)

[5] SSS = Sea Surface Salinity (practical salinity units)

[6]
005 = Unidentified flyingfish
010 = Oxyporhamphus micropterus
015 = Fodiator spp.
020 = Exocetus spp.
030 = Unidentified 4-wing flyingfish
060 = Elassichthys
080 = Hemiramphidae (halfbeaks)
090 = Belonidae (needlefish)
100 = Myctophidae (lanternfish)
125 = Vinciguerria spp.
200 = Scombridae (tunas)
300 = Gempylidae (snake mackerel)
400 = Coryphaenidae (dolphinfish)
500 = Other
700 = Octopoda (pelagic octopus)
900 = Sea Snake

[7]
1 = “a couple” (1-3)
2 = “a few” (4-8); uncommon
3 = “several” (9-15); fairly common
4 = “common” (16-50)
5 = “abundant” (51-150)
6 = “superabundant (150+)
7 = 1000’s
8 = present
9 = “possibly present”

[8]
1 = Large (mantle length > 8 inches)
2 = Medium (3 inches < mantle length < 8 inches)
3 = Small (mantle length < 3 inches)

Table 8. Results of night-light dipnet sampling, *Endeavor*, 30 July – December 1998.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (psu)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
1	980730	1.0	7.72	-79.82	2.0	2	2	29.3	31.00	400	1	3	0	0	0
1	980730	1.0	7.72	-79.82	2.0	2	2	29.3	31.00	500	1	2	0	0	0
2	980731	1.0	5.92	-81.40	2.0	2	3	28.2	32.01	20	1	1	0	0	0
2	980731	1.0	5.92	-81.40	2.0	2	3	28.2	32.01	30	1	1	0	0	0
2	980731	1.0	5.92	-81.40	2.0	2	3	28.2	32.01	100	4	5	0	0	0
2	980731	1.0	5.92	-81.40	2.0	2	3	28.2	32.01	300	1	1	0	0	0
2	980731	1.0	5.92	-81.40	2.0	2	3	28.2	32.01	400	1	1	0	0	0
2	980731	1.0	5.92	-81.40	2.0	2	3	28.2	32.01	500	1	2	0	0	0
3	980801	1.0	4.15	-83.68	3.0	3	2	28.3	32.86	80	3	3	0	0	0
3	980801	1.0	4.15	-83.68	3.0	3	2	28.3	32.86	100	4	3	0	0	0
3	980801	1.0	4.15	-83.68	3.0	3	2	28.3	32.86	400	2	2	0	0	0
3	980801	1.0	4.15	-83.68	3.0	3	2	28.3	32.86	500	1	1	0	0	0
3	980801	1.0	4.15	-83.68	3.0	3	2	28.3	32.86	500	1	1	0	0	0
3	980801	1.0	4.15	-83.68	3.0	3	2	28.3	32.86	500	1	1	0	0	0
3	980801	1.0	4.15	-83.68	3.0	3	2	28.3	32.86	20	1	0	0	0	0
3	980801	1.0	4.15	-83.68	3.0	3	2	28.3	32.86	30	1	0	0	0	0
4	980802	1.0	3.65	-86.23	5.0	3	2	27.9	32.97	20	1	0	0	0	0
4	980802	1.0	3.65	-86.23	5.0	3	2	27.9	32.97	30	1	1	3	1	2
4	980802	1.0	3.65	-86.23	5.0	3	2	27.9	32.97	100	3	3	0	0	0
4	980802	1.0	3.65	-86.23	5.0	3	2	27.9	32.97	500	1	1	0	0	0
4	980802	1.0	3.65	-86.23	5.0	3	2	27.9	32.97	700	1	2	0	0	0
5	980805	1.0	1.57	-97.63	4.0	3	1	25.6	33.89	30	1	1	0	0	0
5	980805	1.0	1.58	-97.63	4.0	3	1	25.6	33.89	100	2	1	0	0	0
5	980805	1.0	1.58	-97.63	4.0	3	1	25.6	33.89	300	1	0	0	0	0
5	980805	1.0	1.58	-97.63	4.0	3	1	25.6	33.89	400	1	0	0	0	0
6	980806	1.0	0.88	-101.38	4.0	4	1	25.4	34.21	20	1	0	1	1	0
6	980806	1.0	0.88	-101.38	4.0	4	1	25.4	34.21	30	1	0	0	0	0
6	980806	1.0	0.88	-101.38	4.0	4	1	25.4	34.21	100	1	0	0	0	0
7	980807	1.0	0.12	-104.82	3.0	4	3	22.6	34.59	30	1	0	2	1	0
7	980807	1.0	0.12	-104.82	3.0	4	3	22.6	34.59	100	2	0	0	0	0
8	980808	1.0	-0.60	-108.30	3.0	4	1	23.9	35.00	100	3	3	2	2	0
8	980808	1.0	-0.60	-108.30	3.0	4	1	23.9	35.00	200	6	0	0	0	0
9	980809	1.0	-1.18	-111.13	3.0	5	2	23.9	34.90	20	2	0	2	2	0
9	980809	1.0	-1.18	-111.13	3.0	5	2	23.9	34.90	30	1	0	0	0	0
9	980809	1.0	-1.18	-111.13	3.0	5	2	23.9	34.90	100	5	19	0	0	0
9	980809	1.0	-1.18	-111.13	3.0	5	2	23.9	34.90	700	1	2	0	0	0
10	980810	1.0	-1.72	-114.17	3.0	5	1	23.9	34.78	10	2	1	1	1	1
10	980810	1.0	-1.72	-114.17	3.0	5	1	23.9	34.78	30	1	0	1	2	0
10	980810	1.0	-1.72	-114.17	3.0	5	1	23.9	34.78	100	4	5	0	0	0
10	980810	1.0	-1.72	-114.17	3.0	5	1	23.9	34.78	300	1	0	0	0	0
10	980810	1.0	-1.72	-114.17	3.0	5	1	23.9	34.78	500	1	1	0	0	0
11	980811	1.0	-3.27	-117.43	5.0	5	2	25.3	34.89	5	2	0	0	0	0
11	980811	1.0	-3.27	-117.43	5.0	5	2	25.3	34.89	10	1	0	0	0	0
11	980811	1.0	-3.27	-117.43	5.0	5	2	25.3	34.89	100	2	0	0	0	0

Table 8 (*Endeavor* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
12	980812	0.0	-4.90	-120.68	6.0	5	3	26.0	34.76	0	0	0	0	0	0
13	980813	1.0	-3.27	-123.28	4.0	5	1	24.7	34.75	10	1	1	2	3	1
13	980813	1.0	-3.27	-123.28	4.0	5	1	24.7	34.75	100	4	4	0	0	0
14	980814	1.0	-1.33	-125.80	3.0	5	2	23.1	35.00	30	1	0	1	1	0
14	980814	1.0	-1.33	-125.80	3.0	5	2	23.1	35.00	100	3	4	2	2	1
14	980814	1.0	-1.33	-125.80	3.0	5	2	23.1	35.00	500	1	0	0	0	0
15	980815	1.0	-0.43	-128.27	4.0	5	1	27.1	34.90	30	1	0	1	1	0
15	980815	1.2	-0.43	-128.27	4.0	5	1	27.1	34.90	100	3	0	2	2	2
15	980815	1.2	-0.43	-128.27	4.0	5	1	27.1	34.90	500	1	0	3	1	1
16	980816	1.0	2.75	-131.28	5.0	5	2	25.5	34.44	100	3	3	2	2	1
17	980817	0.8	4.73	-134.03	4.0	5	3	27.5	33.91	30	4	1	1	1	0
17	980817	0.8	4.73	-134.03	4.0	5	3	27.5	33.91	100	2	2	2	3	0
17	980817	0.8	4.73	-134.03	4.0	5	3	27.5	33.91	300	1	1	0	0	0
17	980817	0.8	4.73	-134.03	4.0	5	3	27.5	33.91	500	2	2	0	0	0
17	980817	0.8	4.73	-134.03	4.0	5	3	27.5	33.91	700	1	1	0	0	0
18	980818	1.0	6.32	-136.02	3.0	5	3	27.3	34.23	5	2	4	2	4	0
18	980818	1.0	6.32	-136.40	3.0	5	3	27.3	34.23	80	1	2	3	4	2
18	980818	1.0	6.32	-136.40	3.0	5	3	27.3	34.23	100	4	15	0	0	0
19	980819	1.0	7.70	-137.95	4.0	5	4	28.2	33.82	5	1	1	2	3	0
19	980819	1.0	7.70	-137.95	4.0	5	4	28.2	33.82	10	5	7	3	3	0
19	980819	1.0	7.70	-137.95	4.0	5	4	28.2	33.82	30	1	0	0	0	0
19	980819	1.0	7.70	-137.95	4.0	5	4	28.2	33.82	100	3	2	0	0	0
19	980819	1.0	7.70	-137.95	4.0	5	4	28.2	33.82	300	1	0	0	0	0
20	980820	1.0	9.42	-140.38	5.0	5	4	28.3	33.60	10	3	6	2	2	0
20	980820	1.0	9.42	-140.38	5.0	5	4	28.3	33.60	30	2	3	3	2	0
20	980820	1.0	9.42	-140.38	5.0	5	4	28.3	33.60	100	3	6	0	0	0
20	980820	1.0	9.42	-140.38	5.0	5	4	28.3	33.60	500	1	2	0	0	0
21	980821	1.0	11.28	-143.08	2.0	5	4	28.4	33.39	10	2	2	3	4	1
21	980821	1.0	11.28	-143.08	2.0	5	4	28.4	33.39	100	4	12	0	0	0
21	980821	1.0	11.28	-143.08	2.0	5	4	28.4	33.39	300	1	0	0	0	0
21	980821	1.0	11.28	-143.08	2.0	5	4	28.4	33.39	500	1	1	0	0	0
22	980904	1.0	8.77	-151.20	3.0	5	3	28.4	33.49	5	1	1	3	3	0
22	980904	1.0	8.77	-151.20	3.0	5	3	28.4	33.49	100	4	18	0	0	0
23	980905	1.0	6.78	-148.38	5.0	5	3	27.9	34.14	5	2	0	3	2	1
23	980905	1.0	6.78	-148.38	5.0	5	3	27.9	34.14	100	4	18	0	0	0
23	980905	1.0	6.78	-148.38	5.0	5	3	27.9	34.14	300	1	0	0	0	0
23	980905	1.0	6.78	-148.38	5.0	5	3	27.9	34.14	500	1	1	0	0	0
24	980906	1.2	6.13	-145.90	4.0	4	2	26.1	34.57	10	2	1	2	3	1
24	980906	1.2	6.13	-145.90	4.0	4	2	26.1	34.57	20	3	1	0	0	0
24	980906	1.2	6.13	-145.90	4.0	4	2	26.1	34.57	30	1	2	0	0	0
24	980906	1.2	6.13	-145.90	4.0	4	2	26.1	34.57	100	4	10	0	0	0
24	980906	1.2	6.13	-145.90	4.0	4	2	26.1	34.57	300	1	0	0	0	0
24	980906	1.2	6.13	-145.90	4.0	4	2	26.1	34.57	500	2	1	0	0	0
25	980907	1.0	8.68	-143.57	3.0	5	3	28.0	33.45	30	2	1	3	1	0

Table 8 (*Endeavor* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
25	980907	1.0	8.68	-143.57	3.0	5	3	28.0	33.45	100	2	3	0	0	0
25	980907	1.0	8.68	-143.57	3.0	5	3	28.0	33.45	300	1	1	0	0	0
25	980907	1.0	8.68	-143.57	3.0	5	3	28.0	33.45	500	1	1	0	0	0
26	980908	1.0	10.53	-141.83	4.0	5	2	28.4	33.86	5	1	1	3	2	1
26	980908	1.0	10.53	-141.83	4.0	5	2	28.4	33.86	100	4	19	0	0	0
26	980908	1.0	10.53	-141.83	4.0	5	2	28.4	33.86	300	1	0	0	0	0
26	980908	1.0	10.53	-141.83	4.0	5	2	28.4	33.86	500	3	9	0	0	0
27	980909	1.0	12.75	-139.72	4.0	5	3	27.9	33.77	20	1	1	3	5	1
27	980909	1.0	12.75	-139.72	4.0	5	3	27.9	33.77	30	1	1	0	0	0
27	980909	1.0	12.75	-139.72	4.0	5	3	27.9	33.77	100	5	10	0	0	0
27	980909	1.0	12.75	-139.72	4.0	5	3	27.9	33.77	500	3	0	0	0	0
28	980910	1.0	14.63	-137.92	4.0	2	2	27.1	34.70	20	1	0	1	1	0
28	980910	1.0	14.63	-137.92	4.0	2	2	27.1	34.70	30	1	0	3	2	0
28	980910	1.0	14.63	-137.92	4.0	2	2	27.1	34.70	100	5	27	0	0	0
29	980911	1.0	12.07	-136.02	4.0	5	3	28.3	33.15	5	2	6	1	1	0
29	980911	1.0	12.07	-136.02	4.0	5	3	28.3	33.15	30	1	2	2	4	0
29	980911	1.0	12.07	-136.02	4.0	5	3	28.3	33.15	80	2	5	0	0	0
29	980911	1.0	12.07	-136.02	4.0	5	3	28.3	33.15	100	5	21	0	0	0
29	980911	1.0	12.07	-136.02	4.0	5	3	28.3	33.15	500	1	1	0	0	0
29	980911	1.0	12.07	-136.02	4.0	5	3	28.3	33.15	700	1	2	0	0	0
30	980912	1.0	9.13	-134.15	1.0	5	1	28.7	33.25	5	1	3	3	4	0
30	980912	1.0	9.13	-134.15	1.0	5	1	28.7	33.25	30	2	2	0	0	0
30	980912	1.0	9.13	-134.15	1.0	5	1	28.7	33.25	80	3	7	0	0	0
30	980912	1.0	9.13	-134.15	1.0	5	1	28.7	33.25	100	4	5	0	0	0
30	980912	1.0	9.13	-134.15	1.0	5	1	28.7	33.25	500	4	0	0	0	0
30	980912	1.0	9.13	-134.15	1.0	5	1	28.7	33.25	700	1	1	0	0	0
31	980913	1.0	5.98	-132.28	6.0	5	2	27.2	34.20	5	2	4	3	2	0
31	980913	1.0	5.98	-132.28	6.0	5	2	27.2	34.20	10	2	6	0	0	0
31	980913	1.0	5.98	-132.28	6.0	5	2	27.2	34.20	20	6	8	0	0	0
31	980913	1.0	5.98	-132.28	6.0	5	2	27.2	34.20	80	1	1	0	0	0
31	980913	1.0	5.98	-132.28	6.0	5	2	27.2	34.20	100	3	7	0	0	0
32	980914	1.0	7.85	-130.55	3.0	5	2	27.8	33.62	10	1	1	3	2	0
32	980914	1.0	7.85	-130.55	3.0	5	2	27.8	33.62	20	4	30	0	0	0
32	980914	1.0	7.85	-130.55	3.0	5	2	27.8	33.62	30	1	1	0	0	0
32	980914	1.0	7.85	-130.55	3.0	5	2	27.8	33.62	80	1	1	0	0	0
32	980914	1.0	7.85	-130.55	3.0	5	2	27.8	33.62	100	4	6	0	0	0
32	980914	1.0	7.85	-130.55	3.0	5	2	27.8	33.62	500	2	4	0	0	0
33	980915	1.0	10.63	-128.77	4.0	5	3	27.5	33.65	5	1	0	1	1	0
33	980915	1.0	10.63	-128.77	4.0	5	3	27.5	33.65	20	3	4	3	3	0
33	980915	1.0	10.63	-128.77	4.0	5	3	27.5	33.65	80	2	4	0	0	0
33	980915	1.0	10.63	-128.77	4.0	5	3	27.5	33.65	100	4	3	0	0	0
33	980915	1.0	10.63	-128.77	4.0	5	3	27.5	33.65	400	1	0	0	0	0
34	980916	1.0	12.73	-126.68	3.0	6	3	27.8	34.33	100	4	11	3	2	0
35	980917	1.0	12.58	-124.05	3.0	1	2	28.3	34.14	20	1	0	2	2	0

Table 8 (*Endeavor* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
35	980917	1.0	12.58	-124.05	3.0	1	2	28.3	34.14	100	3	6	3	3	4
35	980917	1.0	12.58	-124.05	3.0	1	2	28.3	34.14	500	1	3	0	0	0
36	980918	1.0	12.55	-121.32	1.0	5	1	27.8	33.99	20	1	1	3	4	3
36	980918	1.0	12.55	-121.32	1.0	5	1	27.8	33.99	80	1	3	0	0	0
36	980918	1.0	12.55	-121.32	1.0	5	1	27.8	33.99	100	4	13	0	0	0
36	980918	1.0	12.55	-121.32	1.0	5	1	27.8	33.99	300	1	0	0	0	0
37	980919	1.0	13.37	-118.20	3.0	5	2	28.4	34.14	20	4	11	1	1	0
37	980919	1.0	13.37	-118.20	3.0	5	2	28.4	34.14	80	2	4	3	3	0
37	980919	1.0	13.37	-118.20	3.0	5	2	28.4	34.14	100	3	3	0	0	0
37	980919	1.0	13.37	-118.20	3.0	5	2	28.4	34.14	300	1	0	0	0	0
37	980919	1.0	13.37	-118.20	3.0	5	2	28.4	34.14	500	2	1	0	0	0
38	980920	1.0	14.82	-115.02	3.0	5	3	28.1	34.60	20	1	1	3	2	2
38	980920	1.0	14.82	-115.02	3.0	5	3	28.1	34.60	30	1	0	0	0	0
38	980920	1.0	14.82	-115.02	3.0	5	3	28.1	34.60	100	3	5	0	0	0
38	980920	1.0	14.82	-115.02	3.0	5	3	28.1	34.60	500	2	3	0	0	0
39	980921	1.0	16.08	-112.27	3.0	5	2	28.6	34.50	20	4	8	2	4	0
39	980921	1.0	16.08	-112.27	3.0	5	2	28.6	34.50	30	1	1	3	4	0
39	980921	1.0	16.08	-112.27	3.0	5	2	28.6	34.50	100	4	4	0	0	0
39	980921	1.0	16.08	-112.27	3.0	5	2	28.6	34.50	500	1	2	0	0	0
40	980922	1.0	17.25	-109.38	4.0	5	2	28.6	34.15	10	1	0	3	3	1
40	980922	1.0	17.25	-109.38	4.0	5	2	28.6	34.15	20	4	3	0	0	0
40	980922	1.0	17.25	-109.38	4.0	5	2	28.6	34.15	80	2	3	0	0	0
40	980922	1.0	17.25	-109.38	4.0	5	2	28.6	34.15	100	3	5	0	0	0
40	980922	1.0	17.25	-109.38	4.0	5	2	28.6	34.15	300	1	0	0	0	0
40	980922	1.0	17.25	-109.38	4.0	5	2	28.6	34.15	500	1	1	0	0	0
41	980923	1.1	18.25	-107.00	3.0	5	2	28.3	34.02	10	3	6	3	4	4
41	980923	1.1	18.25	-107.00	3.0	5	2	28.3	34.02	20	4	2	0	0	0
41	980923	1.1	18.25	-107.00	3.0	5	2	28.3	34.02	30	3	2	0	0	0
41	980923	1.1	18.25	-107.00	3.0	5	2	28.3	34.02	100	3	6	0	0	0
41	980923	1.1	18.25	-107.00	3.0	5	2	28.3	34.02	300	1	0	0	0	0
41	980923	1.1	18.25	-107.00	3.0	5	2	28.3	34.02	500	3	2	0	0	0
42	980924	1.0	18.97	-104.73	2.0	1	1	30.1	34.14	80	4	11	1	1	0
42	980924	1.0	18.95	-104.73	2.0	1	1	30.1	34.14	500	5	26	3	3	3
43	980925	1.0	19.00	-104.53	3.0	5	2	-	-	15	1	1	0	0	0
43	980925	1.0	19.00	-104.53	3.0	5	2	-	-	30	1	2	0	0	0
43	980925	1.0	19.00	-104.53	3.0	5	2	-	-	80	1	1	0	0	0
43	980925	1.0	19.00	-104.53	3.0	5	2	-	-	100	3	13	0	0	0
43	980925	1.0	19.00	-104.53	3.0	5	2	-	-	400	2	3	0	0	0
43	980925	1.0	19.00	-104.53	3.0	5	2	-	-	500	5	31	0	0	0
44	980930	1.0	19.03	-105.90	4.0	2	3	28.9	34.13	20	1	1	3	2	0
44	980930	1.0	19.03	-105.90	4.0	2	3	28.9	34.13	80	1	2	0	0	0
44	980930	1.0	19.03	-105.90	4.0	2	3	28.9	34.13	500	4	14	0	0	0
45	981001	0.7	19.78	-108.17	5.0	3	3	28.7	34.89	5	1	0	1	1	0
45	981001	0.7	19.78	-108.17	5.0	3	3	28.7	34.89	500	1	0	0	0	0

Table 8 (*Endeavor* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
46	981003	1.0	19.40	-112.52	4.0	5	3	27.1	34.56	5	1	1	3	3	0
46	981003	1.0	19.40	-112.52	4.0	5	3	27.1	34.56	20	2	3	0	0	0
46	981003	1.0	19.40	-112.52	4.0	5	3	27.1	34.56	100	2	0	0	0	0
46	981003	1.0	19.40	-112.52	4.0	5	3	27.1	34.56	500	2	0	0	0	0
47	981004	1.0	17.90	-115.10	4.0	4	2	27.6	34.42	10	1	1	3	3	0
47	981004	1.0	17.90	-115.10	4.0	4	2	27.6	34.42	20	2	0	0	0	0
47	981004	1.0	17.90	-115.10	4.0	4	2	27.6	34.42	30	1	1	0	0	0
47	981004	1.0	17.90	-115.10	4.0	4	2	27.6	34.42	80	2	3	0	0	0
47	981004	1.0	17.90	-115.10	4.0	4	2	27.6	34.42	100	1	0	0	0	0
47	981004	1.0	17.90	-115.10	4.0	4	2	27.6	34.42	500	2	1	0	0	0
48	981006	1.0	14.23	-119.57	4.0	4	3	28.0	34.28	20	2	2	2	2	0
48	981006	1.0	14.23	-119.57	4.0	4	3	28.0	34.28	80	2	0	0	0	0
48	981006	1.0	14.23	-119.57	4.0	4	3	28.0	34.28	100	1	0	0	0	0
89	981007	1.0	12.12	-117.65	5.0	5	3	29.0	33.87	5	1	0	2	2	0
89	981007	1.0	12.12	-117.65	5.0	5	3	29.0	38.78	500	1	0	0	0	0
49	981008	1.0	9.27	-116.82	4.0	5	2	27.6	33.17	20	1	1	2	2	0
49	981008	1.0	9.27	-116.82	4.0	5	2	27.6	33.17	100	2	0	0	0	0
49	981008	1.0	9.27	-116.82	4.0	5	2	27.6	33.17	500	2	2	0	0	0
50	981009	1.0	6.95	-117.58	4.0	5	2	27.7	33.15	5	2	0	1	3	1
50	981009	1.0	6.95	-117.58	4.0	5	2	27.7	33.15	10	1	1	0	0	0
50	981009	1.0	6.95	-117.58	4.0	5	2	27.7	33.15	20	3	7	0	0	0
50	981009	1.0	6.95	-117.58	4.0	5	2	27.7	33.15	100	4	3	0	0	0
50	981009	1.0	6.95	-117.58	4.0	5	2	27.7	33.15	500	2	1	0	0	0
51	981010	1.0	4.83	-119.28	4.0	5	2	27.3	33.67	5	2	1	2	1	0
51	981010	1.0	4.83	-119.28	4.0	5	2	27.3	33.67	10	3	5	0	0	0
51	981010	1.0	4.83	-119.28	4.0	5	2	27.3	33.67	20	4	7	0	0	0
51	981010	1.0	4.83	-119.28	4.0	5	2	27.3	33.67	100	3	2	0	0	0
52	981011	1.0	3.58	-117.63	5.0	5	2	25.0	34.10	10	1	1	2	3	0
52	981011	1.0	3.58	-117.63	5.0	5	2	25.0	34.10	20	2	1	0	0	0
52	981011	1.0	3.58	-117.63	5.0	5	2	25.0	34.10	100	5	6	0	0	0
52	981011	1.0	3.58	-117.63	5.0	5	2	25.0	34.10	300	1	0	0	0	0
52	981011	1.0	3.58	-117.63	5.0	5	2	25.0	34.10	500	2	2	0	0	0
53	981013	1.0	5.03	-113.13	3.0	5	1	27.7	33.18	5	1	2	2	4	0
53	981013	1.0	5.03	-113.13	3.0	5	1	27.7	33.18	100	5	0	0	0	0
53	981013	1.0	5.03	-113.13	3.0	5	1	27.7	33.18	300	1	0	0	0	0
54	981014	1.0	6.93	-110.03	5.0	5	2	27.6	33.13	5	1	1	1	2	3
54	981014	1.0	6.93	-110.03	5.0	5	2	27.6	33.13	10	1	1	0	0	0
54	981014	1.0	6.93	-110.03	5.0	5	2	27.6	33.13	20	4	18	0	0	0
54	981014	1.0	6.93	-110.03	5.0	5	2	27.6	33.13	80	1	1	0	0	0
54	981014	1.0	6.93	-110.03	5.0	5	2	27.6	33.13	100	4	3	0	0	0
54	981014	1.0	6.93	-110.03	5.0	5	2	27.6	33.13	300	1	0	0	0	0
54	981014	1.0	6.93	-110.03	5.0	5	2	27.6	33.13	500	4	17	0	0	0
55	981016	1.0	10.73	-103.55	5.0	5	3	28.1	33.33	5	1	0	1	1	1
55	981016	1.0	10.73	-103.55	5.0	5	3	28.1	33.33	10	1	0	2	1	0

Table 8 (*Endeavor* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
55	981016	1.0	10.73	-103.55	5.0	5	3	28.1	33.33	20	4	10	0	0	0
56	981017	1.0	11.00	-100.40	5.0	5	3	28.6	33.22	20	2	2	2	2	0
56	981017	1.0	11.00	-100.40	5.0	5	3	28.6	33.22	80	1	2	3	1	0
56	981017	1.0	11.00	-100.40	5.0	5	3	28.6	33.22	100	2	1	0	0	0
56	981017	1.0	11.00	-100.40	5.0	5	3	28.6	33.22	300	1	0	0	0	0
57	981018	1.0	10.47	-97.50	3.0	5	3	28.2	33.15	10	4	11	2	3	0
57	981018	1.0	10.47	-97.50	3.0	5	3	28.2	33.15	20	2	1	3	2	0
57	981018	1.0	10.47	-97.50	3.0	5	3	28.2	33.15	80	1	1	0	0	0
57	981018	1.0	10.47	-97.50	3.0	5	3	28.2	33.15	100	1	0	0	0	0
57	981018	1.0	10.47	-97.50	3.0	5	3	28.2	33.15	300	1	0	0	0	0
58	981019	1.0	10.57	-94.42	3.0	5	2	28.2	32.90	20	1	2	2	4	0
58	981019	1.0	10.57	-94.42	3.0	5	2	28.2	32.90	80	1	2	3	3	0
58	981019	1.0	10.57	-94.42	3.0	5	2	28.2	32.90	100	2	2	0	0	0
58	981019	1.0	10.57	-94.42	3.0	5	2	28.2	32.90	300	1	0	0	0	0
59	981021	1.0	10.08	-89.60	2.0	5	2	28.1	33.40	10	1	0	3	3	2
59	981021	1.0	10.08	-89.60	2.0	5	2	28.1	33.40	20	5	15	0	0	0
59	981021	1.0	10.08	-89.60	2.0	5	2	28.1	33.40	100	1	0	0	0	0
59	981021	1.0	10.08	-89.60	2.0	5	2	28.1	33.40	300	1	0	0	0	0
59	981021	1.0	10.08	-89.60	2.0	5	2	28.1	33.40	500	1	1	0	0	0
60	981023	1.0	9.37	-84.87	4.0	5	3	28.1	30.26	10	3	6	3	4	1
60	981023	1.0	9.37	-84.87	4.0	5	3	28.1	30.26	80	4	8	0	0	0
60	981023	1.0	9.37	-84.87	4.0	5	3	28.1	30.26	500	3	5	0	0	0
61	981031	1.0	3.08	-89.48	3.0	3	3	27.6	33.23	10	1	1	2	4	0
61	981031	1.0	3.08	-89.48	3.0	3	3	27.6	33.23	20	1	1	0	0	0
61	981031	1.0	3.08	-89.48	3.0	3	3	27.6	33.23	100	4	7	0	0	0
61	981031	1.0	3.08	-89.48	3.0	3	3	27.6	33.23	400	1	1	0	0	0
62	981101	1.0	0.43	-91.43	2.0	4	1	25.7	33.86	30	1	2	2	4	0
62	981101	1.0	3.08	-89.48	3.0	3	3	27.6	33.23	100	4	12	3	1	0
62	981101	1.0	3.08	-89.48	3.0	3	3	27.6	33.23	500	3	5	0	0	0
63	981104	1.0	-4.17	-93.25	3.0	4	1	22.1	34.52	20	1	1	2	4	0
63	981104	1.0	-4.17	-93.25	3.0	4	1	22.1	34.52	30	1	0	3	1	0
63	981104	1.0	-4.17	-93.25	3.0	4	1	22.1	34.52	100	4	5	0	0	0
63	981104	1.0	-4.17	-93.25	3.0	4	1	22.1	34.52	500	3	7	0	0	0
64	981105	1.0	-6.87	-94.67	4.0	5	1	23.6	35.50	10	1	0	0	0	0
64	981105	1.0	-6.87	-94.67	4.0	5	1	23.6	35.50	20	1	1	0	0	0
64	981105	1.0	-6.87	-94.67	4.0	5	1	23.6	35.50	30	1	0	0	0	0
64	981105	1.0	-6.87	-94.67	4.0	5	1	23.6	35.50	100	3	3	0	0	0
64	981105	1.0	-6.87	-94.67	4.0	5	1	23.6	35.50	400	1	1	0	0	0
64	981105	1.0	-6.87	-94.67	4.0	5	1	23.6	35.50	500	1	1	0	0	0
65	981106	1.0	-9.45	-98.00	4.0	5	1	24.4	35.42	20	2	3	2	4	0
65	981106	1.0	-9.45	-98.00	4.0	5	1	24.4	35.42	30	1	1	0	0	0
65	981106	1.0	-9.45	-98.00	4.0	5	1	24.4	35.42	100	4	3	0	0	0
65	981106	1.0	-9.45	-98.00	4.0	5	1	24.4	35.42	300	1	0	0	0	0
	981107	0.0	-9.72	-98.25	-	-	-	-	-	20	0	6	0	0	0

Table 8 (*Endeavor* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
	981107	0.0	-9.72	-98.25	-	-	-	-	-	30	0	1	0	0	0
66	981107	1.0	-12.25	-99.87	4.0	5	1	24.3	35.59	20	3	5	2	3	0
66	981107	1.0	-12.25	-99.87	4.0	5	1	24.3	35.59	30	1	0	3	1	0
66	981107	1.0	-12.25	-99.87	4.0	5	1	24.3	35.59	100	3	1	0	0	0
66	981107	1.0	-12.25	-99.87	4.0	5	1	24.3	35.59	900	1	0	0	0	0
67	981108	1.0	-12.25	-96.48	4.0	5	1	23.7	35.66	20	3	4	2	2	0
67	981108	1.0	-12.25	-96.48	4.0	5	1	23.7	35.66	30	1	0	3	1	0
67	981108	1.0	-12.25	-96.48	4.0	5	1	23.7	35.66	100	2	1	0	0	0
67	981108	1.0	-12.25	-96.48	4.0	5	1	23.7	35.66	500	1	3	0	0	0
68	981109	1.0	-12.42	-93.03	4.0	5	1	22.9	35.74	5	1	0	2	2	0
68	981109	1.0	-12.42	-93.03	4.0	5	1	22.9	35.74	20	1	1	3	1	0
68	981109	1.0	-12.42	-93.03	4.0	5	1	22.9	35.74	100	3	7	0	0	0
68	981109	1.0	-12.42	-93.03	4.0	5	1	22.9	35.74	400	1	0	0	0	0
68	981109	1.0	-12.42	-93.03	4.0	5	1	22.9	35.74	500	3	5	0	0	0
	981110	0.0	-13.53	-91.78	-	-	-	-	-	20	0	1	0	0	0
69	981110	1.0	-14.82	-90.35	4.0	5	5	21.4	35.78	20	1	0	2	4	0
69	981110	1.0	-14.82	-90.35	4.0	5	5	21.4	35.78	100	4	2	0	0	0
69	981110	1.0	-14.82	-90.35	4.0	5	5	21.4	35.78	500	2	2	0	0	0
70	981111	1.0	-17.12	-87.70	4.0	5	2	20.3	35.56	100	2	0	1	1	0
70	981111	1.0	-17.12	-87.70	4.0	5	2	20.3	35.56	400	1	0	2	2	0
71	981112	1.0	-16.80	-84.60	3.0	5	2	19.7	35.40	30	1	1	1	2	0
71	981112	1.0	-16.80	-84.60	3.0	5	2	19.7	35.40	100	3	5	0	0	0
71	981112	1.0	-16.80	-84.60	3.0	5	2	19.7	35.40	500	4	8	0	0	0
72	981113	1.0	-15.33	-82.32	4.0	5	2	19.7	35.41	100	5	0	1	1	0
72	981113	1.0	-15.33	-82.32	4.0	5	2	19.7	35.41	400	1	0	0	0	0
72	981113	1.0	-15.33	-82.32	4.0	5	2	19.7	35.41	500	1	0	0	0	0
73	981114	1.0	-14.00	-80.35	4.0	5	1	19.6	35.28	20	3	5	1	2	0
73	981114	1.0	-14.00	-80.35	4.0	5	1	19.6	35.28	30	1	0	2	2	0
73	981114	1.0	-14.00	-80.35	4.0	5	1	19.6	35.28	100	4	4	0	0	0
73	981114	1.0	-14.00	-80.35	4.0	5	1	19.6	35.28	500	6	14	0	0	0
74	981121	1.0	-11.60	-78.17	2.0	1	2	19.3	34.94	90	6	29	1	1	0
74	981121	1.0	-11.60	-78.17	2.0	1	2	19.3	34.94	0	0	0	2	3	0
75	981122	1.0	-10.63	-79.73	3.0	1	1	20.3	35.15	20	1	0	1	1	0
75	981122	1.0	-10.63	-79.73	3.0	1	1	20.3	35.15	100	1	0	0	0	0
75	981122	1.0	-10.63	-79.73	3.0	1	1	20.3	35.15	200	6	4	0	0	0
75	981122	1.0	-10.63	-79.73	3.0	1	1	20.3	35.15	500	1	2	0	0	0
76	981123	1.0	-11.25	-81.32	3.0	1	1	20.9	35.29	20	2	0	2	4	0
76	981123	1.0	-11.25	-81.32	3.0	1	1	20.9	35.29	30	1	0	0	0	0
76	981123	1.0	-11.25	-81.32	3.0	1	1	20.9	35.29	100	4	0	0	0	0
77	981124	1.0	-9.75	-80.90	4.0	1	2	21.6	35.44	20	3	2	2	2	0
77	981124	1.0	-9.75	-80.90	4.0	1	2	21.6	35.44	100	2	0	0	0	0
77	981124	1.0	-9.75	-80.90	4.0	1	2	21.6	35.44	500	1	0	0	0	0
90	981125	1.0	-8.28	-79.63	2.0	2	1	18.2	35.01	80	6	13	0	0	0
78	981126	1.0	-7.52	-80.32	3.0	2	1	17.8	34.98	80	5	9	3	2	0

Table 8 (*Endeavor* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
78	981126	1.0	-7.52	-80.32	3.0	2	1	17.8	34.98	500	1	1	0	0	0
79	981127	1.0	-6.90	-80.23	3.0	2	1	16.3	34.99	90	3	3	0	0	0
80	981128	1.0	-4.72	-81.53	3.0	3	2	16.6	34.99	500	3	0	0	0	0
81	981129	1.0	-4.43	-82.45	2.0	3	1	18.4	35.00	80	2	2	2	5	0
81	981129	1.0	-4.43	-82.45	2.0	3	1	18.4	35.00	200	1	1	3	4	0
81	981129	1.0	-4.43	-82.45	2.0	3	1	18.4	35.00	500	2	3	0	0	0
81	981129	1.0	-4.43	-82.45	2.0	3	1	18.4	35.00	500	2	2	0	0	0
81	981129	1.0	-4.43	-82.45	2.0	3	1	18.4	35.00	500	1	1	0	0	0
81	981129	1.0	-4.43	-82.45	2.0	3	1	18.4	35.00	500	1	1	0	0	0
82	981130	1.0	-6.67	-84.95	4.0	3	2	22.6	35.18	20	4	0	2	1	0
82	981130	1.0	-6.67	-84.95	4.0	3	2	22.6	35.18	30	1	1	0	0	0
82	981130	1.0	-6.67	-84.95	4.0	3	2	22.6	35.18	100	2	1	0	0	0
82	981130	1.0	-6.67	-84.95	4.0	3	2	22.6	35.18	500	1	1	0	0	0
83	981201	1.0	-8.87	-87.40	4.0	3	2	23.2	35.60	20	2	7	1	1	0
83	981201	1.0	-8.87	-87.40	4.0	3	2	23.2	35.60	30	1	2	2	2	0
83	981201	1.0	-8.87	-87.40	4.0	3	2	23.2	35.60	100	2	2	0	0	0
83	981201	1.0	-8.87	-87.40	4.0	3	2	23.2	35.60	300	1	0	0	0	0
83	981201	1.0	-8.87	-87.40	4.0	3	2	23.2	35.60	500	1	1	0	0	0
83	981201	1.0	-8.87	-87.40	4.0	3	2	23.2	35.60	500	1	1	0	0	0
84	981202	1.0	-6.65	-89.15	4.0	4	2	23.2	35.36	20	2	4	2	4	0
84	981202	1.0	-6.65	-89.15	4.0	4	2	23.2	35.36	100	4	5	0	0	0
84	981202	1.0	-6.65	-89.15	4.0	4	2	23.2	35.36	400	1	1	0	0	0
84	981202	1.0	-6.65	-89.15	4.0	4	2	23.2	35.36	500	4	2	0	0	0
85	981203	1.0	-3.50	-87.98	4.0	4	2	22.5	34.90	20	1	0	2	3	0
85	981203	1.0	-3.50	-87.98	4.0	4	2	22.5	34.90	100	4	0	0	0	0
85	981203	1.0	-3.50	-87.98	4.0	4	2	22.5	34.90	500	1	0	0	0	0
86	981204	1.0	-0.77	-86.57	3.0	4	2	24.1	33.49	10	1	1	0	0	0
86	981204	1.0	-0.77	-86.57	3.0	4	2	24.1	33.49	30	1	1	0	0	0
86	981204	1.0	-0.77	-86.57	3.0	4	2	24.1	33.49	80	1	2	0	0	0
86	981204	1.0	-0.77	-86.57	3.0	4	2	24.1	33.49	100	1	1	0	0	0
86	981204	1.0	-0.77	-86.57	3.0	4	2	24.1	33.49	500	3	5	0	0	0
87	981205	1.0	1.20	-84.50	4.0	5	1	25.9	33.35	10	2	1	2	4	0
87	981205	1.0	1.20	-84.50	4.0	5	1	25.9	33.35	20	5	44	3	1	0
87	981205	1.0	1.20	-84.50	4.0	5	1	25.9	33.35	80	3	5	0	0	0
87	981205	1.0	1.20	-84.50	4.0	5	1	25.9	33.35	100	4	12	0	0	0
87	981205	1.0	1.20	-84.50	4.0	5	1	25.9	33.35	400	3	6	0	0	0
87	981205	1.0	1.20	-84.50	4.0	5	1	25.9	33.35	500	1	1	0	0	0
87	981205	1.0	1.20	-84.50	4.0	5	1	25.9	33.35	500	1	0	0	0	0
88	981206	1.0	3.35	-82.12	5.0	5	2	27.4	31.61	10	3	5	1	1	0
88	981206	1.0	3.35	-82.12	5.0	5	2	27.4	31.61	20	2	2	2	4	0
88	981206	1.0	3.35	-82.12	5.0	5	2	27.4	31.61	30	1	1	0	0	0
88	981206	1.0	3.35	-82.12	5.0	5	2	27.4	31.61	80	1	1	0	0	0
88	981206	1.0	3.35	-82.12	5.0	5	2	27.4	31.61	100	3	2	0	0	0
88	981206	1.0	3.35	-82.12	5.0	5	2	27.4	31.61	300	1	0	0	0	0

Table 8 (*Endeavor* dipnet sampling) continued.

[1] Records without Station Numbers reflect opportunistic or non-standard specimen collections.

[2] 1 = quarter moon; 2 = half moon; 3 = 3/4 moon; 4 = full moon; 5 = no moon; 6 = new moon.

[3] 1 = clear; 2 = partly cloudy; 3 = overcast; 4 = rain; 5 = other or unknown.

[4] SST = Sea Surface Temperature (Celsius)

[5] SSS = Sea Surface Salinity (practical salinity units)

[6]
005 = Unidentified flyingfish
010 = Oxyporhamphus micropterus
015 = Fodiator spp.
020 = Exocetus spp.
030 = Unidentified 4-wing flyingfish
060 = Elassichthys
080 = Hemiramphidae (halfbeaks)
090 = Belonidae (needlefish)
100 = Myctophidae (lanternfish)
125 = Vinciguerria spp.
200 = Scombridae (tunas)
300 = Gempylidae (snake mackerel)
400 = Coryphaenidae (dolphinfish)
500 = Other
700 = Octopoda (pelagic octopus)
900 = Sea Snake

[7]
1 = “a couple” (1-3)
2 = “a few” (4-8); uncommon
3 = “several” (9-15); fairly common
4 = “common” (16-50)
5 = “abundant” (51-150)
6 = “superabundant (150+)
7 = 1000’s
8 = present
9 = “possibly present”

[8]
1 = Large (mantle length > 8 inches)
2 = Medium (3 inches < mantle length < 8 inches)
3 = Small (mantle length < 3 inches)

Table 9. Results of night-light dipnet sampling, *Jordan*, 31 July - December 1998.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (psu)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
1	980731	1.0	31.62	-116.95	4.0	2	2	20.2	33.14	30	2	3	0	0	0
1	980731	1.0	31.62	-116.95	4.0	2	2	20.2	33.14	500	1	1	0	0	0
2	980801	1.0	29.40	-115.67	4.0	2	2	19.2	32.99	0	0	0	1	1	0
2	980801	1.0	29.40	-115.67	4.0	2	2	19.2	32.99	0	0	0	2	3	0
3	980802	1.0	27.58	-115.12	4.0	3	2	0.0	0.00	30	2	2	2	3	0
4	980803	1.0	26.03	-112.95	3.0	3	1	25.2	33.78	15	2	6	3	2	0
4	980803	1.0	26.03	-112.95	3.0	3	1	25.2	33.78	30	2	3	0	0	0
4	980803	1.0	26.03	-112.95	3.0	3	1	25.2	33.78	90	1	0	0	0	0
4	980803	1.0	26.03	-112.95	3.0	3	1	25.2	33.78	400	1	1	0	0	0
4	980803	1.0	26.03	-112.95	3.0	3	1	25.2	33.78	500	1	1	0	0	0
4	980803	1.0	26.03	-112.95	3.0	3	1	25.2	33.78	500	5	11	0	0	0
4	980803	1.0	26.03	-112.95	3.0	3	1	25.2	33.78	80	1	1	0	0	0
5	980804	1.0	24.02	-111.38	3.0	3	2	27.3	34.22	10	3	5	3	1	0
5	980804	1.0	24.02	-111.38	3.0	3	2	27.3	34.22	20	1	1	2	4	0
5	980804	1.0	24.02	-111.38	3.0	3	2	27.3	34.22	30	1	0	0	0	0
5	980804	1.0	24.02	-111.38	3.0	3	2	27.3	34.22	80	1	0	0	0	0
5	980804	1.0	24.02	-111.38	3.0	3	2	27.3	34.22	400	1	0	0	0	0
5	980804	1.0	24.02	-111.38	3.0	3	2	27.3	34.22	700	3	0	0	0	0
6	980805	1.0	22.80	-109.37	2.0	4	2	30.4	34.74	10	2	1	2	5	0
6	980805	1.0	22.80	-109.37	2.0	4	2	30.4	34.74	20	2	1	0	0	0
6	980805	1.0	22.80	-109.37	2.0	4	2	30.4	34.74	30	1	1	0	0	0
6	980805	1.0	22.80	-109.37	2.0	4	2	30.4	34.74	90	1	1	0	0	0
6	980805	1.0	22.80	-109.37	2.0	4	2	30.4	34.74	200	2	1	0	0	0
6	980805	1.0	22.80	-109.37	2.0	4	2	30.4	34.74	100	3	2	0	0	0
6	980805	1.0	22.80	-109.37	2.0	4	2	30.4	34.74	500	1	1	0	0	0
7	980806	1.0	24.50	-108.93	3.0	4	3	29.9	34.39	10	3	4	1	2	0
7	980806	1.0	24.50	-108.93	3.0	4	3	29.9	34.39	20	1	0	2	3	0
7	980806	1.0	24.50	-108.93	3.0	4	3	29.9	34.39	30	1	1	3	2	0
7	980806	1.0	24.50	-108.93	3.0	4	3	29.9	34.39	200	2	1	0	0	0
7	980806	1.0	24.50	-108.93	3.0	4	3	29.9	34.39	400	1	0	0	0	0
7	980806	1.0	24.50	-108.93	3.0	4	3	29.9	34.39	500	1	0	0	0	0
8	980809	1.0	27.63	-111.63	1.0	5	1	0.0	0.00	30	3	4	1	3	0
8	980809	1.0	27.63	-111.63	1.0	5	1	0.0	0.00	500	2	3	2	3	0
8	980809	1.0	27.63	-111.63	1.0	5	1	0.0	0.00	10	1	0	0	0	0
9	980810	1.0	25.85	-110.85	1.0	5	1	30.0	34.86	15	4	9	2	4	0
9	980810	1.0	25.85	-110.85	1.0	5	1	30.0	34.86	20	1	1	0	0	0
9	980810	1.0	25.85	-110.85	1.0	5	1	30.0	34.86	30	4	19	0	0	0
9	980810	1.0	25.85	-110.85	1.0	5	1	30.0	34.86	200	3	5	0	0	0
9	980810	1.0	25.85	-110.85	1.0	5	1	30.0	34.86	400	1	0	0	0	0
9	980810	1.0	25.85	-110.85	1.0	5	1	30.0	34.86	500	1	1	0	0	0
9	980810	1.0	25.85	-110.85	1.0	5	1	30.0	34.86	500	4	2	0	0	0
9	980810	1.0	25.85	-110.85	1.0	5	1	30.0	34.86	500	3	4	0	0	0
9	980810	1.0	25.85	-110.85	1.0	5	1	30.0	34.86	10	5	11	0	0	0
10	980811	1.0	24.35	-109.48	1.0	5	2	30.5	34.50	10	4	6	2	3	0

Table 9 (*Jordan* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
10	980811	1.0	24.35	-109.48	1.0	5	2	30.5	34.50	20	1	0	3	5	0
10	980811	1.0	24.35	-109.48	1.0	5	2	30.5	34.50	30	1	0	0	0	0
10	980811	1.0	24.35	-109.48	1.0	5	2	30.5	34.50	500	3	1	0	0	0
10	980811	1.0	24.35	-109.48	1.0	5	2	30.5	34.50	500	5	0	0	0	0
10	980811	1.0	24.35	-109.48	1.0	5	2	30.5	34.50	500	3	2	0	0	0
10	980811	1.0	24.35	-109.48	1.0	5	2	30.5	34.50	500	1	1	0	0	0
11	980812	1.0	22.95	-108.70	3.0	5	1	0.0	0.00	10	5	5	1	4	0
11	980812	1.0	22.95	-108.70	3.0	5	1	0.0	0.00	20	1	2	2	4	0
11	980812	1.0	22.95	-108.70	3.0	5	1	0.0	0.00	30	1	1	3	2	0
11	980812	1.0	22.95	-108.70	3.0	5	1	0.0	0.00	100	3	1	0	0	0
11	980812	1.0	22.95	-108.70	3.0	5	1	0.0	0.00	400	1	0	0	0	0
11	980812	1.0	22.95	-108.70	3.0	5	1	0.0	0.00	300	1	1	0	0	0
11	980812	1.0	22.95	-108.70	3.0	5	1	0.0	0.00	500	1	1	0	0	0
12	980814	1.0	22.72	-107.22	3.0	5	2	30.3	34.21	10	5	10	1	2	0
12	980814	1.0	22.72	-107.22	3.0	5	2	30.3	34.21	20	1	3	2	1	0
12	980814	1.0	22.72	-107.22	3.0	5	2	30.3	34.21	30	1	1	3	2	0
12	980814	1.0	22.72	-107.22	3.0	5	2	30.3	34.21	100	4	2	0	0	0
12	980814	1.0	22.72	-107.22	3.0	5	2	30.3	34.21	200	3	4	0	0	0
12	980814	1.0	22.72	-107.22	3.0	5	2	30.3	34.21	400	3	6	0	0	0
12	980814	1.0	22.72	-107.22	3.0	5	2	30.3	34.21	500	5	8	0	0	0
12	980814	1.0	22.72	-107.22	3.0	5	2	30.3	34.21	500	1	1	0	0	0
13	980818	1.0	22.17	-106.42	3.0	5	5	30.6	34.59	10	5	13	0	0	0
13	980818	1.0	22.17	-106.42	3.0	5	0	30.6	34.59	30	2	4	0	0	0
13	980818	1.0	22.17	-106.42	3.0	5	0	30.6	34.59	80	1	1	0	0	0
13	980818	1.0	22.17	-106.42	3.0	5	0	30.6	34.59	400	5	12	0	0	0
13	980818	1.0	22.17	-106.42	3.0	5	0	30.6	34.59	500	6	16	0	0	0
13	980818	1.0	22.17	-106.42	3.0	5	0	30.6	34.59	500	1	1	0	0	0
13	980818	1.0	22.17	-106.42	3.0	5	0	30.6	34.59	500	1	2	0	0	0
13	980818	1.0	22.17	-106.42	3.0	5	0	30.6	34.59	500	1	1	0	0	0
14	980819	1.0	20.65	-105.97	3.0	5	3	30.4	34.29	30	4	21	1	1	0
14	980819	1.0	20.65	-105.97	3.0	5	3	30.4	34.29	80	2	3	2	1	0
14	980819	1.0	20.65	-105.97	3.0	5	3	30.4	34.29	90	4	11	0	0	0
14	980819	1.0	20.65	-105.97	3.0	5	3	30.4	34.29	200	4	2	0	0	0
14	980819	1.0	20.65	-105.97	3.0	5	3	30.4	34.29	300	1	1	0	0	0
14	980819	1.0	20.65	-105.97	3.0	5	3	30.4	34.29	400	4	5	0	0	0
14	980819	1.0	20.65	-105.97	3.0	5	3	30.4	34.29	500	1	1	0	0	0
14	980819	1.0	20.65	-105.97	3.0	5	3	30.4	34.29	500	2	4	0	0	0
14	980819	1.0	20.65	-105.97	3.0	5	3	30.4	34.29	500	6	47	0	0	0
14	980819	1.0	20.65	-105.97	3.0	5	3	30.4	34.29	500	4	8	0	0	0
14	980819	1.0	20.65	-105.97	3.0	5	3	30.4	34.29	500	1	1	0	0	0
14	980819	1.0	20.65	-105.97	3.0	5	3	30.4	34.29	500	3	2	0	0	0
14	980819	1.0	20.65	-105.97	3.0	5	3	30.4	34.29	500	1	2	0	0	0
14	980819	1.0	20.65	-105.97	3.0	5	3	30.4	34.29	500	2	3	0	0	0
14	980819	1.0	20.65	-105.97	3.0	5	3	30.4	34.29	500	4	4	0	0	0

Table 9 (*Jordan* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
14	980819	1.0	20.65	-105.97	3.0	5	3	30.4	34.29	500	2	2	0	0	0
14	980819	1.0	20.65	-105.97	3.0	5	3	30.4	34.29	500	2	3	0	0	0
15	980820	1.0	21.62	-108.50	3.0	5	5	30.5	34.56	10	3	3	1	1	0
15	980820	1.0	21.62	-108.50	3.0	5	0	30.5	34.56	20	2	3	2	2	0
15	980820	1.0	21.62	-108.50	3.0	5	0	30.5	34.56	30	2	4	3	1	0
15	980820	1.0	21.62	-108.50	3.0	5	0	30.5	34.56	80	1	1	0	0	0
15	980820	1.0	21.62	-108.50	3.0	5	0	30.5	34.56	100	2	1	0	0	0
15	980820	1.0	21.62	-108.50	3.0	5	0	30.5	34.56	300	1	0	0	0	0
15	980820	1.0	21.62	-108.50	3.0	5	0	30.5	34.56	400	1	1	0	0	0
16	980821	1.0	19.98	-105.78	0.0	5	3	32.2	34.42	10	4	8	1	3	0
16	980821	1.0	19.98	-105.78	0.0	5	3	32.2	34.42	30	4	12	2	3	0
16	980821	1.0	19.98	-105.78	0.0	5	3	32.2	34.42	80	3	9	3	2	0
16	980821	1.0	19.98	-105.78	0.0	5	3	32.2	34.42	200	3	2	0	0	0
16	980821	1.0	19.98	-105.78	0.0	5	3	32.2	34.42	400	3	3	0	0	0
16	980821	1.0	19.98	-105.78	0.0	5	3	32.2	34.42	500	7	23	0	0	0
16	980821	1.0	19.98	-105.78	0.0	5	3	32.2	34.42	500	1	1	0	0	0
16	980821	1.0	19.98	-105.78	0.0	5	3	32.2	34.42	500	1	1	0	0	0
16	980821	1.0	19.98	-105.78	0.0	5	3	32.2	34.42	500	1	1	0	0	0
16	980821	1.0	19.98	-105.78	0.0	5	3	32.2	34.42	500	1	1	0	0	0
17	980822	1.0	18.15	-103.37	4.0	5	1	30.5	34.23	10	3	6	1	1	0
17	980822	1.0	18.15	-103.37	4.0	5	1	30.5	34.23	30	1	2	2	1	0
17	980822	1.0	18.15	-103.37	4.0	5	1	30.5	34.23	400	2	2	3	1	0
17	980822	1.0	18.15	-103.37	4.0	5	1	30.5	34.23	500	4	3	0	0	0
17	980822	1.0	18.15	-103.37	4.0	5	1	30.5	34.23	500	4	5	0	0	0
17	980822	1.0	18.15	-103.37	4.0	5	1	30.5	34.23	500	2	2	0	0	0
17	980822	1.0	18.15	-103.37	4.0	5	1	30.5	34.23	500	8	1	0	0	0
18	980823	1.0	17.32	-101.80	1.0	1	2	30.7	33.04	10	4	11	1	1	0
18	980823	1.0	17.32	-101.80	1.0	1	2	30.7	33.04	30	1	1	2	3	0
18	980823	1.0	17.32	-101.80	1.0	1	2	30.7	33.04	100	1	1	0	0	0
18	980823	1.0	17.32	-101.80	1.0	1	2	30.7	33.04	300	1	0	0	0	0
18	980823	1.0	17.32	-101.80	1.0	1	2	30.7	33.04	500	2	5	0	0	0
18	980823	1.0	17.32	-101.80	1.0	1	2	30.7	33.04	500	3	3	0	0	0
19	980824	1.0	16.37	-99.10	2.0	1	2	30.8	32.54	30	3	8	3	2	0
19	980824	1.0	16.37	-99.10	2.0	1	2	30.8	32.54	80	1	3	0	0	0
19	980824	1.0	16.37	-99.10	2.0	1	2	30.8	32.54	200	5	7	0	0	0
19	980824	1.0	16.37	-99.10	2.0	1	2	30.8	32.54	500	1	1	0	0	0
19	980824	1.0	16.37	-99.10	2.0	1	2	30.8	32.54	500	2	3	0	0	0
19	980824	1.0	16.37	-99.10	2.0	1	2	30.8	32.54	500	1	1	0	0	0
19	980824	1.0	16.37	-99.10	2.0	1	2	30.8	32.54	500	2	4	0	0	0
19	980824	1.0	16.37	-99.10	2.0	1	2	30.8	32.54	500	5	11	0	0	0
20	980825	1.0	15.45	-96.73	3.0	1	2	30.0	33.65	10	5	8	1	1	0
20	980825	1.0	15.45	-96.73	3.0	1	2	30.0	33.65	20	1	2	2	4	0
20	980825	1.0	15.45	-96.73	3.0	1	2	30.0	33.65	30	1	1	0	0	0
20	980825	1.0	15.45	-96.73	3.0	1	2	30.0	33.65	400	1	0	0	0	0

Table 9 (*Jordan* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
20	980825	1.0	15.45	-96.73	3.0	1	2	30.0	33.65	500	4	4	0	0	0
20	980825	1.0	15.45	-96.73	3.0	1	2	30.0	33.65	500	1	1	0	0	0
21	980826	1.0	15.57	-94.28	1.0	1	1	30.9	33.50	100	2	3	3	3	0
21	980826	1.0	15.57	-94.28	1.0	1	1	30.9	33.50	200	4	1	0	0	0
21	980826	1.0	15.57	-94.28	1.0	1	1	30.9	33.50	400	1	0	0	0	0
21	980826	1.0	15.57	-94.28	1.0	1	1	30.9	33.50	500	3	2	0	0	0
21	980826	1.0	15.57	-94.28	1.0	1	1	30.9	33.50	500	3	3	0	0	0
21	980826	1.0	15.57	-94.28	1.0	1	1	30.9	33.50	500	1	1	0	0	0
21	980826	1.0	15.57	-94.28	1.0	1	1	30.9	33.50	500	1	1	0	0	0
21	980826	1.0	15.57	-94.28	1.0	1	1	30.9	33.50	500	4	2	0	0	0
22	980827	1.0	13.73	-92.20	3.0	5	3	30.6	33.10	15	4	10	1	1	0
22	980827	1.0	13.73	-92.20	3.0	5	3	30.6	33.10	30	3	8	2	2	0
22	980827	1.0	13.73	-92.20	3.0	5	3	30.6	33.10	80	1	1	3	1	0
22	980827	1.0	13.73	-92.20	3.0	5	3	30.6	33.10	200	2	3	0	0	0
22	980827	1.0	13.73	-92.20	3.0	5	3	30.6	33.10	400	1	1	0	0	0
22	980827	1.0	13.73	-92.20	3.0	5	3	30.6	33.10	500	1	3	0	0	0
22	980827	1.0	13.73	-92.20	3.0	5	3	30.6	33.10	500	1	1	0	0	0
22	980827	1.0	13.73	-92.20	3.0	5	3	30.6	33.10	500	1	1	0	0	0
23	980828	1.0	11.03	-90.77	2.0	2	1	29.6	33.39	90	1	0	2	3	0
23	980828	1.0	11.03	-90.77	2.0	2	1	29.6	33.39	100	3	0	0	0	0
23	980828	1.0	11.03	-90.77	2.0	2	1	29.6	33.39	300	1	0	0	0	0
23	980828	1.0	11.03	-90.77	2.0	2	1	29.6	33.39	400	1	0	0	0	0
23	980828	1.0	11.03	-90.77	2.0	2	1	29.6	33.39	500	3	0	0	0	0
24	980829	1.0	12.50	-90.47	0.0	2	3	29.6	33.45	10	4	0	3	1	0
24	980829	1.0	12.50	-90.47	0.0	2	3	29.6	33.45	100	2	0	0	0	0
24	980829	1.0	12.50	-90.47	0.0	2	3	29.6	33.45	400	1	0	0	0	0
24	980829	1.0	12.50	-90.47	0.0	2	3	29.6	33.45	500	1	0	0	0	0
25	980830	1.0	13.18	-90.22	3.0	2	2	29.3	33.40	100	1	0	3	0	0
25	980830	1.0	13.18	-90.22	3.0	2	2	29.3	33.40	90	1	0	2	0	0
25	980830	1.0	13.18	-90.22	3.0	2	2	29.3	33.40	400	1	0	0	0	0
25	980830	1.0	13.18	-90.22	3.0	2	2	29.3	33.40	500	1	0	0	0	0
25	980830	1.0	13.18	-90.22	3.0	2	2	29.3	33.40	500	1	1	0	0	0
26	980831	1.0	12.27	-88.58	4.0	2	2	29.6	33.36	30	1	3	1	0	0
26	980831	1.0	12.27	-88.58	4.0	2	2	29.6	33.36	80	4	12	2	3	0
26	980831	1.0	12.27	-88.58	4.0	2	2	29.6	33.36	80	2	3	0	0	0
26	980831	1.0	12.27	-88.58	4.0	2	2	29.6	33.36	100	1	0	0	0	0
26	980831	1.0	12.27	-88.58	4.0	2	2	29.6	33.36	400	2	2	0	0	0
26	980831	1.0	12.27	-88.58	4.0	2	2	29.6	33.36	500	1	1	0	0	0
27	980901	1.0	11.52	-87.15	2.0	3	2	29.6	33.26	20	1	1	3	1	0
27	980901	1.0	11.52	-87.15	2.0	3	2	29.6	33.26	90	1	1	2	2	0
27	980901	1.0	11.52	-87.15	2.0	3	2	29.6	33.26	200	4	11	0	0	0
27	980901	1.0	11.52	-87.15	2.0	3	2	29.6	33.26	400	2	0	0	0	0
28	980902	1.0	10.03	-86.32	3.0	3	2	29.0	33.25	10	1	1	1	2	0
28	980902	1.0	10.03	-86.32	3.0	3	2	29.0	33.25	100	3	0	2	3	0

Table 9 (*Jordan* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
28	980902	1.0	10.03	-86.32	3.0	3	2	29.0	33.25	300	1	0	0	0	0
29	980904	1.0	8.10	-83.33	3.0	4	2	28.5	31.47	10	1	1	2	5	0
29	980904	1.0	8.10	-83.33	3.0	4	2	28.5	31.47	30	1	0	0	0	0
29	980904	1.0	8.10	-83.33	3.0	4	2	28.5	31.47	90	1	1	0	0	0
29	980904	1.0	8.10	-83.33	3.0	4	2	28.5	31.47	100	2	0	0	0	0
29	980904	1.0	8.10	-83.33	3.0	4	2	28.5	31.47	300	1	0	0	0	0
29	980904	1.0	8.10	-83.33	3.0	4	2	28.5	31.47	900	1	0	0	0	0
30	980905	1.0	7.17	-82.03	3.0	4	2	28.8	31.42	20	1	1	2	5	0
30	980905	1.0	7.17	-82.03	3.0	4	2	28.8	31.42	200	1	1	0	0	0
30	980905	1.0	7.17	-82.03	3.0	4	2	28.8	31.42	500	1	1	0	0	0
30	980905	1.0	7.17	-82.03	3.0	4	2	28.8	31.42	500	1	1	0	0	0
30	980905	1.0	7.17	-82.03	3.0	4	2	28.8	31.42	900	1	0	0	0	0
31	980906	1.0	7.28	-79.93	3.0	4	2	28.9	30.37	30	3	7	2	5	0
31	980906	1.0	7.28	-79.93	3.0	4	2	28.9	30.37	80	4	4	0	0	0
31	980906	1.0	7.28	-79.93	3.0	4	2	28.9	30.37	90	3	2	0	0	0
31	980906	1.0	7.28	-79.93	3.0	4	2	28.9	30.37	90	2	0	0	0	0
31	980906	1.0	7.28	-79.93	3.0	4	2	28.9	30.37	200	4	2	0	0	0
31	980906	1.0	7.28	-79.93	3.0	4	2	28.9	30.37	400	1	0	0	0	0
31	980906	1.0	7.28	-79.93	3.0	4	2	28.9	30.37	500	1	1	0	0	0
31	980906	1.0	7.28	-79.93	3.0	4	2	28.9	30.37	500	1	1	0	0	0
32	980907	1.0	8.05	-79.15	2.0	4	2	28.6	30.17	30	3	9	0	0	0
32	980907	1.0	8.05	-79.15	2.0	4	2	28.6	30.17	500	1	1	0	0	0
32	980907	1.0	8.05	-79.15	2.0	4	2	28.6	30.17	500	1	1	0	0	0
33	980912	1.0	8.00	-80.00	3.0	5	2	29.1	29.72	10	1	1	3	4	0
33	980912	1.0	8.00	-80.00	3.0	5	2	29.1	29.72	15	1	2	0	0	0
33	980912	1.0	8.00	-80.00	3.0	5	2	29.1	29.72	30	1	1	0	0	0
33	980912	1.0	8.00	-80.00	3.0	5	2	29.1	29.72	80	2	4	0	0	0
33	980912	1.0	8.00	-80.00	3.0	5	2	29.1	29.72	90	1	2	0	0	0
33	980912	1.0	8.00	-80.00	3.0	5	2	29.1	29.72	500	3	5	0	0	0
33	980912	1.0	8.00	-80.00	3.0	5	2	29.1	29.72	500	1	4	0	0	0
33	980912	1.0	8.00	-80.00	3.0	5	2	29.1	29.72	500	4	2	0	0	0
34	980913	1.0	6.95	-81.80	3.0	5	2	27.9	30.73	10	3	7	1	2	0
34	980913	1.0	6.95	-81.80	3.0	5	2	27.9	30.73	30	3	19	2	5	0
34	980913	1.0	6.95	-81.80	3.0	5	2	27.9	30.73	80	1	1	3	3	0
34	980913	1.0	6.95	-81.80	3.0	5	2	27.9	30.73	80	3	2	0	0	0
34	980913	1.0	6.95	-81.80	3.0	5	2	27.9	30.73	90	3	5	0	0	0
34	980913	1.0	6.95	-81.80	3.0	5	2	27.9	30.73	200	3	2	0	0	0
34	980913	1.0	6.95	-81.80	3.0	5	2	27.9	30.73	400	2	3	0	0	0
34	980913	1.0	6.95	-81.80	3.0	5	2	27.9	30.73	900	1	0	0	0	0
34	980913	1.0	6.95	-81.80	3.0	5	2	27.9	30.73	500	1	2	0	0	0
34	980913	1.0	6.95	-81.80	3.0	5	2	27.9	30.73	500	1	1	0	0	0
34	980913	1.0	6.95	-81.80	3.0	5	2	27.9	30.73	500	5	15	0	0	0
34	980913	1.0	6.95	-81.80	3.0	5	2	27.9	30.73	500	1	1	0	0	0
34	980913	1.0	6.95	-81.80	3.0	5	2	27.9	30.73	500	1	1	0	0	0

Table 9 (*Jordan* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
34	980913	1.0	6.95	-81.80	3.0	5	2	27.9	30.73	500	1	1	0	0	0
34	980913	1.0	6.95	-81.80	3.0	5	2	27.9	30.73	500	1	1	0	0	0
34	980913	1.0	6.95	-81.80	3.0	5	2	27.9	30.73	500	1	1	0	0	0
34	980913	1.0	6.95	-81.80	3.0	5	2	27.9	30.73	500	1	0	0	0	0
34	980913	1.0	6.95	-81.80	3.0	5	2	27.9	30.73	500	1	1	0	0	0
35	980914	1.0	7.28	-84.83	3.0	5	3	28.2	32.04	10	5	11	1	2	0
35	980914	1.0	7.28	-84.83	3.0	5	3	28.2	32.04	20	1	3	2	4	0
35	980914	1.0	7.28	-84.83	3.0	5	3	28.2	32.04	30	3	7	3	2	0
35	980914	1.0	7.28	-84.83	3.0	5	3	28.2	32.04	200	6	9	0	0	0
35	980914	1.0	7.28	-84.83	3.0	5	3	28.2	32.04	400	2	2	0	0	0
35	980914	1.0	7.28	-84.83	3.0	5	3	28.2	32.04	500	1	1	0	0	0
35	980914	1.0	7.28	-84.83	3.0	5	3	28.2	32.04	500	3	3	0	0	0
35	980914	1.0	7.28	-84.83	3.0	5	3	28.2	32.04	500	1	0	0	0	0
35	980914	1.0	7.28	-84.83	3.0	5	3	28.2	32.04	500	3	0	0	0	0
36	980915	1.0	7.68	-87.53	4.0	5	3	28.2	33.17	10	2	2	1	2	0
36	980915	1.0	7.68	-87.53	4.0	5	3	28.2	33.17	20	1	2	2	3	0
36	980915	1.0	7.68	-87.53	4.0	5	3	28.2	33.17	30	1	2	3	1	0
36	980915	1.0	7.68	-87.53	4.0	5	3	28.2	33.17	100	4	2	0	0	0
36	980915	1.0	7.68	-87.53	4.0	5	3	28.2	33.17	300	1	0	0	0	0
37	980916	1.0	8.05	-90.03	4.0	5	2	28.3	33.28	10	5	9	1	3	0
37	980916	1.0	8.05	-90.03	4.0	5	2	28.3	33.28	20	3	9	2	2	0
37	980916	1.0	8.05	-90.03	4.0	5	2	28.3	33.28	30	2	2	0	0	0
37	980916	1.0	8.05	-90.03	4.0	5	2	28.3	33.28	100	3	0	0	0	0
37	980916	1.0	8.05	-90.03	4.0	5	2	28.3	33.28	300	1	0	0	0	0
38	980917	1.0	8.68	-93.07	4.0	5	1	27.8	33.30	10	4	5	1	5	0
38	980917	1.0	8.68	-93.07	4.0	5	1	27.8	33.30	20	4	20	2	2	0
38	980917	1.0	8.68	-93.07	4.0	5	1	27.8	33.30	30	3	9	3	1	0
38	980917	1.0	8.68	-93.07	4.0	5	1	27.8	33.30	100	4	0	0	0	0
38	980917	1.0	8.68	-93.07	4.0	5	1	27.8	33.30	300	1	0	0	0	0
38	980917	1.0	8.68	-93.07	4.0	5	1	27.8	33.30	400	2	0	0	0	0
39	980918	1.0	9.28	-96.25	5.0	5	3	27.6	33.65	10	3	5	1	4	0
39	980918	1.0	9.28	-96.25	5.0	5	3	27.6	33.65	20	2	4	2	3	0
39	980918	1.0	9.28	-96.25	5.0	5	3	27.6	33.65	30	3	8	0	0	0
39	980918	1.0	9.28	-96.25	5.0	5	3	27.6	33.65	100	3	0	0	0	0
39	980918	1.0	9.28	-96.25	5.0	5	3	27.6	33.65	400	1	0	0	0	0
40	980919	1.0	9.68	-98.47	4.0	5	2	27.9	33.68	10	5	7	1	4	0
40	980919	1.0	9.68	-98.47	4.0	5	2	27.9	33.68	20	3	9	2	3	0
40	980919	1.0	9.68	-98.47	4.0	5	2	27.9	33.68	30	3	9	0	0	0
40	980919	1.0	9.68	-98.47	4.0	5	2	27.9	33.68	100	3	1	0	0	0
40	980919	1.0	9.68	-98.47	4.0	5	2	27.9	33.68	500	1	1	0	0	0
41	980920	1.0	9.93	-101.72	5.0	5	4	27.9	33.66	10	5	8	1	2	0
41	980920	1.0	9.93	-101.72	5.0	5	4	27.9	33.66	20	4	13	2	3	0
41	980920	1.0	9.93	-101.72	5.0	5	4	27.9	33.66	30	2	3	3	1	0
41	980920	1.0	9.93	-101.72	5.0	5	4	27.9	33.66	100	3	2	0	0	0

Table 9 (*Jordan* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
41	980920	1.0	9.93	-101.72	5.0	5	4	27.9	33.66	300	1	0	0	0	0
41	980920	1.0	9.93	-101.72	5.0	5	4	27.9	33.66	500	1	0	0	0	0
42	980921	1.0	10.18	-104.53	3.0	5	2	27.8	33.43	10	3	3	1	2	0
42	980921	1.0	10.18	-104.53	3.0	5	2	27.8	33.43	20	4	9	2	3	0
42	980921	1.0	10.18	-104.53	3.0	5	2	27.8	33.43	30	3	4	0	0	0
42	980921	1.0	10.18	-104.53	3.0	5	2	27.8	33.43	100	3	4	0	0	0
42	980921	1.0	10.18	-104.53	3.0	5	2	27.8	33.43	300	1	0	0	0	0
42	980921	1.0	10.18	-104.53	3.0	5	2	27.8	33.43	500	1	1	0	0	0
42	980921	1.0	10.18	-104.53	3.0	5	2	27.8	33.43	500	1	0	0	0	0
43	980922	1.0	10.32	-107.28	3.0	5	2	28.2	33.93	10	3	7	1	2	0
43	980922	1.0	10.32	-107.28	3.0	5	2	28.2	33.93	20	2	3	2	4	0
43	980922	1.0	10.32	-107.28	3.0	5	2	28.2	33.93	30	1	1	0	0	0
43	980922	1.0	10.32	-107.28	3.0	5	2	28.2	33.93	100	3	2	0	0	0
43	980922	1.0	10.32	-107.28	3.0	5	2	28.2	33.93	300	1	0	0	0	0
44	980923	1.0	10.27	-109.20	1.0	1	2	28.2	33.77	10	4	8	0	0	0
44	980923	1.0	10.27	-109.20	1.0	1	2	28.2	33.77	20	2	3	0	0	0
44	980923	1.0	10.27	-109.20	1.0	1	2	28.2	33.77	30	1	1	0	0	0
44	980923	1.0	10.27	-109.20	1.0	1	2	28.2	33.77	200	5	0	0	0	0
44	980923	1.0	10.27	-109.20	1.0	1	2	28.2	33.77	400	1	0	0	0	0
44	980923	1.0	10.27	-109.20	1.0	1	2	28.2	33.77	500	6	7	0	0	0
45	980924	1.0	10.43	-111.32	1.0	1	1	28.3	33.71	20	1	1	0	0	0
45	980924	1.0	10.43	-111.32	1.0	1	1	28.3	33.71	30	1	1	0	0	0
45	980924	1.0	10.43	-111.32	1.0	1	1	28.3	33.71	100	1	1	0	0	0
45	980924	1.0	10.43	-111.32	1.0	1	1	28.3	33.71	300	1	0	0	0	0
45	980924	1.0	10.43	-111.32	1.0	1	1	28.3	33.71	400	1	0	0	0	0
46	980925	1.0	11.07	-114.40	3.0	1	2	28.2	34.23	10	1	1	2	4	0
46	980925	1.0	11.07	-114.40	3.0	1	2	28.2	34.23	20	3	6	0	0	0
46	980925	1.0	11.07	-114.40	3.0	1	2	28.2	34.23	30	2	2	0	0	0
46	980925	1.0	11.07	-114.40	3.0	1	2	28.2	34.23	100	3	4	0	0	0
46	980925	1.0	11.07	-114.40	3.0	1	2	28.2	34.23	500	1	0	0	0	0
47	980926	1.0	11.77	-113.25	2.0	2	1	28.6	34.21	20	1	1	2	3	0
47	980926	1.0	11.77	-113.25	2.0	2	1	28.6	34.21	100	2	0	0	0	0
47	980926	1.0	11.77	-113.25	2.0	2	1	28.6	34.21	400	1	1	0	0	0
	980927	0.0	11.82	-112.93	-	-	-	-	-	30	0	5	0	0	0
48	980927	1.0	12.37	-110.15	5.0	2	4	28.6	34.05	10	1	1	1	2	0
48	980927	1.0	12.37	-110.15	5.0	2	4	28.6	34.05	20	2	3	2	3	0
48	980927	1.0	12.37	-110.15	5.0	2	4	28.6	34.05	30	2	2	0	0	0
48	980927	1.0	12.37	-110.15	5.0	2	4	28.6	34.05	300	1	0	0	0	0
48	980927	1.0	12.37	-110.15	5.0	2	4	28.6	34.05	100	2	1	0	0	0
49	980928	1.0	12.93	-107.50	0.0	2	2	28.5	33.18	20	2	1	2	2	0
49	980928	1.0	12.93	-107.50	0.0	2	2	28.5	33.18	30	1	1	3	1	0
50	980929	1.0	15.58	-105.88	0.0	2	1	29.0	34.14	10	1	2	2	4	0
50	980929	1.0	15.58	-105.88	0.0	2	1	29.0	34.14	20	4	15	0	0	0
50	980929	1.0	15.58	-105.88	0.0	2	1	29.0	34.14	30	2	4	0	0	0

Table 9 (*Jordan* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
50	980929	1.0	15.58	-105.88	0.0	2	1	29.0	34.14	100	1	3	0	0	0
51	980930	1.0	18.50	-104.98	2.0	2	2	29.1	34.41	10	1	2	2	4	0
51	980930	1.0	18.50	-104.98	2.0	2	2	29.1	34.41	20	1	2	3	1	0
51	980930	1.0	18.50	-104.98	2.0	2	2	29.1	34.41	30	1	2	0	0	0
51	980930	1.0	18.50	-104.98	2.0	2	2	29.1	34.41	400	3	2	0	0	0
51	980930	1.0	18.50	-104.98	2.0	2	2	29.1	34.41	500	5	14	0	0	0
51	980930	1.0	18.50	-104.98	2.0	2	2	29.1	34.41	500	8	0	0	0	0
52	980930	1.0	18.60	-104.83	2.0	2	2	29.4	34.51	10	2	4	1	5	0
52	980930	1.0	18.60	-104.83	2.0	2	2	29.4	34.51	20	1	1	2	2	0
52	980930	1.0	18.60	-104.83	2.0	2	2	29.4	34.51	30	1	0	0	0	0
52	980930	1.0	18.60	-104.83	2.0	2	2	29.4	34.51	300	1	0	0	0	0
52	980930	1.0	18.60	-104.83	2.0	2	2	29.4	34.51	200	1	1	0	0	0
52	980930	1.0	18.60	-104.83	2.0	2	2	29.4	34.51	500	6	16	0	0	0
52	980930	1.0	18.60	-104.83	2.0	2	2	29.4	34.51	500	1	1	0	0	0
52	980930	1.0	18.60	-104.83	2.0	2	2	29.4	34.51	500	1	2	0	0	0
53	981005	1.0	18.12	-104.38	4.0	4	2	29.8	33.95	30	3	8	1	1	0
53	981005	1.0	18.12	-104.38	4.0	4	2	29.8	33.95	80	2	4	2	4	0
53	981005	1.0	18.12	-104.38	4.0	4	2	29.8	33.95	90	1	1	0	0	0
53	981005	1.0	18.12	-104.38	4.0	4	2	29.8	33.95	200	1	1	0	0	0
53	981005	1.0	18.12	-104.38	4.0	4	2	29.8	33.95	400	1	1	0	0	0
53	981005	1.0	18.12	-104.38	4.0	4	2	29.8	33.95	500	2	5	0	0	0
53	981005	1.0	18.12	-104.38	4.0	4	2	29.8	33.95	500	1	1	0	0	0
53	981005	1.0	18.12	-104.38	4.0	4	2	29.8	33.95	500	1	1	0	0	0
53	981005	1.0	18.12	-104.38	4.0	4	2	29.8	33.95	500	1	1	0	0	0
53	981005	1.0	18.12	-104.38	4.0	4	2	29.8	33.95	80	1	2	0	0	0
53	981005	1.0	18.12	-104.38	4.0	4	2	29.8	33.95	500	2	4	0	0	0
53	981005	1.0	18.12	-104.38	4.0	4	2	29.8	33.95	100	1	1	0	0	0
54	981006	1.0	14.95	-104.40	3.0	5	3	29.6	33.31	10	4	9	1	2	0
54	981006	1.0	14.95	-104.40	3.0	5	3	29.6	33.31	20	1	1	2	4	0
54	981006	1.0	14.95	-104.40	3.0	5	3	29.6	33.31	30	2	5	0	0	0
54	981006	1.0	14.95	-104.40	3.0	5	3	29.6	33.31	100	3	0	0	0	0
54	981006	1.0	14.95	-104.40	3.0	5	3	29.6	33.31	300	1	0	0	0	0
54	981006	1.0	14.95	-104.40	3.0	5	3	29.6	33.31	500	1	0	0	0	0
54	981006	1.0	14.95	-104.40	3.0	5	3	29.6	33.31	500	4	0	0	0	0
54	981006	1.0	14.95	-104.40	3.0	5	3	29.6	33.31	500	1	0	0	0	0
55	981007	1.0	11.78	-104.78	1.0	5	1	29.4	33.44	10	5	9	2	5	0
55	981007	1.0	11.78	-104.78	1.0	5	1	29.4	33.44	20	1	1	0	0	0
55	981007	1.0	11.78	-104.78	1.0	5	1	29.4	33.44	30	2	3	0	0	0
55	981007	1.0	11.78	-104.78	1.0	5	1	29.4	33.44	100	3	0	0	0	0
56	981008	1.0	8.50	-105.22	4.0	5	4	27.6	33.06	10	2	2	1	4	0
56	981008	1.0	8.50	-105.22	4.0	5	4	27.6	33.06	20	2	3	2	3	0
56	981008	1.0	8.50	-105.22	4.0	5	4	27.6	33.06	30	2	1	0	0	0
56	981008	1.0	8.50	-105.22	4.0	5	4	27.6	33.06	100	4	6	0	0	0
56	981008	1.0	8.50	-105.22	4.0	5	4	27.6	33.06	500	1	1	0	0	0

Table 9 (*Jordan* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
57	981009	1.0	5.22	-105.75	5.0	5	3	27.0	33.37	10	3	8	1	2	0
57	981009	1.0	5.22	-105.75	5.0	5	3	27.0	33.37	20	4	10	2	3	0
57	981009	1.0	5.22	-105.75	5.0	5	3	27.0	33.37	300	1	0	0	0	0
57	981009	1.0	5.22	-105.75	5.0	5	3	27.0	33.37	100	4	1	0	0	0
58	981010	1.0	1.80	-106.27	4.0	5	1	23.1	34.26	30	1	2	1	3	0
58	981010	1.0	1.80	-106.27	4.0	5	1	23.1	34.26	100	4	1	2	5	0
59	981011	1.0	-0.23	-106.60	3.0	5	1	20.3	35.01	100	4	0	1	2	0
59	981011	1.0	-0.23	-106.60	3.0	5	1	20.3	35.01	0	0	0	2	4	0
60	981012	1.0	-3.08	-106.90	2.0	5	1	22.9	34.97	10	1	1	1	1	0
60	981012	1.0	-3.08	-106.90	2.0	5	1	22.9	34.97	100	3	0	2	2	0
61	981013	1.0	-6.57	-107.40	4.0	5	1	23.4	35.03	30	1	0	1	4	0
61	981013	1.0	-6.57	-107.40	4.0	5	1	23.4	35.03	100	4	0	0	0	0
61	981013	1.0	-6.57	-107.40	4.0	5	1	23.4	35.03	300	1	0	0	0	0
62	981014	1.0	-8.23	-107.15	5.0	5	1	24.0	35.03	20	3	8	1	4	0
62	981014	1.0	-8.23	-107.15	5.0	5	1	24.0	35.03	30	2	3	2	4	0
62	981014	1.0	-8.23	-107.15	5.0	5	1	24.0	35.03	100	4	6	3	1	0
62	981014	1.0	-8.23	-107.15	5.0	5	1	24.0	35.03	300	1	0	0	0	0
63	981015	0.8	-7.47	-106.35	5.0	1	2	24.0	35.08	20	4	12	1	2	0
63	981015	0.8	-7.47	-106.35	5.0	1	2	24.0	35.08	30	1	1	3	1	0
63	981015	0.8	-7.47	-106.35	5.0	1	2	24.0	35.08	100	2	0	0	0	0
64	981015	1.0	-6.07	-104.95	4.0	5	1	0.0	0.00	10	1	0	1	5	0
64	981015	1.0	-6.07	-104.95	4.0	5	1	0.0	0.00	20	3	9	0	0	0
64	981015	1.0	-6.07	-104.95	4.0	5	1	0.0	0.00	30	1	1	0	0	0
64	981015	1.0	-6.07	-104.95	4.0	5	1	0.0	0.00	100	5	3	0	0	0
65	981016	1.0	-3.97	-102.88	4.0	5	1	23.4	35.14	10	1	0	1	5	0
65	981016	1.0	-3.97	-102.88	4.0	5	1	23.4	35.14	20	1	1	0	0	0
65	981016	1.0	-3.97	-102.88	4.0	5	1	23.4	35.14	100	4	5	0	0	0
66	981017	1.0	-1.88	-100.92	4.0	5	1	0.0	0.00	30	1	1	1	4	0
66	981017	1.0	-1.88	-100.92	4.0	5	1	0.0	0.00	100	4	0	0	0	0
67	981018	1.0	0.27	-98.58	3.0	5	2	20.9	34.91	100	3	0	1	5	0
68	981019	1.0	2.55	-96.32	5.0	5	2	26.0	33.61	20	1	2	1	3	0
68	981019	1.0	2.55	-96.32	5.0	5	2	26.0	33.61	100	4	5	0	0	0
68	981019	1.0	2.55	-96.32	5.0	5	2	26.0	33.61	300	1	0	0	0	0
69	981020	1.0	4.87	-93.78	5.0	5	3	27.1	33.39	10	3	5	1	4	0
69	981020	1.0	4.87	-93.78	5.0	5	3	27.1	33.39	20	2	4	3	1	0
69	981020	1.0	4.87	-93.78	5.0	5	3	27.1	33.39	100	4	0	0	0	0
69	981020	1.0	4.87	-93.78	5.0	5	3	27.1	33.39	400	1	0	0	0	0
	981021	0.0	5.13	-93.28	-	-	-	-	-	30	0	1	0	0	0
70	981021	1.0	6.57	-90.63	5.0	5	3	27.1	32.96	10	4	7	1	5	0
70	981021	1.0	6.57	-90.63	5.0	5	3	27.1	32.96	20	3	7	2	1	0
70	981021	1.0	6.57	-90.63	5.0	5	3	27.1	32.96	30	2	5	0	0	0
70	981021	1.0	6.57	-90.63	5.0	5	3	27.1	32.96	100	4	1	0	0	0
70	981021	1.0	6.57	-90.63	5.0	5	3	27.1	32.96	400	2	0	0	0	0
71	981022	1.0	8.17	-87.55	6.0	5	4	27.9	33.12	10	3	2	1	5	0

Table 9 (*Jordan* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
71	981022	1.0	8.17	-87.55	6.0	5	4	27.9	33.12	20	3	5	2	4	0
71	981022	1.0	8.17	-87.55	6.0	5	4	27.9	33.12	30	2	3	3	2	0
71	981022	1.0	8.17	-87.55	6.0	5	4	27.9	33.12	100	4	0	0	0	0
71	981022	1.0	8.17	-87.55	6.0	5	4	27.9	33.12	300	1	0	0	0	0
71	981022	1.0	8.17	-87.55	6.0	5	4	27.9	33.12	400	1	0	0	0	0
72	981023	1.0	9.85	-84.88	3.0	5	3	27.5	29.80	15	1	2	2	1	0
72	981023	1.0	9.85	-84.88	3.0	5	3	27.5	29.80	80	2	3	0	0	0
72	981023	1.0	9.85	-84.88	3.0	5	3	27.5	29.80	500	1	2	0	0	0
72	981023	1.0	9.85	-84.88	3.0	5	3	27.5	29.80	500	7	4	0	0	0
72	981023	1.0	9.85	-84.88	3.0	5	3	27.5	29.80	500	8	3	0	0	0
72	981023	1.0	9.85	-84.88	3.0	5	3	27.5	29.80	500	1	1	0	0	0
73	981029	1.0	9.50	-85.37	4.0	2	2	27.1	30.09	15	4	22	1	1	0
73	981029	1.0	9.50	-85.37	4.0	2	2	27.1	30.09	30	3	8	2	2	0
73	981029	1.0	9.50	-85.37	4.0	2	2	27.1	30.09	80	2	4	3	4	0
73	981029	1.0	9.50	-85.37	4.0	2	2	27.1	30.09	90	1	0	0	0	0
73	981029	1.0	9.50	-85.37	4.0	2	2	27.1	30.09	400	1	3	0	0	0
73	981029	1.0	9.50	-85.37	4.0	2	2	27.1	30.09	500	1	1	0	0	0
74	981030	1.0	11.47	-87.40	6.0	5	3	26.8	33.02	30	2	5	1	2	0
74	981030	1.0	11.47	-87.40	6.0	5	3	26.8	33.02	80	1	1	2	4	0
74	981030	1.0	11.47	-87.40	6.0	5	3	26.8	33.02	100	9	0	3	3	0
74	981030	1.0	11.47	-87.40	6.0	5	3	26.8	33.02	500	1	1	0	0	0
74	981030	1.0	11.47	-87.40	6.0	5	3	26.8	33.02	500	1	1	0	0	0
74	981030	1.0	11.47	-87.40	6.0	5	3	26.8	33.02	500	1	2	0	0	0
74	981030	1.0	11.47	-87.40	6.0	5	3	26.8	33.02	500	1	2	0	0	0
	981031	0.0	11.42	-87.77	-	-	-	-	-	30	0	1	0	0	0
75	981031	1.0	10.27	-89.28	4.0	5	3	25.9	33.56	10	2	3	1	2	0
75	981031	1.0	10.27	-89.28	4.0	5	3	25.9	33.56	20	1	1	2	4	0
75	981031	1.0	10.27	-89.28	4.0	5	3	25.9	33.56	30	3	6	0	0	0
75	981031	1.0	10.27	-89.28	4.0	5	3	25.9	33.56	100	3	3	0	0	0
75	981031	1.0	10.27	-89.28	4.0	5	3	25.9	33.56	400	1	1	0	0	0
76	981101	1.0	7.40	-90.30	4.0	3	3	27.1	32.63	10	2	2	1	3	0
76	981101	1.0	7.40	-90.30	4.0	3	3	27.1	32.63	20	3	7	2	4	0
76	981101	1.0	7.40	-90.30	4.0	3	3	27.1	32.63	30	4	9	0	0	0
76	981101	1.0	7.40	-90.30	4.0	3	3	27.1	32.63	80	1	1	0	0	0
76	981101	1.0	7.40	-90.30	4.0	3	3	27.1	32.63	100	4	10	0	0	0
76	981101	1.0	7.40	-90.30	4.0	3	3	27.1	32.63	400	1	0	0	0	0
77	981102	1.0	4.43	-91.50	4.0	4	2	27.0	33.25	10	1	1	1	1	0
77	981102	1.0	4.43	-91.50	4.0	4	2	27.0	33.25	20	1	2	2	3	0
77	981102	1.0	4.43	-91.50	4.0	4	2	27.0	33.25	30	1	1	0	0	0
77	981102	1.0	4.43	-91.50	4.0	4	2	27.0	33.25	100	4	6	0	0	0
77	981102	1.0	4.43	-91.50	4.0	4	2	27.0	33.25	400	1	1	0	0	0
78	981103	1.0	1.43	-93.33	3.0	4	2	25.6	33.83	10	1	1	0	0	0
78	981103	1.0	1.43	-93.33	3.0	4	2	25.6	33.83	20	1	3	0	0	0
78	981103	1.0	1.43	-93.33	3.0	4	2	25.6	33.83	30	1	0	0	0	0

Table 9 (*Jordan* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
78	981103	1.0	1.43	-93.33	3.0	4	2	25.6	33.83	300	1	0	0	0	0
79	981104	1.0	-0.85	-94.85	1.0	4	1	0.0	0.00	100	1	0	2	1	0
-	981105	0.0	-1.83	-94.12	-	-	-	-	-	20	0	1	0	0	0
80	981105	1.0	-1.82	-93.80	1.0	4	1	21.1	34.51	20	1	3	3	2	0
80	981105	1.0	-1.82	-93.80	1.0	4	1	21.1	34.51	100	4	7	2	1	0
80	981105	1.0	-1.82	-93.80	1.0	4	1	21.1	34.51	300	1	1	0	0	0
80	981105	1.0	-1.82	-93.80	1.0	4	1	21.1	34.51	400	1	2	0	0	0
80	981105	1.0	-1.82	-93.80	1.0	4	1	21.1	34.51	500	1	1	0	0	0
	981106	0.0	-1.17	-91.65	-	-	-	-	-	30	0	2	0	0	0
81	981106	1.0	-1.13	-91.70	4.0	5	3	23.2	33.77	10	1	1	1	2	0
81	981106	1.0	-1.13	-91.70	4.0	5	3	23.2	33.77	20	3	8	2	3	0
81	981106	1.0	-1.13	-91.70	4.0	5	3	23.2	33.77	30	3	9	0	0	0
81	981106	1.0	-1.13	-91.70	4.0	5	3	23.2	33.77	100	4	0	0	0	0
81	981106	1.0	-1.13	-91.70	4.0	5	3	23.2	33.77	500	3	4	0	0	0
81	981106	1.0	-1.13	-91.70	4.0	5	3	23.2	33.77	500	1	1	0	0	0
82	981107	1.0	-0.98	-90.17	3.0	5	1	23.6	33.76	10	2	6	3	1	0
82	981107	1.0	-0.98	-90.17	3.0	5	1	23.6	33.76	20	2	7	0	0	0
82	981107	1.0	-0.98	-90.17	3.0	5	1	23.6	33.76	30	1	1	0	0	0
82	981107	1.0	-0.98	-90.17	3.0	5	1	23.6	33.76	500	2	4	0	0	0
82	981107	1.0	-0.98	-90.17	3.0	5	1	23.6	33.76	500	1	1	0	0	0
82	981107	1.0	-0.98	-90.17	3.0	5	1	23.6	33.76	400	1	1	0	0	0
83	981108	1.0	-1.40	-87.88	3.0	5	3	22.1	34.43	10	2	2	1	5	0
83	981108	1.0	-1.40	-87.88	3.0	5	3	22.1	34.43	30	2	0	3	1	0
83	981108	1.0	-1.40	-87.88	3.0	5	3	22.1	34.43	100	4	0	0	0	0
83	981108	1.0	-1.40	-87.88	3.0	5	3	22.1	34.43	400	1	0	0	0	0
84	981109	1.0	-2.05	-85.15	4.0	5	3	19.9	34.67	20	1	1	1	3	0
84	981109	1.0	-2.05	-85.15	4.0	5	3	19.9	34.67	100	2	2	2	3	0
84	981109	1.0	-2.05	-85.15	4.0	5	3	19.9	34.67	500	1	2	0	0	0
85	981110	1.0	-2.63	-82.17	4.0	5	1	17.3	34.80	500	2	0	1	4	0
86	981111	1.0	-1.17	-81.02	3.0	5	3	24.8	32.46	15	2	3	0	0	0
86	981111	1.0	-1.17	-81.02	3.0	5	3	24.8	32.46	30	2	3	0	0	0
86	981111	1.0	-1.17	-81.02	3.0	5	3	24.8	32.46	90	3	2	0	0	0
86	981111	1.0	-1.17	-81.02	3.0	5	3	24.8	32.46	80	1	1	0	0	0
86	981111	1.0	-1.17	-81.02	3.0	5	3	24.8	32.46	500	4	2	0	0	0
86	981111	1.0	-1.17	-81.02	3.0	5	3	24.8	32.46	400	3	0	0	0	0
87	981112	1.0	1.43	-79.52	5.0	5	2	26.9	32.05	0	0	0	1	1	0
87	981112	1.0	1.43	-79.52	5.0	5	2	26.9	32.05	20	2	2	0	0	0
87	981112	1.0	1.43	-79.52	5.0	5	2	26.9	32.05	30	3	6	0	0	0
87	981112	1.0	1.43	-79.52	5.0	5	2	26.9	32.05	90	1	2	0	0	0
87	981112	1.0	1.43	-79.52	5.0	5	2	26.9	32.05	500	1	0	0	0	0
87	981112	1.0	1.43	-79.52	5.0	5	2	26.9	32.05	900	1	0	0	0	0
87	981112	1.0	1.43	-79.52	5.0	5	2	26.9	32.05	400	1	1	0	0	0
88	981113	1.0	3.08	-78.18	4.0	5	2	27.2	30.25	0	0	0	2	3	0
88	981113	1.0	3.08	-78.18	4.0	5	2	27.2	30.25	15	2	5	3	1	0

Table 9 (*Jordan* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
88	981113	1.0	3.08	-78.18	4.0	5	2	27.2	30.25	30	3	6	0	0	0
88	981113	1.0	3.08	-78.18	4.0	5	2	27.2	30.25	90	1	1	0	0	0
88	981113	1.0	3.08	-78.18	4.0	5	2	27.2	30.25	200	1	1	0	0	0
88	981113	1.0	3.08	-78.18	4.0	5	2	27.2	30.25	500	2	4	0	0	0
89	981114	1.0	4.73	-77.93	4.0	5	2	27.3	30.00	10	1	2	1	1	0
89	981114	1.0	4.73	-77.93	4.0	5	2	27.3	30.00	20	1	2	2	2	0
89	981114	1.0	4.73	-77.93	4.0	5	2	27.3	30.00	30	1	0	3	1	0
89	981114	1.0	4.73	-77.93	4.0	5	2	27.3	30.00	100	3	2	0	0	0
89	981114	1.0	4.73	-77.93	4.0	5	2	27.3	30.00	200	1	1	0	0	0
89	981114	1.0	4.73	-77.93	4.0	5	2	27.3	30.00	300	1	0	0	0	0
89	981114	1.0	4.73	-77.93	4.0	5	2	27.3	30.00	400	1	3	0	0	0
89	981114	1.0	4.73	-77.93	4.0	5	2	27.3	30.00	500	1	2	0	0	0
89	981114	1.0	4.73	-77.93	4.0	5	2	27.3	30.00	500	1	2	0	0	0
89	981114	1.0	4.73	-77.93	4.0	5	2	27.3	30.00	500	1	2	0	0	0
89	981114	1.0	4.73	-77.93	4.0	5	2	27.3	30.00	500	1	2	0	0	0
89	981114	1.0	4.73	-77.93	4.0	5	2	27.3	30.00	500	1	1	0	0	0
90	981115	1.0	7.43	-78.55	2.0	5	1	28.2	26.28	80	8	1	2	1	0
90	981115	1.0	7.43	-78.55	2.0	5	1	28.2	26.28	100	8	10	0	0	0
90	981115	1.0	7.43	-78.55	2.0	5	1	28.2	26.28	400	2	2	0	0	0
90	981115	1.0	7.43	-78.55	2.0	5	1	28.2	26.28	500	1	1	0	0	0
90	981115	1.0	7.43	-78.55	2.0	5	1	28.2	26.28	500	1	1	0	0	0
90	981115	1.0	7.43	-78.55	2.0	5	1	28.2	26.28	500	1	2	0	0	0
91	981122	1.0	7.82	-79.68	1.0	1	2	28.3	26.93	30	1	1	3	1	0
91	981122	1.0	7.82	-79.68	1.0	1	2	28.3	26.93	200	6	30	0	0	0
91	981122	1.0	7.82	-79.68	1.0	1	2	28.3	26.93	400	1	3	0	0	0
91	981122	1.0	7.82	-79.68	1.0	1	2	28.3	26.93	500	2	4	0	0	0
92	981125	1.0	9.20	-89.62	3.0	2	1	26.7	33.34	10	4	9	1	5	0
92	981125	1.0	9.20	-89.62	3.0	2	1	26.7	33.34	20	1	1	2	2	0
92	981125	1.0	9.20	-89.62	3.0	2	1	26.7	33.34	30	2	2	3	1	0
92	981125	1.0	9.20	-89.62	3.0	2	1	26.7	33.34	100	4	2	0	0	0
92	981125	1.0	9.20	-89.62	3.0	2	1	26.7	33.34	300	1	0	0	0	0
93	981126	1.0	10.45	-93.00	4.0	2	1	27.6	33.41	10	1	0	1	4	0
93	981126	1.0	10.45	-93.00	4.0	2	1	27.6	33.41	30	3	12	2	1	0
93	981126	1.0	10.45	-93.00	4.0	2	1	27.6	33.41	100	3	1	3	1	0
93	981126	1.0	10.45	-93.00	4.0	2	1	27.6	33.41	400	1	0	0	0	0
94	981129	1.0	16.53	-101.12	2.0	3	1	29.5	33.90	10	1	2	1	1	0
94	981129	1.0	16.53	-101.12	2.0	3	1	29.5	33.90	30	1	2	2	2	0
94	981129	1.0	16.53	-101.12	2.0	3	1	29.5	33.90	400	3	2	0	0	0
94	981129	1.0	16.53	-101.12	2.0	3	1	29.5	33.90	500	2	2	0	0	0
94	981129	1.0	16.53	-101.12	2.0	3	1	29.5	33.90	500	1	1	0	0	0
94	981129	1.0	16.53	-101.12	2.0	3	1	29.5	33.90	500	3	3	0	0	0
94	981129	1.0	16.53	-101.12	2.0	3	1	29.5	33.90	500	2	4	0	0	0
95	981130	1.0	17.48	-104.17	1.0	3	1	28.0	34.18	30	1	1	2	3	0
95	981130	1.0	17.48	-104.17	1.0	3	1	28.0	34.18	400	1	1	0	0	0

Table 9 (*Jordan* dipnet sampling) continued.

Station[1] Number	Date Y-M-D	Hours of Effort	Lat.	Lon.	Beau-fort	Moon[2] Phase	Sky[3]	SST[4] (C)	SSS[5] (ppt)	Fish[6] Species	Relative[7] Abund. (Fish)	Number Collected (Fish)	Squid[8] Type	Relative[7] Abund. (Squid)	Number Collected (Squid)
95	981130	1.0	17.48	-104.17	1.0	3	1	28.0	34.18	500	4	1	0	0	0
95	981130	1.0	17.48	-104.17	1.0	3	1	28.0	34.18	500	1	1	0	0	0
95	981130	1.0	17.48	-104.17	1.0	3	1	28.0	34.18	500	1	1	0	0	0
95	981130	1.0	17.48	-104.17	1.0	3	1	28.0	34.18	500	1	1	0	0	0
96	981201	1.0	18.33	-107.78	3.0	4	2	27.7	33.98	20	1	1	2	2	0
96	981201	1.0	18.33	-107.78	3.0	4	2	27.7	33.98	100	2	1	3	1	0
96	981201	1.0	18.33	-107.78	3.0	4	2	27.7	33.98	500	1	1	0	0	0
97	981202	1.0	19.03	-110.47	5.0	4	1	25.9	34.64	10	1	1	2	1	0
97	981202	1.0	19.03	-110.47	5.0	4	1	25.9	34.64	20	1	2	0	0	0
97	981202	1.0	19.03	-110.47	5.0	4	1	25.9	34.64	100	1	1	0	0	0
98	981203	1.0	20.00	-111.20	3.0	4	1	25.6	34.72	10	1	2	1	3	0
98	981203	1.0	20.00	-111.20	3.0	4	1	25.6	34.72	20	1	1	2	2	0
98	981203	1.0	20.00	-111.20	3.0	4	1	25.6	34.72	30	2	2	3	2	0
98	981203	1.0	20.00	-111.20	3.0	4	1	25.6	34.72	100	3	5	0	0	0
98	981203	1.0	20.00	-111.20	3.0	4	1	25.6	34.72	400	1	1	0	0	0
98	981203	1.0	20.00	-111.20	3.0	4	1	25.6	34.72	500	1	1	0	0	0
98	981203	1.0	20.00	-111.20	3.0	4	1	25.6	34.72	700	1	0	0	0	0
99	981204	1.0	22.50	-112.22	3.0	4	3	24.4	34.68	20	1	1	1	4	0
99	981204	1.0	22.50	-112.22	3.0	4	3	24.4	34.68	30	1	1	2	4	0
99	981204	1.0	22.50	-112.22	3.0	4	3	24.4	34.68	100	4	5	0	0	0
99	981204	1.0	22.50	-112.22	3.0	4	3	24.4	34.68	300	1	0	0	0	0
99	981204	1.0	22.50	-112.22	3.0	4	3	24.4	34.68	400	1	1	0	0	0

[1] Records without Station Numbers reflect opportunistic or non-standard specimen collections.

[2] 1 = quarter moon; 2 = half moon; 3 = 3/4 moon; 4 = full moon; 5 = no moon; 6 = new moon.

[3] 1 = clear; 2 = partly cloudy; 3 = overcast; 4 = rain; 5 = other or unknown.

[4] SST = Sea Surface Temperature (Celsius)

[5] SSS = Sea Surface Salinity (practical salinity units)

[6] 005 = Unidentified flyingfish
010 = Oxyporhamphus micropterus
015 = Fodiator spp.
020 = Exocetus spp.
030 = Unidentified 4-wing flyingfish
060 = Elassichthys
080 = Hemiramphidae (halfbeaks)
090 = Belonidae (needlefish)
100 = Myctophidae (lanternfish)
125 = Vinciguerria spp.
200 = Scombridae (tunas)
300 = Gempylidae (snake mackerel)
400 = Coryphaenidae (dolphinfish)
500 = Other
700 = Octopoda (pelagic octopus)
900 = Sea Snake

Table 9 (*Jordan* dipnet sampling) continued.

[7]
1 = “a couple” (1-3)
2 = “a few” (4-8); uncommon
3 = “several” (9-15); fairly common
4 = “common” (16-50)
5 = “abundant” (51-150)
6 = “superabundant (150+)
7 = 1000’s
8 = present
9 = “possibly present”

[8]
1 = Large (mantle length > 8 inches)
2 = Medium (3 inches < mantle length < 8 inches)
3 = Small (mantle length < 3 inches)

Table 10. Sea striders (*Halobates* spp.) collected from the *McArthur*, *Endeavor*, and *Jordan*, 30 July-9 December 1998.

Species	No. of Stations With Samples	Individuals Collected
H. sobrinus	84	1772
H. micans	72	728
H. sericeus	5	34
H. splendens	5	8

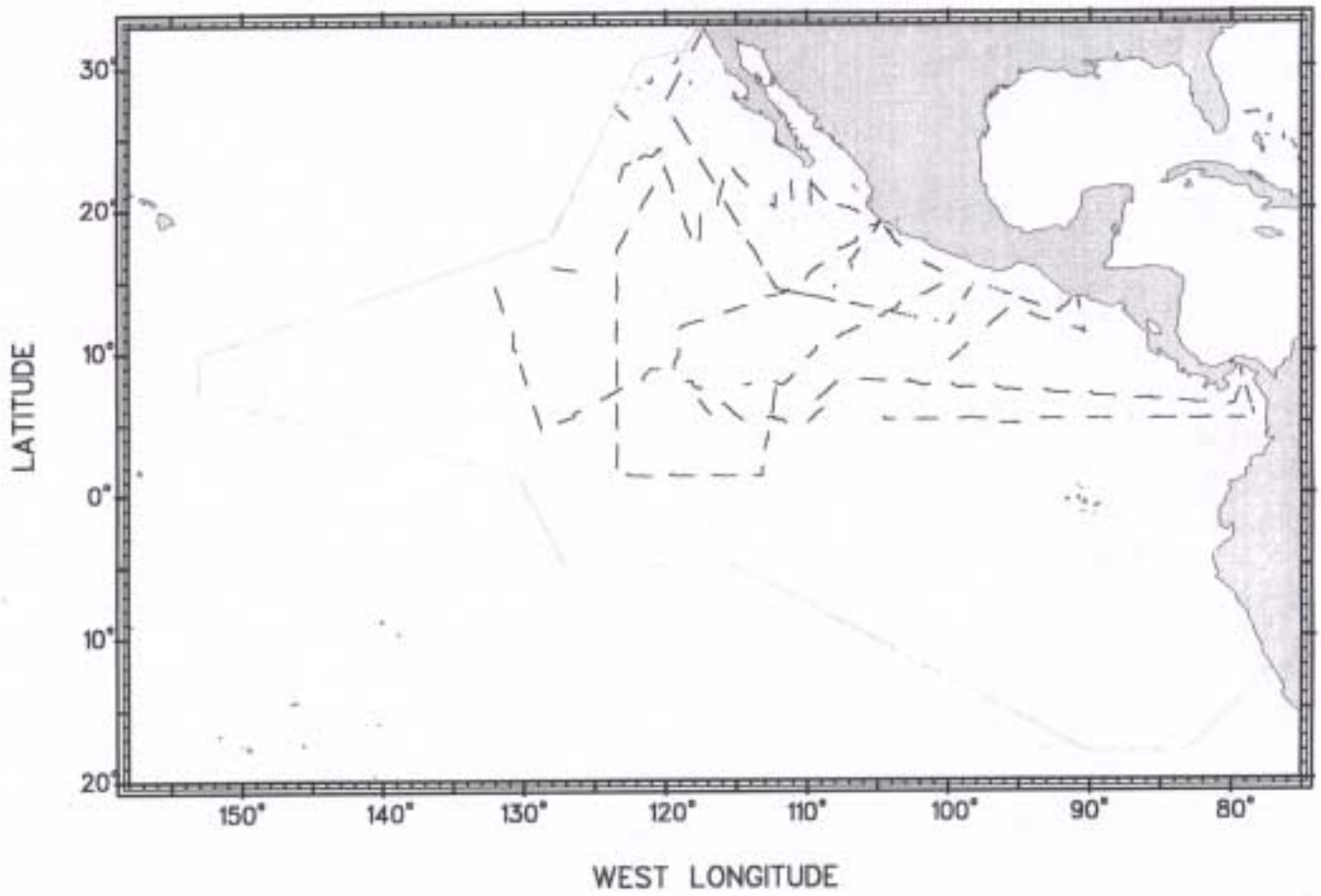

Figure 1. Tracklines, *McArthur*, 31 July – 9 December 1998. The tracklines are indicated by the dashed lines; the study area boundary is indicated by the solid line.

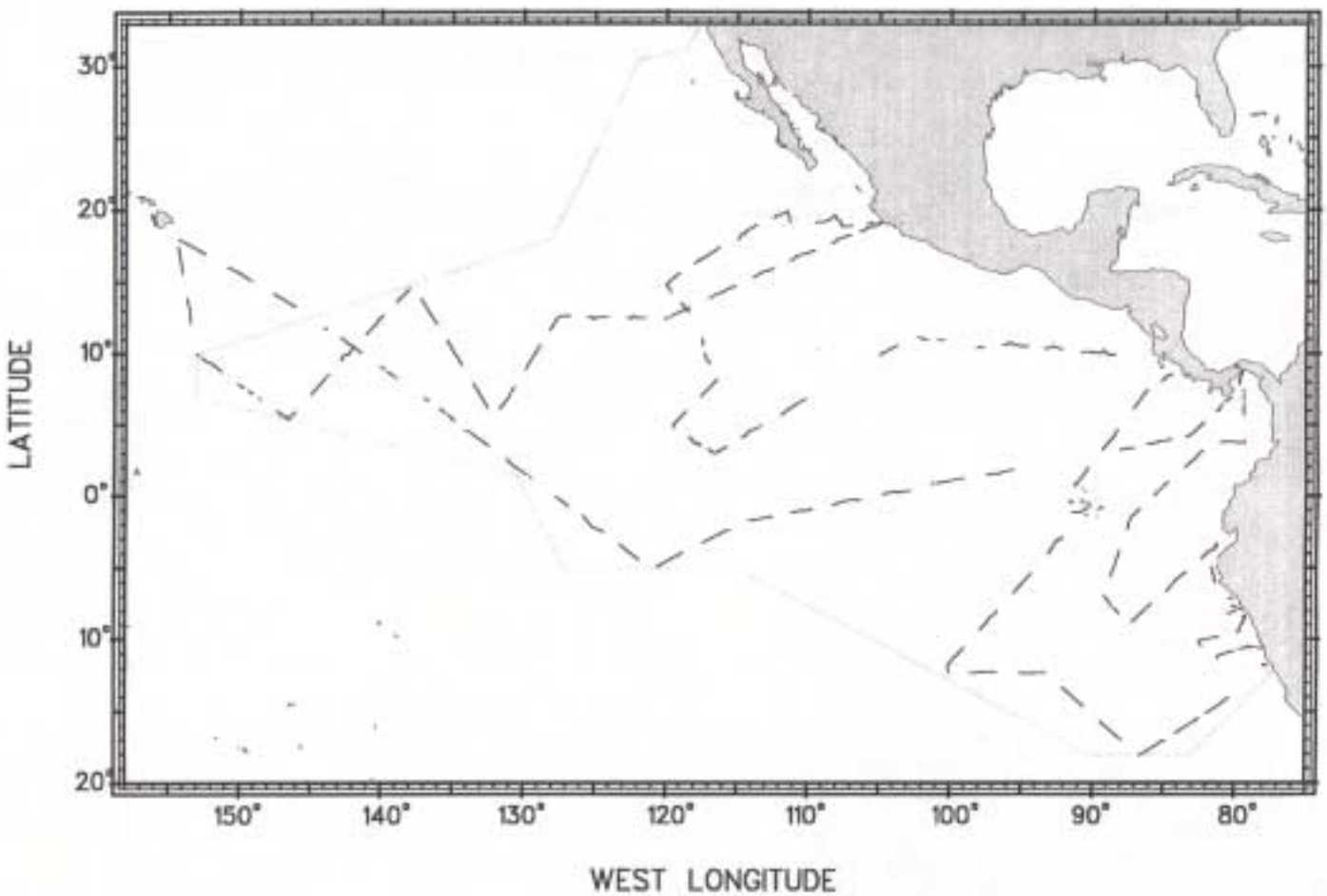

Figure 2. Tracklines, *Endeavor*, 30 July – 9 December 1998. The tracklines are indicated by the dashed lines; the study area boundary is indicated by the solid line.

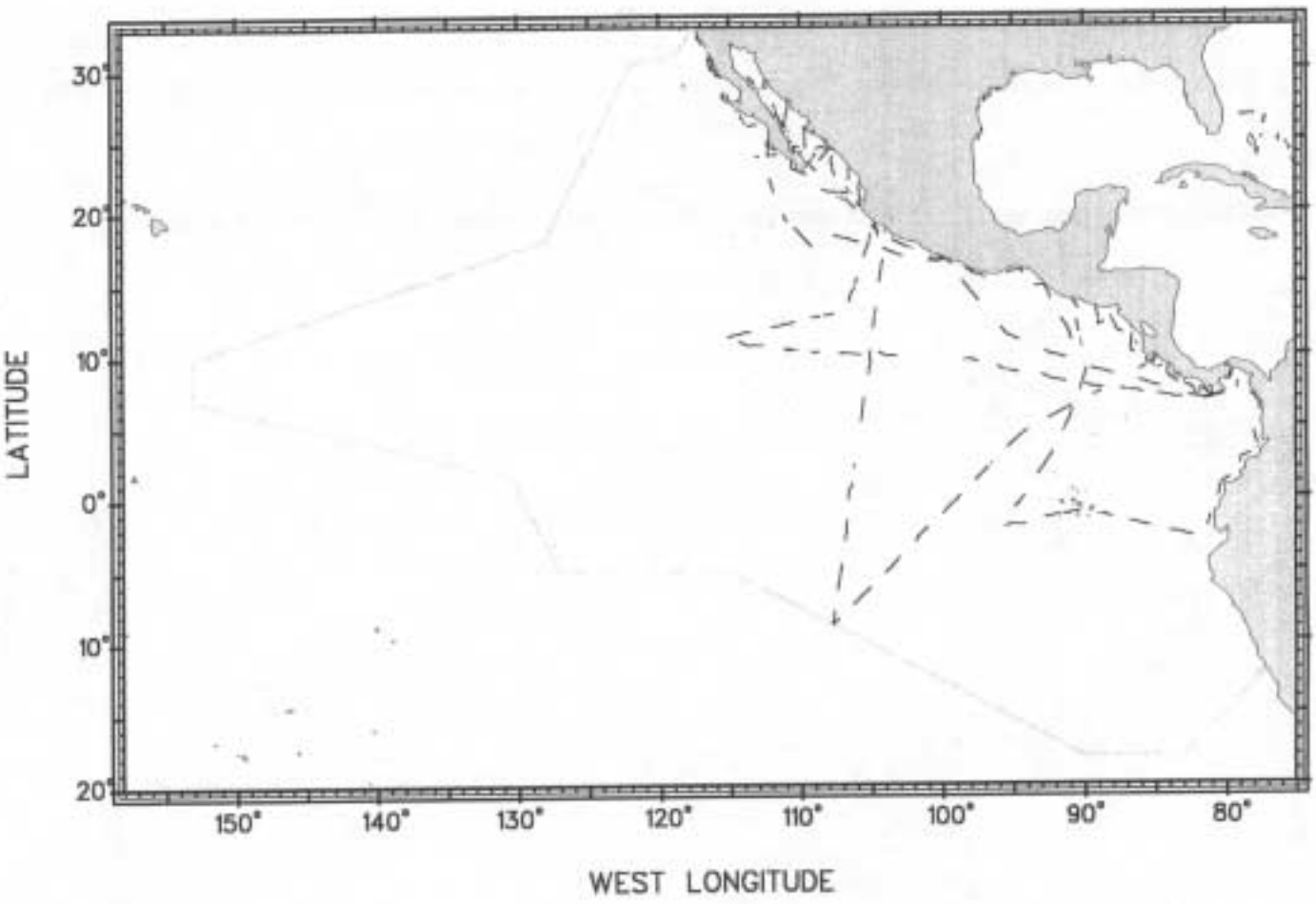

Figure 3. Tracklines, *Jordan*, 31 July – 9 December 1998. The tracklines are indicated by the dashed lines; the study area boundary is indicated by the solid line.

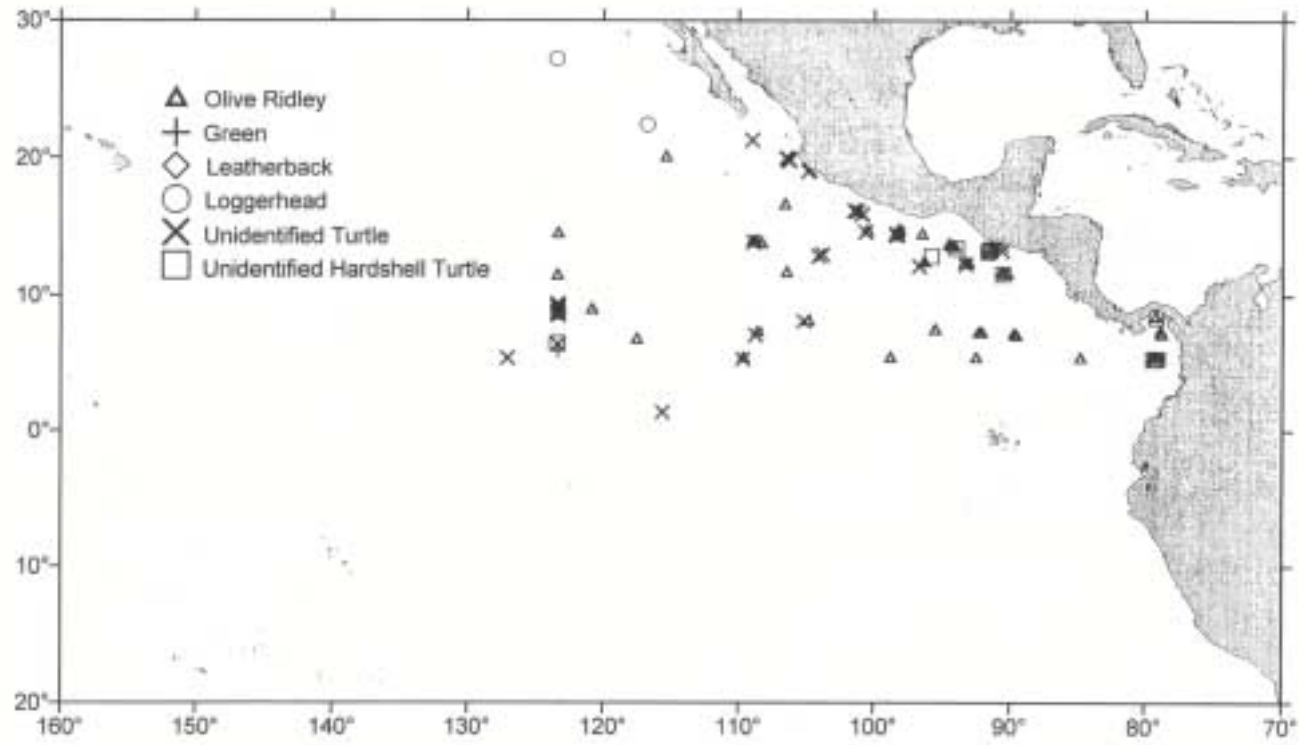

Figure 4. Locations of turtle sightings recorded from the *McArthur*, 31 July – 9 December 1998.

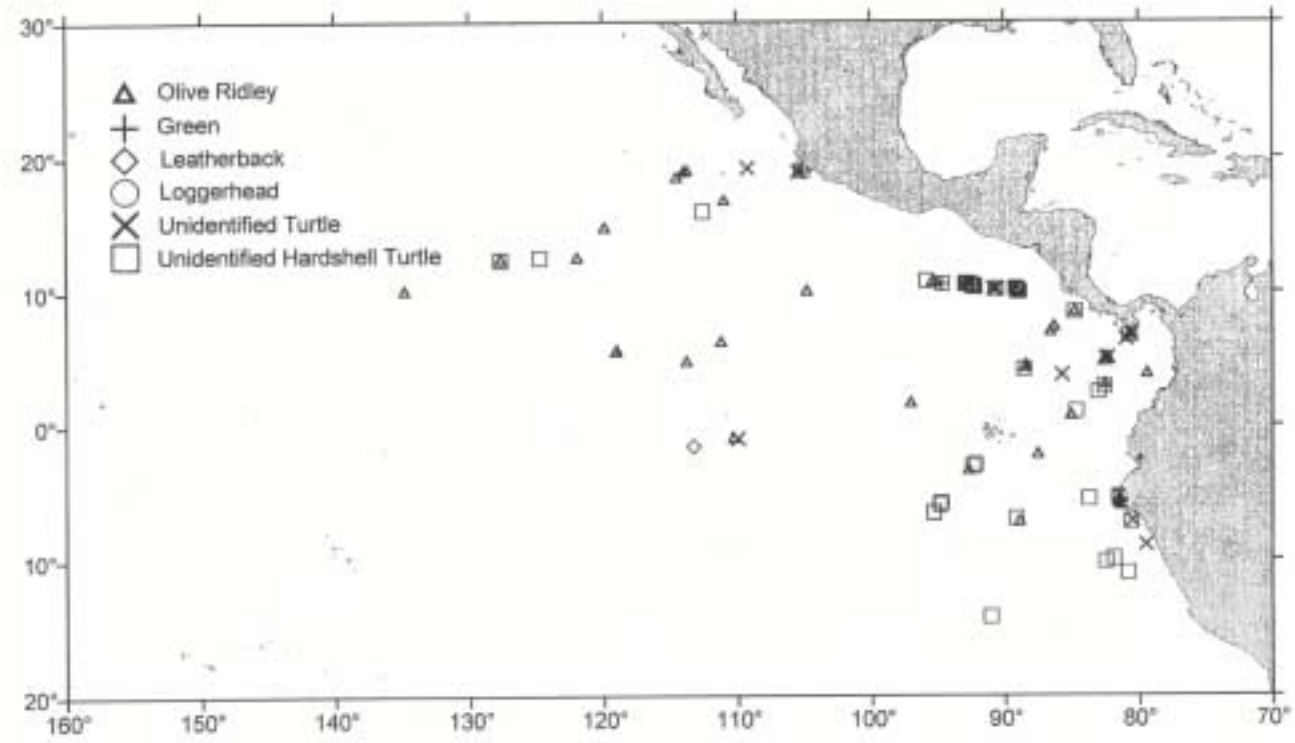

Figure 5. Locations of turtle sightings recorded from the *Endeavor*, 30 July – 9 December 1998.

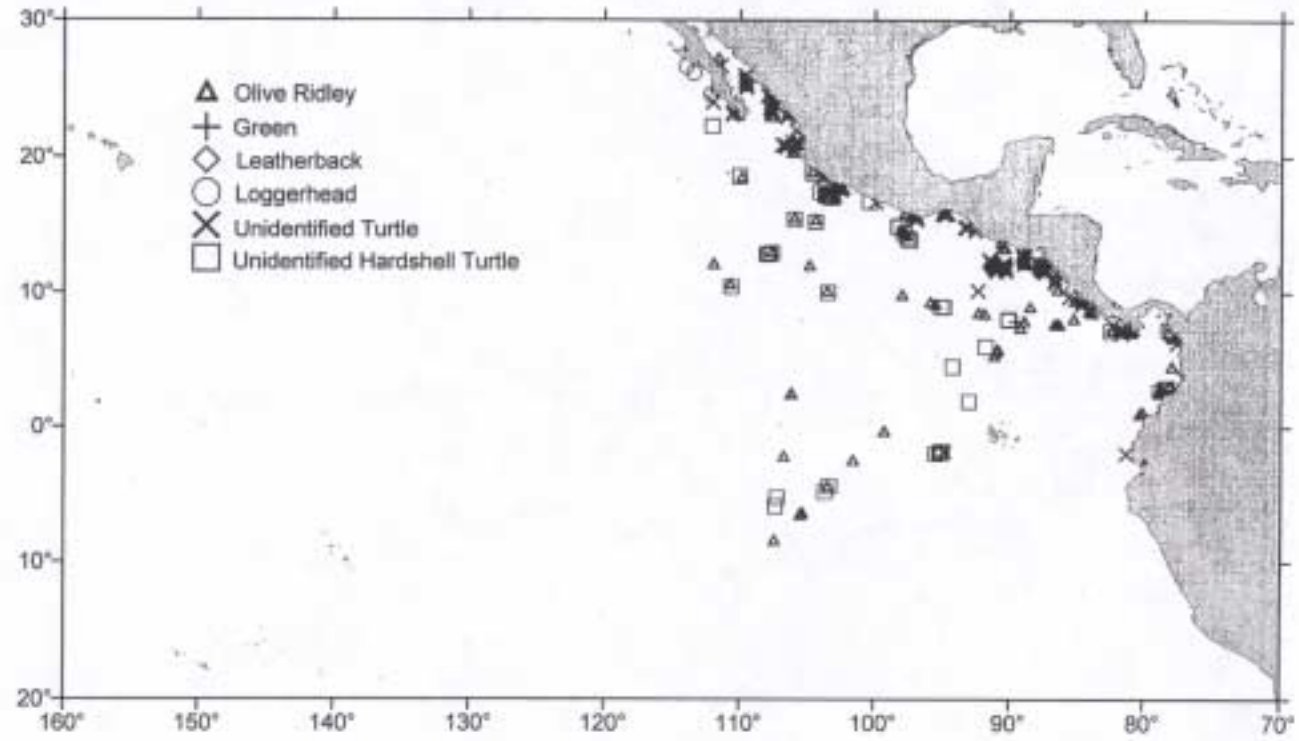

Figure 6. Locations of turtle sightings recorded from the *Jordan*, 31 July – 9 December 1998.

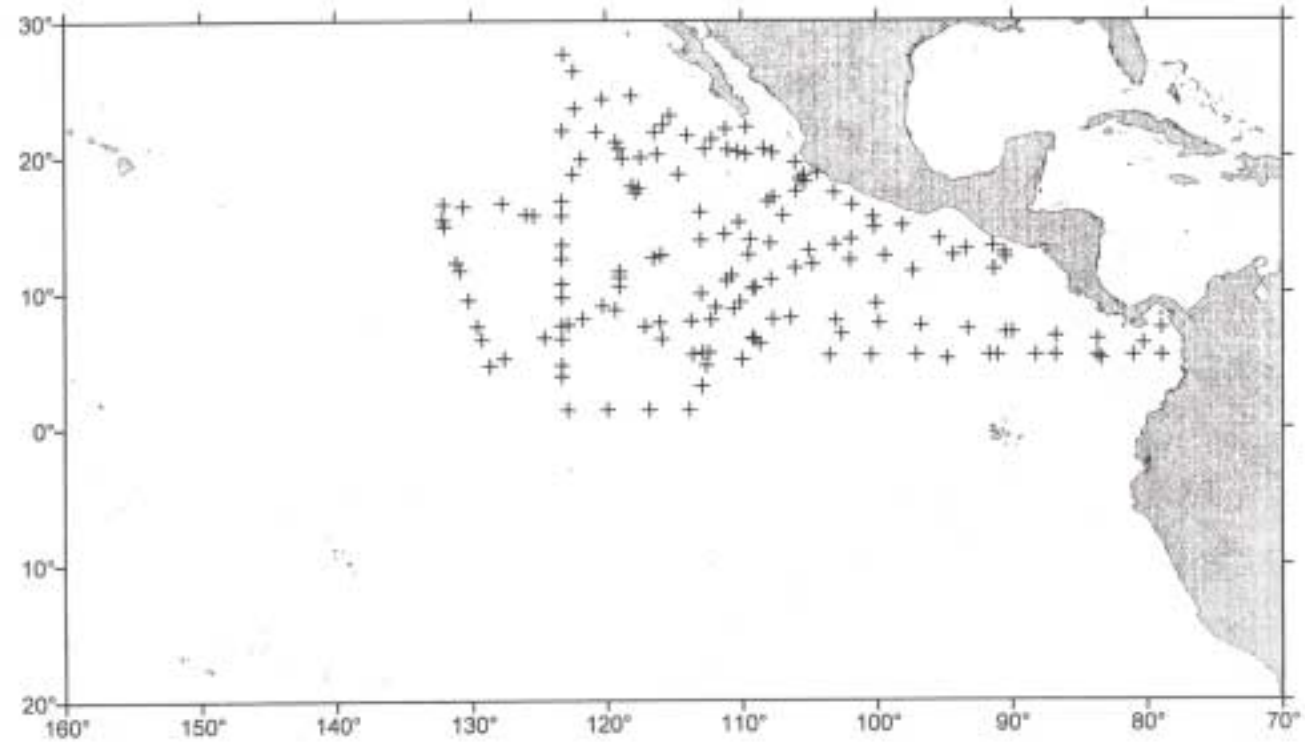

Figure 7. Locations of dipnet stations, *McArthur*, 31 July – 9 December 1998.

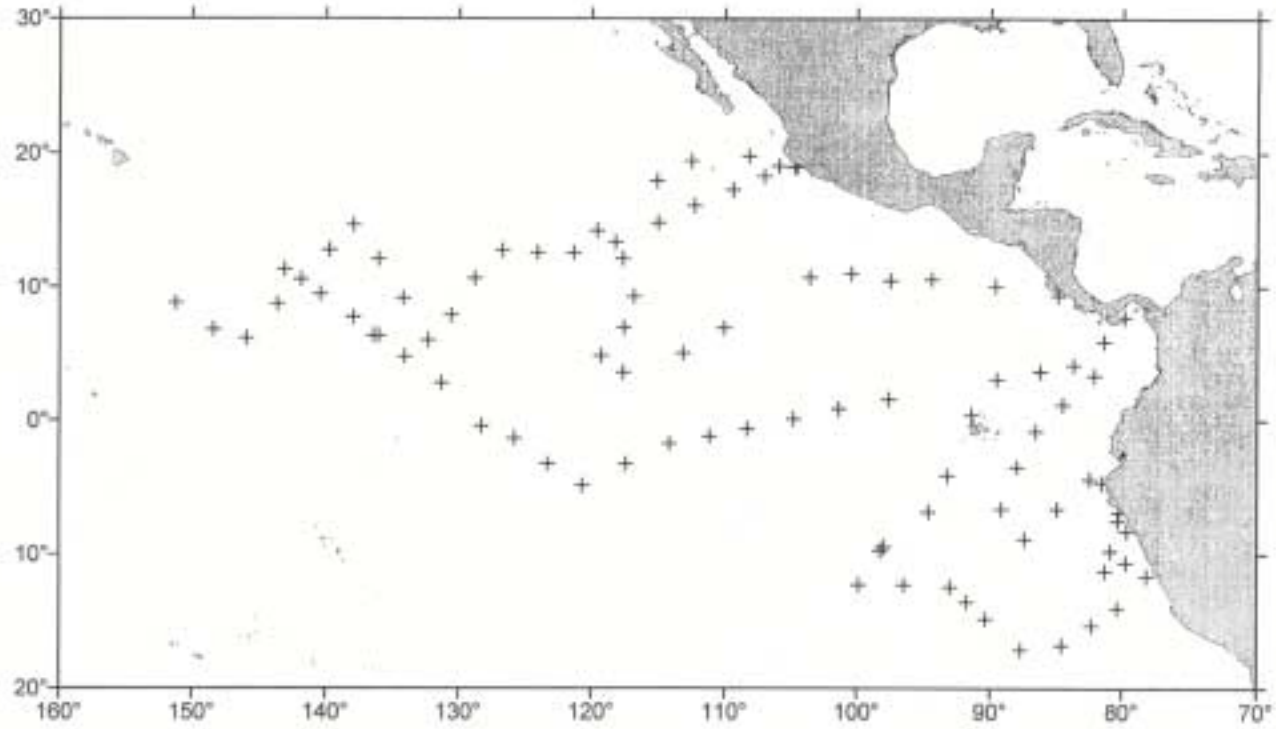

Figure 8. Locations of dipnet stations, *Endeavor*, 30 July – 9 December 1998.

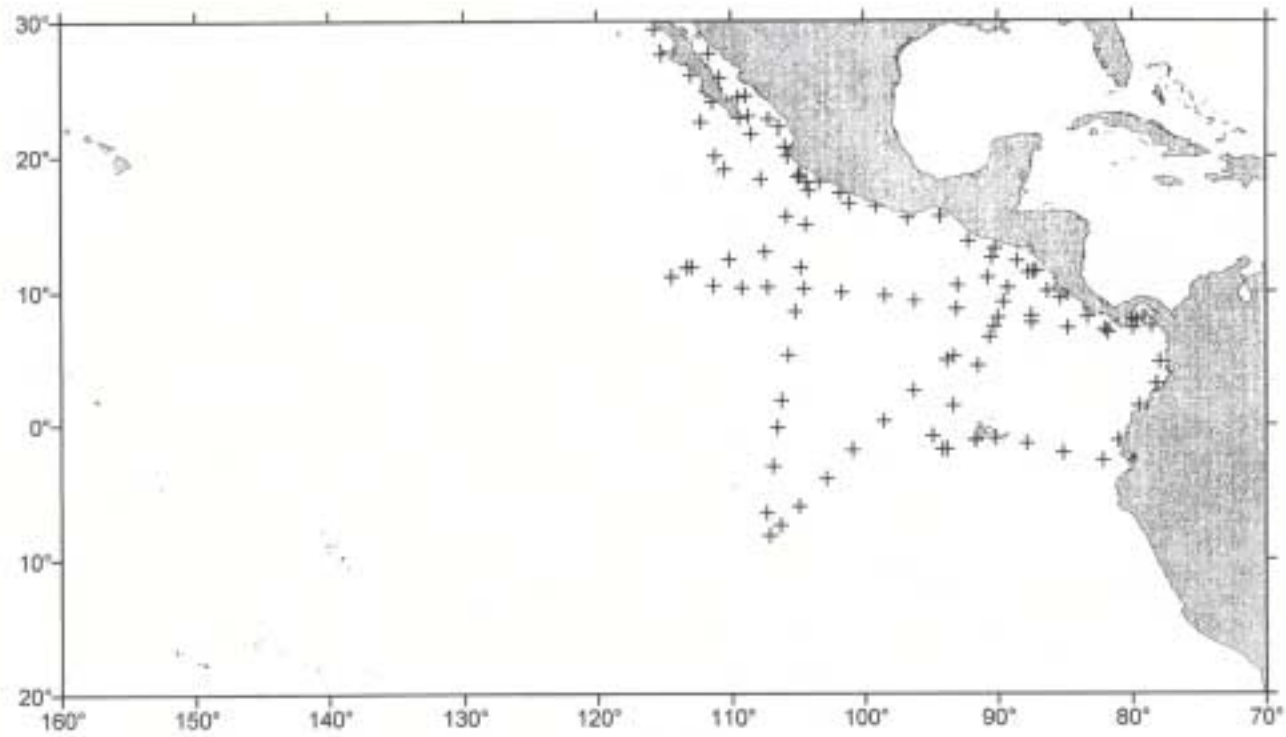

Figure 9. Locations of dipnet stations, *Jordan*, 31 July – 9 December 1998.

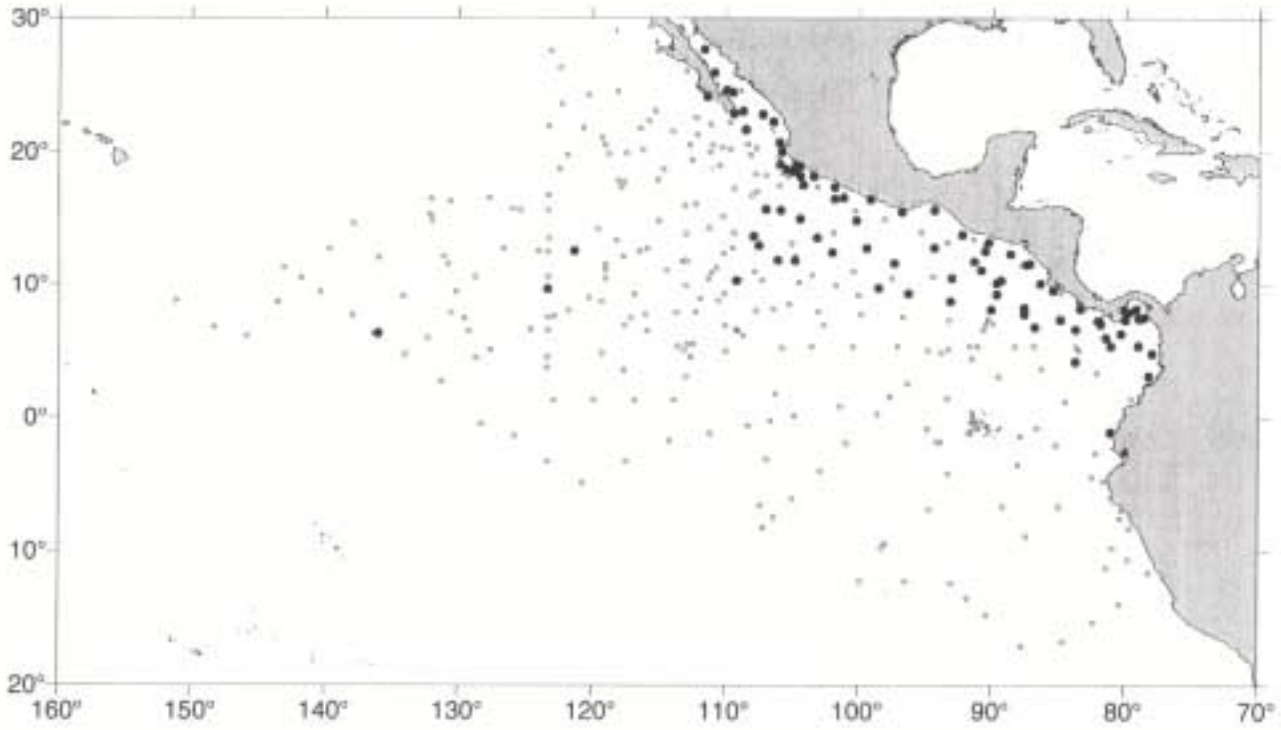

Figure 10. Locations of *H. sobrinus* collected from the *McArthur*, *Endeavor*, and *Jordan*, 30 July – 9 December 1998. Solid circles indicate locations of dipnet stations where *H. sobrinus* were collected; open circles indicate locations of dipnet stations where *H. sobrinus* were not collected.

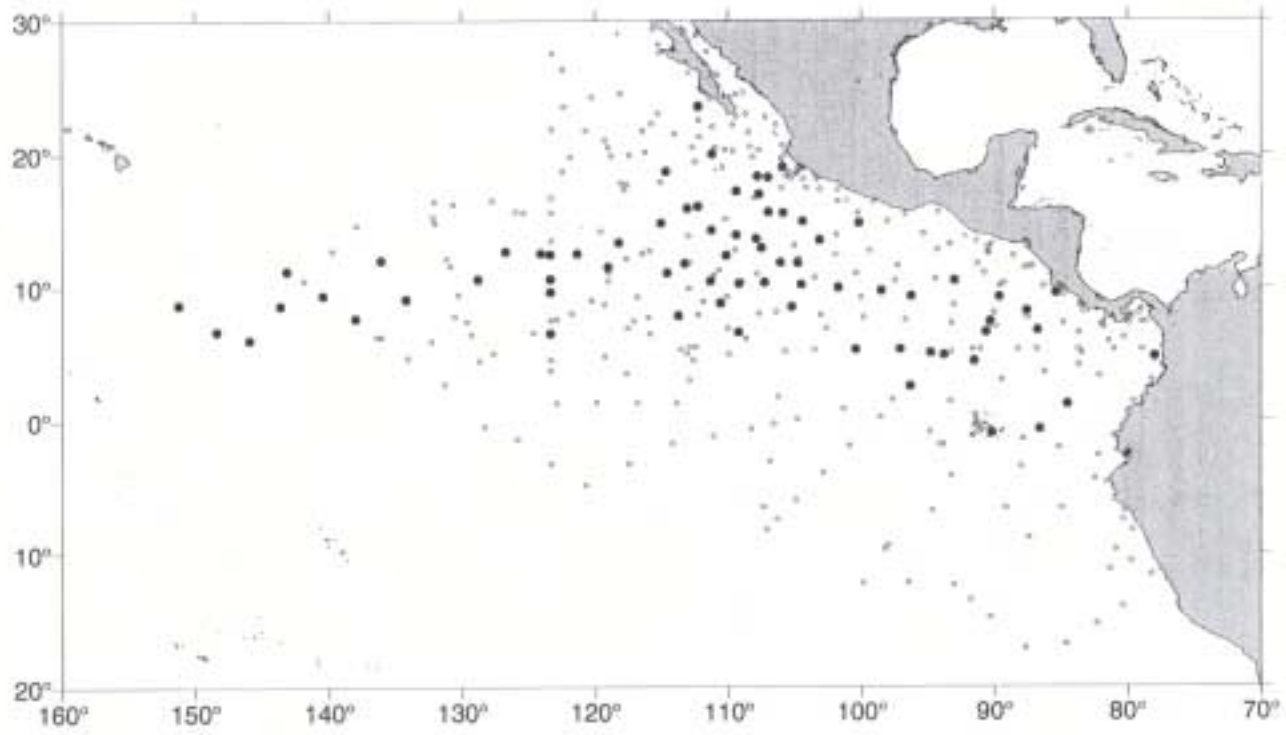

Figure 11. Locations of *H. micans* collected from the *McArthur*, *Endeavor*, and *Jordan*, 30 July – 9 December 1998. Solid circles indicate locations of dipnet stations where *H. micans* were collected; open circles indicate locations of dipnet stations where *H. micans* were not collected.

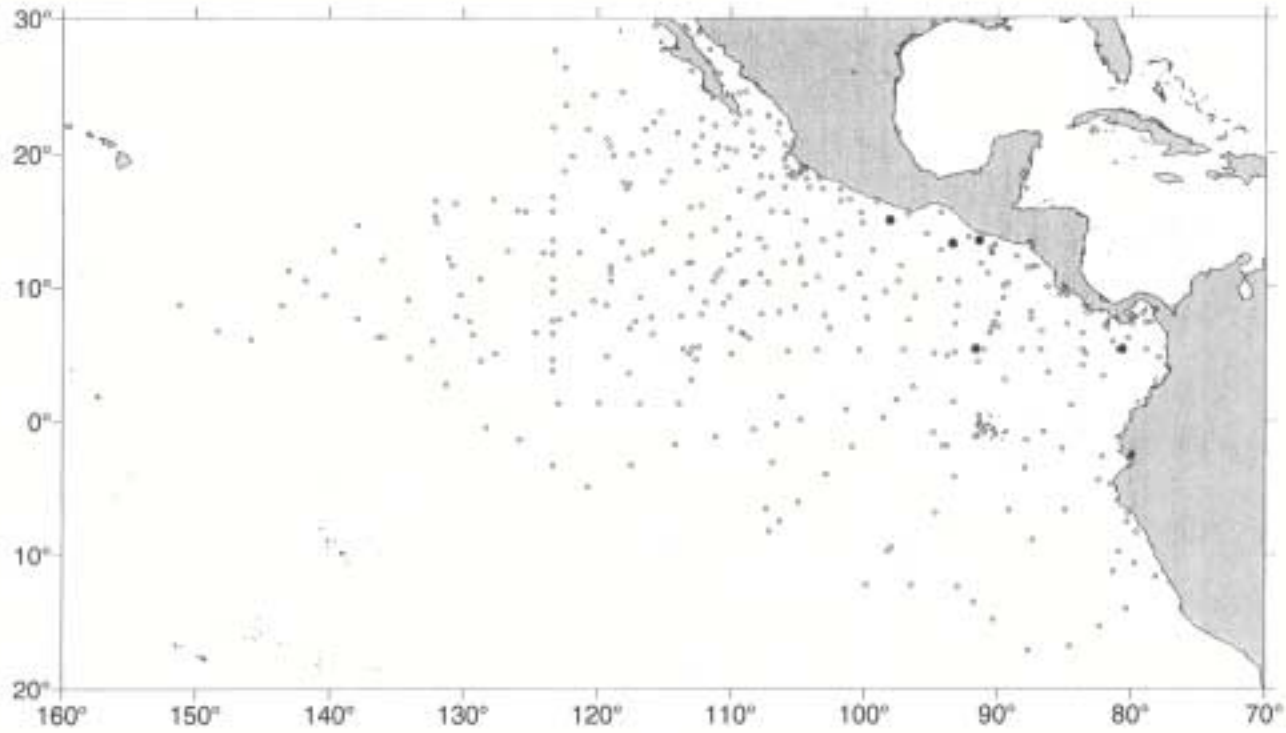

Figure 12. Locations of *H. sericeus* collected from the *McArthur*, *Endeavor*, and *Jordan*, 30 July – 9 December 1998. Solid circles indicate locations of dipnet stations where *H. sericeus* were collected; open circles indicate locations of dipnet stations where *H. sericeus* were not collected.

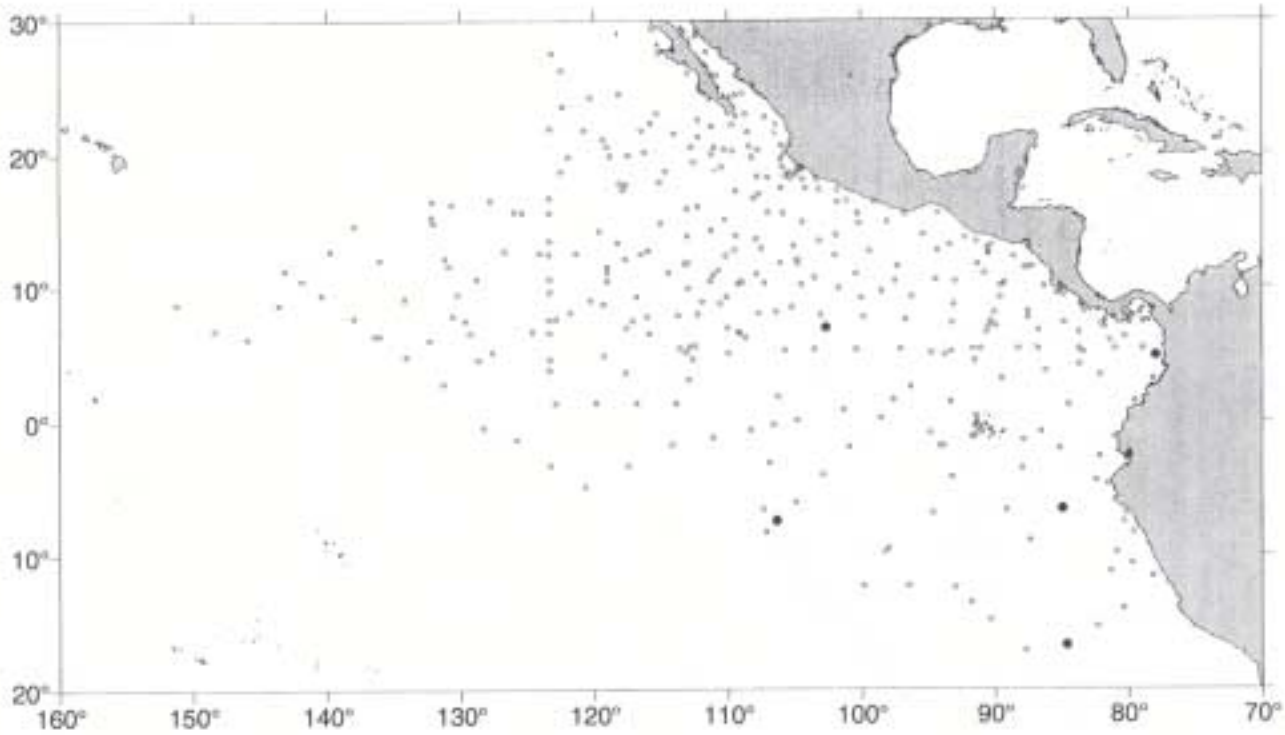

Figure 13. Locations of *H. splendens* collected from the *McArthur*, *Endeavor*, and *Jordan*, 30 July – 9 December 1998. Solid circles indicate dipnet stations where *H. splendens* were collected; open circles indicate locations of dipnet stations where *H. splendens* were not collected.

APPENDIX 1

SCIENTIFIC PERSONNEL 1998

Name (observer number)	Position	Affil.[1]	D. S. Jordan Leg #						McArthur Leg #					Endeavor Leg #				
			1	2	3	4	5	6	1	2	3	4	5	1	2	3	4	5
Tim Gerrodette (084)	Chief Scientist	SWFSC	x															
David Au (187)	Cruise Leader	SWSC															x	
Lisa Ballance (120)	Cruise Leader/Seabird Observer	SWFSC			x	x	x	x										
Jay Barlow (015)	Cruise Leader	SWFSC												x				
James Carretta (071)	Cruise Leader	SWFSC								x								
Susan Chivers (029)	Cruise Leader	SWFSC										x						
Andy Dizon (060)	Cruise Leader	SWFSC									x							
Meghan Donahue (136)	Cruise Leader	SWFSC																x
Paul Fiedler (081)	Cruise Leader	SWFSC							x									
Karin Forney (086)	Cruise Leader	SWFSC													x			
Mark Lowry (019)	Cruise Leader	SWFSC											x					
Robert Pitman (004)	Cruise Leader (Leg 2)/ Seabird Observer	SWFSC	x	x	x	x	x	x										
Barb Taylor (034)	Cruise Leader	SWFSC														x		
James Cotton (007)	ID Specialist	SWFSC	x	x							x	x	x					
Gary Friedrichsen (001)	ID Specialist	SWFSC												x	x			
Tom Jefferson (111)	ID Specialist	SWFSC					x	x										
Doug Kinzey (091)	ID Specialist	SWFSC			x	x			x	x							x	x
Rick LeDuc (056)	ID Specialist	SWFSC														x		
Paula Olson (092)	ID Specialist	SWFSC			x	x			x	x							x	x
Richard Rowlett (073)	ID Specialist	SWFSC					x	x						x	x	x		
Brian Smith (074)	ID Specialist	SWFSC	x	x							x	x						
Lisa Baraff (152)	Marine Mammal Observer	SWFSC			x	x			x	x							x	x
Jorge Del Angel (168)	Marine Mammal Observer	SWFSC			x	x			x	x							x	x
Kathy Hough (188)	Marine Mammal Observer (Leg6)/ Scientific Observer	SWFSC					x	x										
Greg Krutzikowsky (181)	Marine Mammal Observer	SWFSC			x	x			x	x							x	x
John Mason (182)	Marine Mammal Observer	SWFSC					x	x						x	x	x		

Appendix 1 continued.

Name (observer number)	Position	Affil.[1]	D. S. Jordan Leg #						McArthur Leg #					Endeavor Leg #				
			1	2	3	4	5	6	1	2	3	4	5	1	2	3	4	5
Laura Morse (149)	Marine Mammal Observer	SWFSC			x	x			x	x							x	x
Elizabeth Moses (183)	Marine Mammal Observer	SWFSC	x	x							x	x	x					
Stephanie Norman (153)	Marine Mammal Observer	SWFSC					x	x						x	x	x		
Todd Pusser (143)	Marine Mammal Observer	SWFSC	x	x							x	x	x					
Joe Raffetto (069)	Marine Mammal Observer	SWFSC											x					
Shannon Rankin (184)	Marine Mammal Observer	SWFSC												x	x	x	x	x
Kristin Rasmussen (147)	Marine Mammal Observer	SWFSC	x	x							x	x	x					
Cheryl Ryder (185)	Marine Mammal Observer	SWFSC					x	x						x	x	x		
Juan Carlos Salinas (126)	Marine Mammal Observer	SWFSC					x	x						x	x	x		
Koen Van Waerebeek (186)	Marine Mammal Observer	SWFSC												x	x	x	x	x
Ernesto Vazquez (125)	Marine Mammal Observer	SWFSC	x	x							x	x	x					
Karen Fear (174)	Acoustic Tech	SWFSC															x	
Mark MacDonald	Acoustic Tech	SWFSC																
Tom Norris (161)	Acoustic Tech	SWFSC												x	x	x	x	x
Julie Oswald	Acoustic Tech	SWFSC														x		
Aaron Thode	Acoustic Tech	SWFSC																x
Christine Vitulli	Acoustic Tech	SWFSC													x			
Jim Gilpatrick (080)	Photogrammetrist	SWFSC			x			x										
Morgan Lynn (057)	Photogrammetrist	SWFSC	x	x		x	x											
Daniel Palacios (144)	Photogrammetrist	OSU		x		x	x											
Wayne Perryman (110)	Photogrammetrist	SWFSC						x										
LT Tom Martin (158)	Photogrammetrist	SWFSC			x													
LTjg Alexandra Von Saunder (119)	Photogrammetrist	SWFSC	x															
Jimmy De La Cruz	Helicopter Mechanic	AOC				x												
Ron Hegelsen	Helicopter Mechanic	AOC	x					x										
Pete Yates	Helicopter Mechanic	AOC		x	x		x											
LT Debra Barr	Helicopter Pilot	NOAA	x	x			x	x										
LT Steve Pape	Helicopter Pilot	NOAA			x	x												
Lynne Butler	Oceanographer	SIO												x	x	x	x	x

Appendix 1 continued.

Name (observer number)	Position	Affil.[1]	D. S. Jordan Leg #						McArthur Leg #					Endeavor Leg #				
			1	2	3	4	5	6	1	2	3	4	5	1	2	3	4	5
Kerri Danil	Oceanographer	SWFSC							x	x	x	x	x					
Kerry Kopitsky	Oceanographer	SWFSC	x	x	x	x	x	x										
Kathryn Noyes	Oceanographer	SWFSC							x	x	x	x	x					
Valerie Philbrick (089)	Oceanographer	SWFSC	x	x	x	x		x										
William Fanning	Marine Tech	URI												x				
Bill Fanning	Marine Tech	URI															x	
David Nelson	Marine Tech	URI													x	x		
Tom Orvosh	Marine Tech	URI																x
Elyse Bixby	Scientific Observer	SWFSC														x		
Katie Cramer	Scientific Observer	SWFSC													x			
Luana Galver	Scientific Observer	SWFSC			x													
Nick Kellar (173)	Scientific Observer	SWFSC															x	
Dawn Breese	Seabird Observer	SWFSC							x	x								
Michael Force (098)	Seabird Observer	SWFSC							x	x	x	x	x					
Fritz Hertel	Seabird Observer	UCLA		x	x													
Brett Jarrett	Seabird Observer	SWFSC	x	x							x	x	x					
Cornelia Oedekoven	Seabird Observer	SWFSC												x	x	x	x	x
Stuart Pimm	Seabird Observer	UT						x										
Larry Spear	Seabird Observer	SWFSC													x	x	x	
Alonso Aquilar	Visiting Scientist	INDP							x									
Ruth Bello Calvo	Visiting Scientist	IMARPE																x
ENS Williams Casasola	Visiting Naval Officer	AG								x		x						
Jaume Forcada	Visiting Scientist	UB																x
Guillermo Jimenez	Visiting Scientist	INDP											x					

[1] SWFSC- Southwest Fisheries Science Center; OSU- Oregon State University; AOC- NOAA Aircraft Operations Center; NOAA- National Oceanic and Atmospheric Administration; SIO – Scripps Institution of OceanographyURI- University of Rhode Island; UCLA- University of California Los Angeles; UT- University of Tennessee; INP- Instituto Nacional de la Pesca, Mexico; IMARPE- Instituto de la Mar, Peru; AG-Armada de Guatemala; UB- Universidad de Barcelona, Spain