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1979

Annual Operating Report

SAN ONOFRE NUCLEAR GENERATING STATION

Volume IV
Biological Data Report

NEKTON

ENVIRONMENTAL TECHNICAL SPECIFICATIONS
Unit 1

PREOPERATIONAL MONITORING PROGRAM
Units 2 and 3

Prepared for

Southern California Edison Company
P. O. Box 800
Rosemead, CA. 91770

Prepared for

SOUTHERN CALIFORNIA EDISON COMPANY
P. O. Box 800
Rosemead, CA 91770

by

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I. INTRODUCTION

A. PURPOSE OF THE STUDY

The marine monitoring studies reported in this volume were conducted to meet Nuclear Regulatory Commission (NRC) requirements as stated in the Environmental Technical Specifications (ETS), Docket No. 50-206, Sections 3.1.2a (1) General Ecological Survey and 3.1.2a(2) Impingement of Organisms for San Onofre Nuclear Generating Station (SONGS) Unit 1, and the Preoperational Monitoring Program (PMP) for SONGS Units 2 and 3. Broadly stated, the ETS objectives are to determine the effects of SONGS Unit 1 operations on the marine resources in the vicinity of the station. The Preoperational Monitoring Program objectives are designed to provide a baseline for the determination of the nature, extent, and significance of the effects of SONGS Units 2 and 3 on the species composition, distribution, and abundance of fish in the vicinity of the generating station. The studies are also being conducted in compliance with the National Pollutant Discharge Elimination System (NPDES) permit for SONGS Unit 1. These programs require that results be reported to the California Regional Water Quality Control Board (CRWQCB), San Diego Region, and the regional office of the Environmental Protection Agency.

B. LOCATION OF STUDY AREA

SONGS Units 1, 2, and 3 are located at 33° 22.5' N and 117° 32.5' W between the cities of Oceanside and San Clemente, California, on a narrow coastal plain which extends inland approximately 3 km from the beach to coastal foothills (Figure I-1). The site is adjacent to the U. S. Marine Corps Base at Camp Pendleton, and is bounded by the San Onofre State Beach on the north and south. The study area extends approximately 6.4 km (4 miles) upcoast, 11.5 km (7 miles) downcoast, and 3.3 km (2 miles) offshore of SONGS.

C. BACKGROUND

Oceanographic and marine biological studies, referred to as the Marine Environmental Monitoring (MEM), began in 1963 in the San Onofre area and were reported on a semiannual basis to the California Regional Water Quality Control Board, San Diego Region (CRWQCB) until 1975. In 1975, the Unit 1 Environmental Technical Specification (ETS) program was implemented in compliance with Nuclear Regulatory Commission requirements. The ETS program has continued to the present. In 1976, the CRWQCB issued permits for SONGS Units 1, 2, and 3 under the National Pollutant Discharge Elimination System (NPDES) which included marine monitoring programs to replace previous MEM requirements. The NPDES marine monitoring programs, which are similar to the ETS program, have continued to the present.

In 1978, a Preoperational Monitoring Program (PMP) was initiated in compliance with requirements of the Nuclear Regulatory Commission. This program, along with the others mentioned above, will provide a baseline of oceanographic and marine biological data prior to the operation of Units 2 and 3. The

Preoperational Monitoring Program is complemetnary to the Unit 1 ETS Program and essentially expands the study area further offshore into the area of Units 2 and 3 diffusers.

D. SCOPE AND ORGANIZATION

This document contains fish data collected under combined ETS and PMP requirements in 1979 and SONGS Operators logs. It is Volume IV of five volumes comprising the Annual Operating Report submitted to the NRC and the CRWQCB. Volumes I through IV are data reports and are submitted in accordance with the April 1 reporting deadline of the year following the year of the data collection. Volume V, which includes analysis of data presented in Volumes I through IV, will be submitted to the appropriate regulatory agencies by July 1, 1980.

Volume I summarizes data collected on selected abiotic receiving water characteristics including receiving water temperature, turbidity, heavy metals (water column and sediment), nutrients, dissolved oxygen, pH, chlorine, and sediment characteristics. Volume II summarizes data gathered to quantitatively assess the environmental effects of sand spoil disposal during construction and dredging operations associated with the construction of SONGS Units 2 and 3. Areas under investigation include the sandy intertidal, subtidal infauna, and kelp bed areas adjacent to SONGS. Volume III contains plankton and benthic data collected under ETS and PMP requirements. Intertidal data are also included. Volume V will present a detailed statistical evaluation, interpretation, and discussion of physical and biological data collected in 1979 and will compare 1979 data to data collected from 1975 through 1978.

Dates for the collection of fish data during calendar year 1979 are summarized in Table I-1.

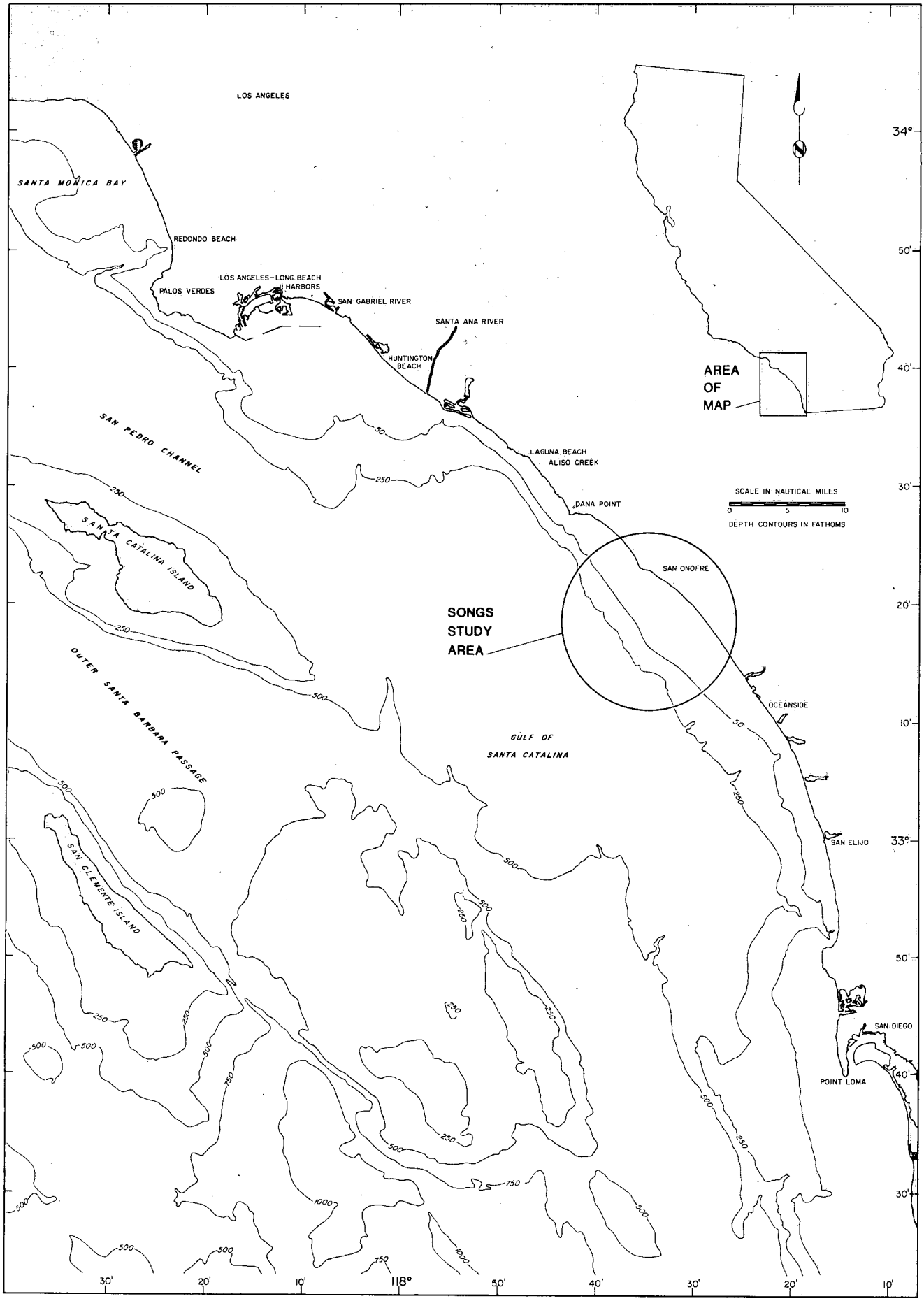

LOS ANGELES
SANTA MONICA BAY
REDONDO BEACH
PALOS VERDES
LOS ANGELES-LONG BEACH HARBORS
SAN GABRIEL RIVER
SANTA ANA RIVER
HUNTINGTON BEACH
LAGUNA BEACH
ALISO CREEK
DANA POINT
SAN ONOFRE
OCEANSIDE
SAN ELIJO
SAN DIEGO
POINT LOMA
SAN PEDRO CHANNEL
SANTA CATALINA ISLAND
OUTER SANTA BARBARA PASSAGE
SAN CLEMENTE ISLAND
GULF OF SANTA CATALINA
SONGS STUDY AREA
AREA OF MAP
SCALE IN NAUTICAL MILES
0 5 10
DEPTH CONTOURS IN FATHOMS
34°
50'
40'
30'
20'
10'
33°
50'
40'
30'
30'
20'
10'
118°
50'
40'
30'
20'
10'

Table I-1. Schedule of fish surveys conducted at SONGS during 1979.

SURVEY	NPDES	ETS	PMP	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Fish Receiving Waters	X	X	X		15-16		17-18		27-28		26-27		16-17		12-13
Impingement Normal Operation	X	X		Weekly	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------
Impingement Heat Treatments	X	X			15		22		24			4,29		18	

E. GENERATING STATION OPERATION

SONGS OPERATORS LOG

January 1979

Date		Time	Occurrence
Jan.	1	0001	Unit at 455 MWe
	6	2217	Reducing unit load for turbine stop valve tests
		2225	Unit load at 3.70 MWe
		2255	Completed tests - increasing unit load
		2340	Unit at full load 45 MWe
	23	0400	Reducing unit load for turbine stop valve tests
		0420	Unit load at 445 MWe
		0510	Completed test - increasing unit load
		0530	Unit load at 451 MWe
	26	0943	Stand pipe installed on saltwater intake for marine sampling.

SONGS OPERATORS LOG

February 1979

Date		Time	Occurrence
Feb.	1	0001	Unit load at 452 MWe
	8	1020	Plankton study pipe removed
	11	0800	Decreasing unit load to heat treat the circulating water intake tunnel
		0815	Unit load at 360 MWe. Started reversing the circulating water tunnels.
		0820	Circulating water mov-10 malfunctioned Returning tunnels to normal configuration
		0830	Circulating water tunnels normal except Mov 10 is 70-% open and won't travel up
		1035	Cancelled heat treatment increasing unit load
		1120	Unit at full load
	14	2200	Started unit load reduction for heat treatment
		2225	Unit load at 380 MWe
		2245	Intake and outfall tunnels are reversed for heat treat of intake tunnel
	15	0001	Unit load at 352 MWe
		0010	Started heat treatment - circulating water inlet temp. 100°F
		0205	Heat treat completed - started lowering circulating water system temp.
		0245	Circulating water system temp. normal
		0330	Circulating water system tunnels reversed to normal positions
		0400	Unit load increased to 450 MWe
	21	0001	Started load drop for condenser cleaning
		0015	Stopped north circulating water pump

February, 1979 (Continued)

Date	Time	Occurrence
Feb. 21	0040	Unit load at 250 MWe
	0320	Unit load drop to 180 MWe
	0322	Started north circulating water pump
	0340	Stopped south circulating water pump
	0400	Unit load increased to 250 MWe
	0545	Decreased load to 175 MWe
	0555	Started increasing unit load
	0605	Started increasing unit load to full power
	0635	Started south circulating water pump
	0710	Unit at full load 450 MWe
	2300	Unit load being reduced to 300 MWe to repair condenser tube leak North circulating water pump stopped
23	0001	Unit load at 300 MWe
	0325	Started north circulating water pump
	0330	Stopped south circulating water pump
	0610	Started unit load increase
	0615	Started south circulating water pump
	0651	Unit at full load

SONGS OPERATORS LOG

March 1979

Date		Time	Occurrence
Mar.	1	0001	Unit load at 456 MWe
	7	0500	Started unit load drop to 345 MWe for turbine stop & valve tests
		0530	Unit returned to full load 455 MWe
	8	1400	Plankton study suction pipe installed at screenwell
	9	0830	Plankton study stand pipe removed from screenwell

SONGS OPERATORS LOG

April 1979

Date		Time	Occurrence
Apr.	1	0001	Unit load at 451 MWe
	4	0500	Started unit load drop to 365 MWe for stop and control valve test
		0620	Unit returned to full load after completion of tests
	5	1345	Stopped north circulating water pump
		2100	Reducing unit load to remove unit from line - unit load at 350 MWe
		2247	Unit off-line
	7	0045	Started north circulating water pump
		0850	Stopped south circulating water pump
	8	0212	Started south circulating water pump
	9	0650	Rolled the turbine
		0759	Unit on line
		0800	Reactor power >5%
		1610	Increasing unit load above 90%
		1800	Unit at full load - 441 MWe
	11	0001	Unit load at 453 MWe
	22	0800	Started unit load drop for heat treatment
		0930	Started heat treatment of intake water tunnel with gates reversed
		1115	Heat treat of intake tunnel completed
		1117	Started load drop to repair steam leak
		1155	Circulating water temperatures stable
		1220	Unit at 150 MWe

April, 1979 (Continued)

Date	Time	Occurrence
	1303	Circulating water tunnels returned to normal
	1330	Started unit load increase after repairs
	1510	Unit at full load

SONGS OPERATORS LOG

May 1979

Date		Time	Occurrence
May	1	0001	Unit load at 453 MWe
	11	0500	Started load decrease to 365 MWe for turbine stop valve test
		0600	Completed test - load back to 450 MWe
	14	1043	Unit trip from variable low pressure during testing
		1355	Rolled turbine
		1448	Unit on line at 25 MWe
		1530	Unit at 20% power
		1700	Reactor Power 73.4%
		1805	Unit at 99% power and 433 MWe
	15	0001	Unit load at 453 MWe

SONGS OPERATORS LOG

June 1979

Date		Time	Occurrence
June	1	0001	Unit load at 445 MWe
		2107	Started unit load drop for outage
		2135	Stopped south circulating water pump
		2240	Unit offline
	4	1015	Stopped the north circulating water pump
	5	1230	Started the north circulating water pump
	7	1056	Stopped the north circulating water pump for testing
		1830	Started the south circulating water pump
	11	1002	Stopped south circulating water pump
	12	2038	Started south circulating water pump
	13	1042	Started north circulating water pump
	16	0955	Stopped south circulating water pump
	17	1350	Started south circulating water pump
	18	0841	Unit on line
		1650	Unit at full load 443 MWe
	24	0700	Unit load drrop for heat treatment of intake tunnel
		0720	Unit load at 320 MWe
		1740	Circulating water tunnels reversed
		0810	Heat treating the intake tunnel
		1111	Completed the heat treatment of the intake tunnel - circulating water tunnels are normal
		1130	Started load increase
		1155	Unit at full load

June, 1979 (Continued)

Date	Time	Occurrence
30	2300	Unit load decrease to 220 MWe for condenser cleaning
	2319	Stopped south circulating water pump
	2400	Unit at 240 MWe

SONGS OPERATORS LOG

July 1979

Date		Time	Occurrence
July	25	000	Unit operating at 100%, 444 MWe
	26	0001	Unit load at 442 MWe
		2300	Reducing unit load to 300 MWe for condenser cleaning and turbine stop valve test
		2337	Stopped north circulating water pump
		2350	Unit at 300 MWe
	27	0001	Unit load at 303 MWe. Reactor power 68%
		0208	Started north circulating water pump
		0222	Stopped south circulating water pump
		0442	Started south circulating water pump
		0510	Unit load at 452 MWe
	28	0001	Unit load at 450 MWe
		2225	Load reduced to 360 MWe to replace pins in traveling screens
	29	0001	Unit load 441 MWe
	30	0001	Unit load 450 MWe

SONGS OPERATORS LOG

August 1979

Date		Time	Occurrence
Aug.	2	0001	Unit load 447 MWe Hypochlorite system off - low level in tank
	3	0001	Unit load 447 MWe
		0820	Plankton study suction pipe installed in intake
		1620	Hypochlorite controls in automatic
	5	0001	Unit load 445 MWe
		0735	Unit load dropped to 365 MWe, tunnels reversed for heat treatment
		1150	Circulating water tunnels returned to normal configuration
	8	0845	Unit load reduction to 350 MWe
		0920	Increasing unit load to full load
		1010	Unit at full load - 440 MWe
	10	2200	Initiated load drop for condenser cleaning and repair
		2225	Stopped north circulating water pump
	11	0001	Unit load at 210 MWe
		0015	Unit load at 202 MWe
		0555	Started north circulating water pump
		0605	Stopped south circulating water pump
		0747	Started south circulating water pump
		0753	Stopped north circulating water pump
		1045	Started unit load increase
		1100	Started north circulating water pump
		1225	Unit at full load - 431 MWe

August, 1979 (Continued)

Date	Time	Occurrence
15	0001	Unit load at 445 MWe
25	0001	Started load reduction for outage request
	0020	Unit load at 365 MWe
	0610	Started load increase
	0627	Unit at full load - 441 MWe
29	1859	Started load decrease
	2100	Unit off line
	2126	Reactor subcritical
30	0256	Commenced reactor startup
	0445	Unit on line
	0735	Reactor power at 100% - 420 MWe
	215	Started load decrease
	2145	Unit load at 250 MWe
31	0001	Unit load at 253 MWe
	0430	Started load increase after repairs accomplished
	0530	Unit at full load - 441 MWe

SONGS OPERATORS LOG

September 1979

Date		Time	Occurrence
Sept.	1	0001	Unit load at 446 MWe
	4	0500	Started load decrease for fish impingement study
		0513	Unit load at 380 MWe
		0532	Circulating water tunnels are reversed
		0910	Circulating water tunnels returned to normal Started load increase
		0930	Unit at full load - 430 MWe
		2225	Opened circulating water tunnel gates to attain screenwell temperature of $90^{o}F \pm 2^{o}$
		2330	Intake screenwell temperature is normal
	5	2230	Opened circulating water tunnel gates to increase screenwell temperature to $90^{o}F \pm 2^{o}F$
		2332	Returned intake temperature to normal
	6	2222	Increasing screenwell temperature to $90^{o}F \pm 2^{o}F$
		2300	Decreasing intake temperature to normal
	7	2200	Increasing intake screenwell temperature to $90^{o}F \pm 2^{o}F$
		2300	Completed temperature rise - dropping to normal Started load decrease
		2318	Stopped south circulating water pump
	8	0001	Unit load at 280 MWe
		0010	Unit load at 270 MWe
		0300	Unit load increase to 380 MWe commenced
		0446	Started south circulating water pump
		0500	Unit load at 380 MWe

September, 1979 (Continued)

Date	Time	Occurrence
Sept. 8	0530	Reversed circulating water tunnels to remove flow meter on intake velocity cap
	0735	Started load increase after surge meter removed - circulating water tunnels returned to normal
Sept. 14	2000	Reducing unit load for repair of refueling water lines
	2140	Unit off line via anti-motoring trip
18	1428	Stopped south circulating water pump
	1430	Stopped north circulating water pump
19	0645	Started north circulating water pump
	0815	Started south circulating water pump
24	1535	Rolled turbine
	1602	Unit on line at 25 MWe
	2010	Unit load at 150 MWe
	2250	Unit laod at 440 MWe
29	2315	Reducing unit load for heat treatment and test turbine stop valves
	2325	Unit load at 380 MWe
	2348	Circulating water tunnels reversed
30	0001	Unit load at 375 MWe
	0230	Completed heat treat - reducing circulating water temperature
	0355	Returned the circulating water tunnels to normal configuration - increasing unit load
	0420	Unit load at 450 MWe

SONGS OPERATORS LOG

October 1979

Date		Time	Occurrence
Oct.	1	0001	Unit load at 452 MWe gross.
	13	2032	Reducing unit load for condenser cleaning.
		2045	Shut down south circulating water pump.
		2126	Unit load at 220 MWe gross.
	14	0152	Started south circulating water pump.
		0215	Stopped north circulating water pump.
		0521	Increasing unit load to 100% after starting north circulating water pump.
		0730	Unit at full load, 450 MWe gross.
	23	2155	Reducing unit load to 320 MWe gross for south condenser cleaning.
		2212	Stopped south circulating water pump.
		2220	Unit load at 320 MWe gross.
	24	0110	Reduced unit load to 130 MWe gross.
		0140	Unit load increased to 320 MWe gross.
		0235	Started south circulating water pump.
		0308	Increasing load to full load.
		0430	Unit load at 441 MWe gross.

SONGS OPERATORS LOG

November 1979

Date		Time	Occurrence
Nov.	1	0001	Unit load at 454 MWe.
		1237	Manually tripped reactor for safety reasons.
	13	0122	Unit on the line.
		0600	Unit load at 200 gross.
		0650	Continue unit load increase.
		1200	Unit at full load 450 MWe gross.
	14	0001	Unit at 425 MWe gross.
	15	0001	Unit load at 446 MWe gross.
	18	0800	Decreasing unit load to heat treat the circulating water intake tunnels.
		0820	Unit load at 360 MWe.
		0845	Reversed the circulating water tunnels.
		1112	Completed heat treatment.
		1245	Returned the circulating water tunnels to normal configuration increasing unit load.
		1315	Unit at 445 MWe gross.
	20	0001	Unit load at 450 MWe gross.
	28	0001	Started unit load drop to 280 MWe for condenser cleaning.
		0012	Stopped south circulating pump.
		0027	Unit load at 280 MWe gross.
		0214	Started south circulating pump.
	28	0235	Stopped north circulating pump.
		0410	Started unit load increase to full load.

November, 1979 (Continued)

Date		Time	Occurrence
Nov.	28	0435	Started north circulating pump.
		0510	Unit at full load.
	29	2110	Started load decrease to 280 MWe gross.
		2148	Stopped north circulating pump.
		2152	Unit load at 280 MWe gross
	30	0140	North circulating pump returned to service.
		0203	South circulating pump stopped.
		0415	South circulating pump returned to service.
		0445	Unit at full load (446 MWe).

SONGS OPERATORS LOG

December 1979

Date		Time	Occurrence
Dec.	1	0001	Unit load 452 MWe Reactor power 100%
	12	2000	Started unit load drop
		2040	Unit load at 260 MWe
		2100	Stopped north circulating water pump
	13	0120	Started north circulating water pump
		0200	Stopped south circulating water pump
		0415	Started load increase
		0500	Started south circulating water pump
		0501	Increasing load to 450 MWe, 100% power
	14	0001	Unit load at 451 MWe, 100% power
	16	0001	Unit load at 450 MWe
		0345	Reducing load
		0348	Unit load at 366 MWe Stopped south circulating water pump
	17	1230	Circulating water chlorine inspection line closed for repair
	18	0600	South circulating water pump returned to service
		0615	Started load increase
		0630	Unit at 450 MWe
	20	0840	Circulating water chlorine system returned to service

II. FISH - RECEIVING WATERS

This program was designed to determine the nature, extent, and significance of the effects of SONGS Units 1, 2, and 3 operations on the species composition, distribution, and abundance of juvenile and adult fish offshore SONGS. This single program meets the requirements of both the ETS and PMP.

A. METHODS

A detailed description of station locations and field methodology is given in ETS Fish Survey Procedures (SCE R&D/LCMR, Procedures EMP 25-5-35) and PMP Fish Survey Procedures (SCE R&D/LCMR, Procedures N-1-1/79). A general review of these procedures is given below.

1. Field

a. Gill Nets

A total of 14 gill net stations were established at sites in an upcoast (San Mateo Point) reference area; an area directly offshore of SONGS Units 1, 2, and 3 (SONGS); and a downcoast (Don Light) reference area (Figure II-1). Each gill net station consists of a pair of identical Marinovich experimental monofilament gill nets for replicate sampling. Each net measures 45.7 m long, 1.8 m deep, and contains six 7.6-m panels of bar mesh of the following sizes: 22 mm, 25 mm, 38 mm, 46 mm, 53 mm, and 76 mm. All nets are set over mostly cobble substrata, perpendicular to the shoreline and are retrieved after 24 h. This fishing period encompasses both dusk and dawn, the periods of greatest fish activity. Eight of the 14 stations (Station 1, 2, 3, 6, 7, 8, 11, and 12) are located on the 9-m (30-ft) isobath. The remaining six stations (Stations 4, 5, 9, 10, 13, and 14) are located on the 14-m (45-ft) isobath (Figure II-1). Station 3 is located within 50 m of the SONGS Unit 1 discharge and Station 6 is located approximately 2 km downcoast of Stations 7 and 8.

Temperature-transmissivity profile data are collected at each cluster of 9-m and 14-m gill net stations once daily for the two days of the survey. Data are taken at 1-m depth intervals from the surface to the bottom.

b. Otter Trawls

Otter trawl samples are collected over sand substrata at nine stations at depths of 6.1 m, 12.2 m, and 18.3 m (20, 40, and 60 ft, respectively) (Figure II-1). A 25-ft semi-balloon otter trawl is used to make two sequential, 5-min trawls (i.e., a pair of replicate samples) at each station on two consecutive days during daylight hours. This results in 18 trawls/day for a total of 36 trawls/survey. Trawl samples are collected within the same 24-h period that gill nets are fished. Trawl stations are located at sites over sandy bottom in the same general areas as gill net stations. Station sites were established to provide data for assessing the present effects of the SONGS Unit 1 discharge, as well as to provide baseline data for assessing possible future effects of Units 2 and 3 when they become operational.

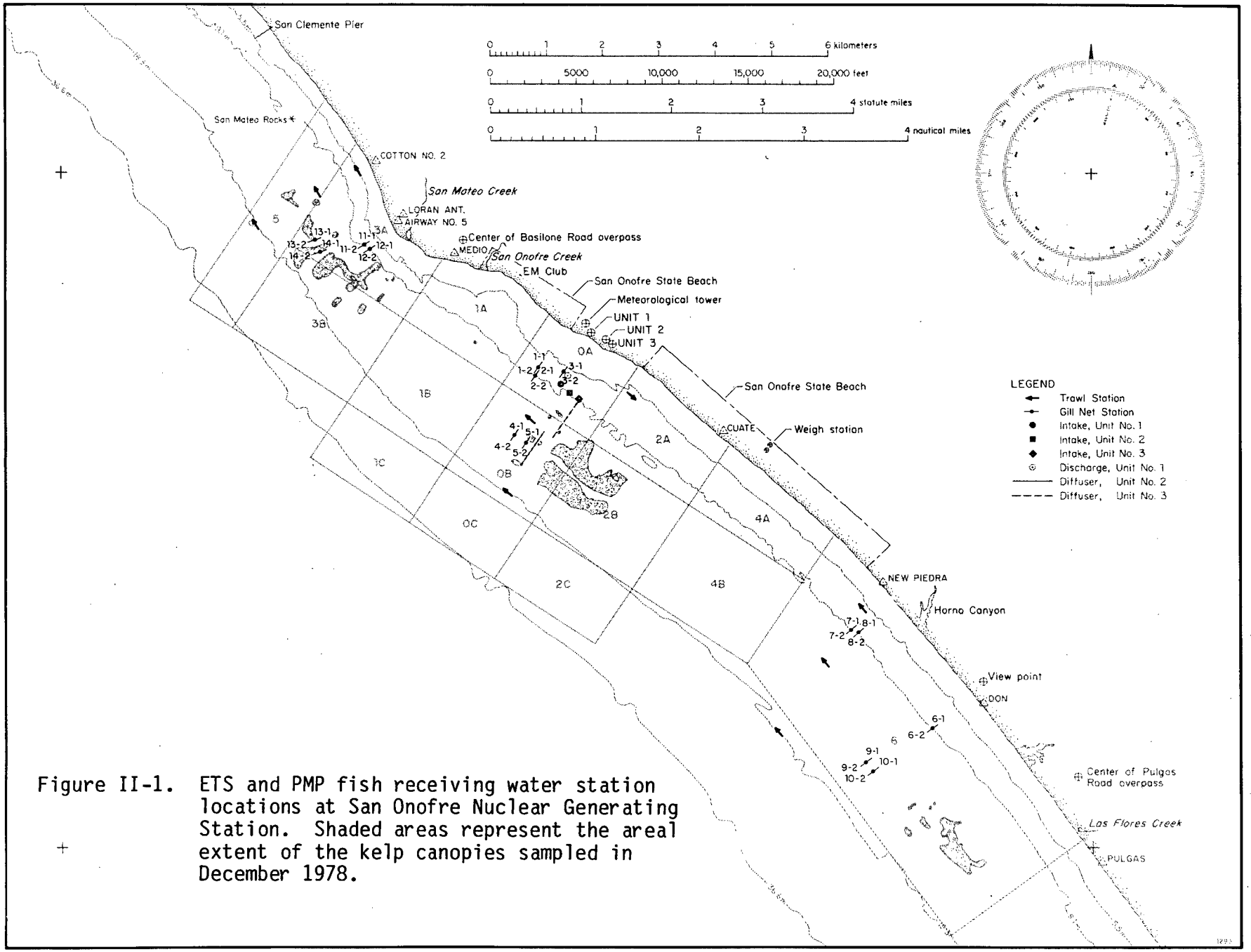


Figure II-1. ETS and PMP fish receiving water station locations at San Onofre Nuclear Generating Station. Shaded areas represent the areal extent of the kelp canopies sampled in December 1978.

Bimonthly gill net and otter trawl surveys were conducted on February 15-16, April 17-18, June 27-28, August 26-27, October 16-17, and December 12-13, 1979.

2. Gill Net and Otter Trawl Laboratory

All fishes collected in gill net and otter trawl samples are identified, counted, and visually inspected for anomalies, diseases, and parasites. A group of select fish species has been studied more intensively with the onset of the combined program. These following species were selected because of their numerical dominance in SONGS Unit 1 impingement samples, their abundance offshore, and/or because of their value to local sport and commercial fisheries.

Seriphus politus	-	Queenfish
Genyonemus lineatus	-	White croaker
Roncador stearnsii	-	Spotfin croaker
Cynoscion nobilis	-	White seabass
Hyperprosopon argenteum	-	Walleye surfperch
Phanerodon furcatus	-	White surfperch
Paralabrax clathratus	-	Kelp bass
Paralabrax nebulifer	-	Barred sand bass
Paralabrax maculatofasciatus	-	Spotted sand bass
Paralichthys californicus	-	California halibut

Select species are identified, enumerated, measured, and sexed. Standard lengths (tip of the snout to the end of the vertebral column) of a maximum of 125 individuals per species from each gill net and otter trawl sample are measured. A subset of no more than 50 individuals per species are sexed (male, female, indeterminate) by examining their gonads or by noting secondary sexual characteristics when evident. Indeterminate fish are sexually immature, recently spawned, or damaged such that sex cannot be determined. General reproductive condition of fish is also noted.

A maximum of 10 female Seriphus politus and 10 female Genyonemus lineatus per net are subsampled for gonosomatic index analysis. Gonad and total body wet weights are determined for each subsampled female with gonad weight divided by total body weight to determine the index on a survey, area, depth, and gear basis.

In addition to the preceding methods, which are utilized for the combined Units 1, 2, and 3 program, certain additional length and sex data are taken to maintain compliance with the Unit 1 ETS at some stations. The ETS requires that all fish from the six nets near the Unit 1 discharge (Zone 0A) and the six nets at the downcoast inshore reference area (Zone 6) be measured and that resident species be subsampled for sex composition.

B. RESULTS

Species composition and abundance data tables, length frequency histograms, length frequency tables, and tables summarizing the sex composition of fish taxa collected during 1979 are presented. These tables are presented by

survey in chronological order. Species composition and abundance data are presented by gear-type and geographic locality. Length-frequency structure for Seriphus politus and Genyonemus lineatus are presented as histograms by survey and gear-type. Length frequency data for all other species are presented as tabular summaries by survey and gear-type as are sex composition, and gonosomatic indices. Temperature-transmissivity data are presented in Volume I. Field notes summarizing general observations during each survey also are included.

C. SPECIES COMPOSITION AND ABUNDANCE

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN REPLICATE GILL NETS AT OFFSHORE AREAS SONGS (ZONE OA), DON LIGHT (ZONE 6), AND SAN MATEO POINT (ZONE 3A) AT 30 FEET ON FEBRUARY 15-16,1979

TAXA	SONGS (ZONE OA)						DON LIGHT (ZONE 6)						SAN MATEO POINT			
	STATION 1		STATION 2		STATION 3		STATION 6		STATION 7		STATION 8		STATION11		STATION12	
	REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE	
	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
CHORDATA																
CARCHARHINIDAE																
Mustelus californicus	-	-	-	-	-	-	-	11	-	-	-	-	-	-	-	-
Triakis semifasciata	-	1	2	-	-	-	-	-	-	-	-	-	1	5	-	-
SQUALIDAE																
Squalus acanthias	-	-	1	2	-	2	8	2	6	1	3	5	1	4	2	3
BATRACHOIDIDAE																
Porichthys myriaster	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
ATHERINIDAE																
Atherinopsis californiensis	22	5	1	2	2	-	1	-	-	-	-	-	-	1	5	-
SERRANIDAE																
Paralabrax clathratus	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax maculatofasciatus	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
Paralabrax nebulifer	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-
PRISTIPOMATIDAE																
Anisotremus davidsonii	1	-	-	-	-	-	-	-	-	2	-	-	5	-	-	-
Xenistius californiensis	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
SCIAENIDAE																
Cheilotrema saturnum	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Cynoscion nobilis	1	2	3	2	-	1	-	-	-	-	-	-	1	11	-	-
Genyonemus lineatus	4	-	1	2	17	10	5	9	5	-	4	5	4	5	7	5
Menticirrhus undulatus	2	-	1	1	2	2	2	-	1	3	1	10	-	1	1	1
Roncador stearnsii	1	-	-	5	-	-	-	-	-	2	-	1	-	1	-	-
Seriphus politus	12	17	18	36	28	14	8	12	13	-	4	33	14	27	6	1
GIRELLIDAE																
Girella nigricans	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-
EMBIOTOCIDAE																
Amphistichus argenteus	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
Damalichthys vacca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Embiotoca jacksoni	-	-	-	1	-	-	-	-	-	-	-	-	4	2	-	-
Hyperprosopon argenteum	1	-	-	-	1	-	-	-	-	1	2	-	3	1	-	-
Hypsurus caryi	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Micrometrus minimus	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phanerodon furcatus	-	-	-	-	-	-	-	2	1	4	2	4	-	-	-	-
Rhacochilus toxotes	-	1	2	-	-	-	-	-	-	-	1	-	1	2	-	-
LABRIDAE																
Halichoeres semicinctus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pimelometopon pulchrum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPHYRAENIDAE																
Sphyraena argentea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SCOMBRIDAE																
Sarda chiliensis	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Scomber japonicus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(CONTINUED),3Ø FOOT GILL NETS: SURVEY OF FEBRUARY 15-16,1979

TAXA	SONGS (ZONE OA)						DON LIGHT (ZONE 6)						SAN MATEO POINT			
	STATION 1		STATION 2		STATION 3		STATION 6		STATION 7		STATION 8		STATION11		STATION12	
	REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE	
	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
CHORDATA																
STROMATEIDAE																
Peprilus simillimus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SCORPAENIDAE																
Scorpaena guttata	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
BOTHIDAE																
Paralichthys californicus	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-
PLEURONECTIDAE																
Pleuronichthys coenosus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pleuronichthys verticalis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN REPLICATE GILL NETS AT OFFSHORE AREAS SONGS (ZONE OB), DON LIGHT (ZONE 6), AND SAN MATEO POINT (ZONE 3B) AT 45 FEET ON FEBRUARY 15-16,1979

TAXA	SONGS (ZONE OB)				DON LIGHT (ZONE 6)				SAN MATEO (ZONE 3B)			
	STATION 4		STATION 5		STATION 9		STATION 10		STATION 13		STATION 14	
	REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE	
	1	2	1	2	1	2	1	2	1	2	1	2
CHORDATA												
CARCHARHINIDAE												
Mustelus californicus	2	-	2	2	-	-	-	-	-	-	-	1
Triakis semifasciata	-	-	2	-	-	-	2	-	-	-	-	-
SQUALIDAE												
Squalus acanthias	10	-	2	4	2	1	-	-	7	1	2	-
BATRACHOIDIDAE												
Porichthys myriaster	-	-	-	-	-	-	-	-	-	1	-	-
ATHERINIDAE												
Atherinopsis californiensis	-	-	-	-	1	2	2	-	-	-	5	1
SERRANIDAE												
Paralabrax clathratus	-	-	-	1	-	-	-	1	-	-	-	-
Paralabrax maculatofasciatus	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax nebulifer	-	1	2	-	1	1	-	1	-	1	2	-
PRISTIPOMATIDAE												
Anisotremus davidsonii	-	-	4	-	-	-	-	-	-	-	-	-
Xenistius californiensis	-	-	-	-	-	-	1	-	-	-	-	-
SCIAENIDAE												
Cheilotrema saturnum	-	-	1	1	1	-	-	5	-	-	1	1
Cynoscion nobilis	-	3	-	2	-	-	-	1	3	17	3	-
Genyonemus lineatus	26	35	16	29	38	40	55	37	16	10	2	5
Menticirrhus undulatus	1	-	1	-	4	3	11	3	2	2	-	-
Roncador stearnsii	-	-	-	-	-	-	1	1	1	-	-	-
Seriphus politus	7	4	8	14	13	17	18	24	21	11	6	13
GIRELLIDAE												
Girella nigricans	-	-	-	-	1	-	-	-	-	-	-	-
EMBIOTOCIDAE												
Amphistichus argenteus	-	-	-	-	-	-	-	-	-	-	-	-
Damalichthys vacca	-	-	-	-	-	-	-	2	-	-	-	-
Embiotoca jacksoni	-	-	-	1	-	-	-	2	-	-	-	2
Hyperprosopon argenteum	-	-	3	1	-	-	-	-	-	-	1	-
Hypsurus caryi	-	-	-	-	-	-	-	-	-	-	-	1
Micrometrus minimus	-	-	-	-	-	-	-	-	-	-	-	-
Phanerodon furcatus	-	2	1	1	7	4	1	5	-	1	1	-
Rhacochilus toxotes	-	-	2	-	-	-	-	-	-	-	1	-
LABRIDAE												
Halichoeres semicinctus	-	-	-	1	-	-	-	1	-	-	-	-
Pimelometopon pulchrum	-	-	1	-	-	-	-	-	-	-	-	-
SPHYRAENIDAE												
Sphyraena argentea	-	-	-	-	-	-	-	-	-	-	1	-
SCOMBRIDAE												
Sarda chiliensis	-	-	-	-	-	-	-	-	-	-	-	-
Scomber japonicus	-	-	-	-	4	-	-	-	-	-	-	-

(CONTINUED),45 FOOT GILL NETS: SURVEY OF FEBRUARY 15-16,1979

TAXA	SONGS (ZONE OB)				DON LIGHT (ZONE 6)				SAN MATEO (ZONE 3B)			
	STATION 4		STATION 5		STATION 9		STATION 10		STATION 13		STATION 14	
	REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE	
	1	2	1	2	1	2	1	2	1	2	1	2
CHORDATA												
STROMATEIDAE												
Peprilus simillimus	-	-	-	-	-	-	-	-	-	1	-	-
SCORPAENIDAE												
Scorpaena guttata	-	-	-	-	-	-	-	-	1	1	-	1
BOTHIDAE												
Paralichthys californicus	1	-	2	-	-	2	1	1	-	2	3	-
PLEURONECTIDAE												
Pleuronichthys cornosus	1	-	-	-	-	-	-	-	-	-	-	-
Pleuronichthys verticalis	-	-	-	-	-	-	1	-	-	-	-	-

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN FOUR REPLICATE 5-MINUTE OTTER TRAWLS CONDUCTED OFFSHORE SAN MATEO POINT AT 20, 40, AND 60 FEET ON FEBRUARY 15-16,1979 **REPLICATES 1 AND 2 WERE TAKEN ON THE 15TH AND 3 AND 4 ON THE 16TH.**

TAXA	20 FEET				40 FEET				60 FEET				TOTALS		
	REPLICATE				REPLICATE				REPLICATE				DEPTH		
	1	2	3	4	1	2	3	4	1	2	3	4	20	40	60
TIME	1203	1228	1045	1058	1354	1431	1115	1131	1445	1515	1153	1236			
CHORDATA															
SQUALIDAE															
Squalus acanthias	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
RHINOBATIDAE															
Rhinobatos productus	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
PLATYRHINIDAE															
Platyrhinoidis triseriata	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
DASYATIDAE															
Urolophus halleri	-	-	-	-	-	-	-	-	-	-	1	-	0	0	1
ENGRAULIDAE															
Anchoa compressa	-	-	-	-	14	8	17	1	-	-	-	-	0	40	0
Anchoa delicatissima	2	1	-	-	24	21	22	4	-	-	-	-	3	71	0
Engraulis mordax	-	-	-	-	-	1	8	1	-	-	-	-	0	10	0
Engraulidae species complex	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
SYNODONTIDAE															
Synodus lucioceps	-	-	-	-	-	-	-	-	-	-	-	1	0	0	1
ATHERINIDAE															
Atherinopsis californiensis	-	-	-	-	2	3	2	-	1	-	-	-	0	7	1
SYNGNATHIDAE															
Syngnathus spp.	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
PRISTIPOMATIDAE															
Xenistius californiensis	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
SCIAENIDAE															
Cynoscion nobilis	-	-	-	-	4	1	-	-	-	-	-	-	0	5	0
Genyonemus lineatus	1	-	-	-	57	24	18	7	8	-	-	-	1	106	8
Menticirrhus undulatus	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Seriphus politus	-	5	-	-	244	396	379	97	-	-	-	-	5	1116	0
Umbrina roncador	3	4	-	-	-	-	-	-	-	-	-	-	7	0	0
EMBIOTOCIDAE															
Cymatogaster aggregata	-	-	-	-	-	-	1	-	1	-	-	-	0	1	1
Hyperprosopon argenteum	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Micrometrus minimus	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Phanerodon furcatus	-	-	-	-	-	5	1	-	1	3	-	-	0	6	4
STROMATEIDAE															
Peprilus simillimus	-	-	-	-	-	1	11	17	-	-	-	-	0	29	0
BOTHIDAE															
Citharichthys stigmaeus	-	1	-	-	-	-	-	-	-	-	-	4	1	0	4
Paralichthys californicus	-	-	-	-	-	-	-	-	-	1	-	1	0	0	2
PLEURONECTIDAE															
Hypsopsetta guttulata	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Pleuronichthys ritteri	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Pleuronichthys verticalis	-	-	-	-	-	-	-	-	-	-	-	1	0	0	1

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN FOUR REPLICATE 5-MINUTE OTTER TRAWLS CONDUCTED OFFSHORE SAN ONOFRE AT 20, 40, AND 60 FEET ON FEBRUARY 15-16,1979 **REPLICATES 1 AND 2 WERE TAKEN ON THE 15TH AND 3 AND 4 ON THE 16TH.**

TAXA	20 FEET				40 FEET *				60 FEET **				TOTALS		
	REPLICATE				REPLICATE				REPLICATE				DEPTH		
	1	2	3	4	1	2	3	4	1	2	3	4	20	40	60
TIME	1730	1745	1358	1410	1511	1539	1440	1455	1549	1558	1614	1631			
CHORDATA															
SQUALIDAE															
Squalus acanthias	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
RHINOBATIDAE															
Rhinobatos productus	-	-	-	-	-	1	-	-	-	-	-	-	0	1	0
PLATYRHINIDAE															
Platyrhinoidis triseriata	1	-	-	-	-	-	-	-	-	-	-	-	1	0	0
DASYATIDAE															
Urolophus halleri	1	-	-	-	-	-	-	-	-	-	-	-	1	0	0
ENGRAULIDAE															
Anchoa compressa	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Anchoa delicatissima	1	-	-	-	-	-	-	-	-	-	-	-	1	0	0
Engraulis mordax	1	1	1	-	-	-	-	-	-	-	-	-	3	0	0
Engraulidae species complex	-	-	15	12	-	-	10	-	122	-	-	-	27	10	122
SYNODONTIDAE															
Synodus lucioceps	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
ATHERINIDAE															
Atherinopsis californiensis	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
SYNGNATHIDAE															
Syngnathus spp.	1	-	-	-	-	-	-	-	-	-	-	-	1	0	0
PRISTIPOMATIDAE															
Xenistius californiensis	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
SCIAENIDAE															
Cynoscion nobilis	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Genyonemus lineatus	1	3	3	-	1	1	-	5	-	-	-	-	7	7	0
Menticirrhus undulatus	6	1	1	3	-	-	-	-	-	-	-	-	11	0	0
Seriphus politus	11	5	2	5	2	6	-	42	-	2	-	-	23	50	2
Umbrina roncador	2	-	-	-	-	-	-	-	-	-	-	-	2	0	0
EMBIOTOCIDAE															
Cymatogaster aggregata	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Hyperprosopon argenteum	2	-	-	-	-	-	-	-	-	-	-	-	2	0	0
Micrometrus minimus	2	-	-	-	-	-	-	-	-	-	-	-	2	0	0
Phanerodon furcatus	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
STROMATEIDAE															
Peprilus simillimus	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
BOTHIDAE															
Citharichthys stigmaeus	-	-	-	-	-	1	-	-	-	-	1	-	0	1	1
Paralichthys californicus	-	-	-	-	-	-	-	-	1	-	-	-	0	0	1
PLEURONECTIDAE															
Hypsopsetta guttulata	-	-	-	-	1	-	-	-	-	-	-	-	0	1	0
Pleuronichthys ritteri	-	-	-	-	-	-	-	-	-	-	1	-	0	0	1
Pleuronichthys verticalis	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0

*All trawls conducted on February 16, 1979

**Replicates 2, 3, and 4 conducted on February 16, 1979

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN FOUR REPLICATE 5-MINUTE OTTER TRAWLS CONDUCTED OFFSHORE DON LIGHT AT 20, 40, AND 60 FEET ON FEBRUARY 15-16,1979 **REPLICATES 1 AND 2 WERE TAKEN ON THE 15TH AND 3 AND 4 ON THE 16TH.**

TAXA	20 FEET				40 FEET				60 FEET				TOTALS		
	REPLICATE				REPLICATE				REPLICATE				DEPTH		
	1	2	3	4	1	2	3	4	1	2	3	4	20	40	60
TIME	0821	0840	0744	0803	0919	0837	0945	0854	1038	1115	0920	0937			
CHORDATA															
SQUALIDAE															
Squalus acanthias	2	-	1	-	-	-	-	-	-	-	-	-	3	0	0
RHINOBATIDAE															
Rhinobatos productus	-	-	-	-	1	-	-	-	-	-	-	-	0	1	0
PLATYRHINIDAE															
Platyrhinoidis triseriata	-	-	-	-	1	-	-	-	-	-	-	-	0	1	0
DASYATIDAE															
Urolophus halleri	-	1	1	-	-	-	-	-	-	-	-	-	2	0	0
ENGRAULIDAE															
Anchoa compressa	5	2	25	-	-	-	-	-	-	-	-	-	32	0	0
Anchoa delicatissima	5	-	54	-	-	-	-	-	-	-	-	-	59	0	0
Engraulis mordax	2	4	-	3	8	-	-	-	-	-	-	-	9	8	0
Engraulidae species complex	-	-	-	-	-	-	15	-	-	27	-	22	0	15	49
SYNODONTIDAE															
Synodus lucioceps	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
ATHERINIDAE															
Atherinopsis californiensis	1	-	-	1	-	-	-	-	-	-	-	-	2	0	0
SYNGNATHIDAE															
Syngnathus spp.	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
PRISTIPOMATIDAE															
Xenistius californiensis	-	-	1	-	-	-	-	-	-	-	-	-	1	0	0
SCIAENIDAE															
Cynoscion nobilis	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Genyonemus lineatus	16	7	211	1	64	9	-	-	-	1	-	1	235	73	2
Menticirrhus undulatus	2	2	5	-	3	1	-	-	-	-	-	-	9	4	0
Seriphus politus	22	16	830	9	93	22	-	-	5	-	-	-	877	115	5
Umbrina roncador	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
EMBIOTOCIDAE															
Cymatogaster aggregata	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Hyperprosopon argenteum	-	-	2	-	-	-	-	-	-	-	-	-	2	0	0
Micrometrus minimus	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Phanerodon furcatus	-	-	-	-	2	-	3	3	-	-	-	-	0	8	0
STROMATEIDAE															
Peprilus simillimus	-	-	-	-	1	-	10	-	-	-	-	-	0	11	0
BOTHIDAE															
Citharichthys stigmaeus	2	-	-	-	6	1	-	1	-	-	1	-	2	8	1
Paralichthys californicus	-	-	1	-	1	-	-	-	-	-	-	-	1	1	0
PLEURONECTIDAE															
Hypsopsetta guttulata	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Pleuronichthys ritteri	-	-	-	-	-	-	-	1	-	-	-	-	0	1	0
Pleuronichthys verticalis	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN REPLICATE GILL NETS AT OFFSHORE AREAS SONGS (ZONE OA), DON LIGHT (ZONE 6), AND SAN MATEO POINT (ZONE 3A) AT 30 FEET ON APRIL 17-18, 1979

TAXA	SONGS (ZONE OA)						DON LIGHT (ZONE 6)						SAN MATEO POINT			
	STATION 1		STATION 2		STATION 3		STATION 6		STATION 7		STATION 8		STATION11		STATION12	
	REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE	
	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
CHORDATA																
CARCHARHINIDAE																
Mustelus californicus	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-
Mustelus henlei	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Triakis semifasciata	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SQUALIDAE																
Squalus acanthias	2	1	1	1	-	1	5	5	2	-	6	-	-	-	-	-
RHINOBATIDAE																
Rhinobatos productus	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
SYNODONTIDAE																
Synodus lucioceps	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
ATHERINIDAE																
Atherinopsis californiensis	-	-	-	1	1	1	12	4	11	1	9	-	-	-	-	-
SERRANIDAE																
Paralabrax clathratus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax maculatofasciatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax nebulifer	-	-	1	-	-	-	-	-	-	1	-	1	2	1	3	-
PRISTIPOMATIDAE																
Anisotremus davidsonii	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
Xenistius californiensis	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-
SCIAENIDAE																
Cheilotrema saturnum	4	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-
Cynoscion nobilis	5	1	9	-	2	-	-	-	-	-	-	1	-	1	-	2
Genyonemus lineatus	1	1	1	5	13	17	5	6	1	-	1	5	5	2	5	19
Menticirrhus undulatus	-	1	-	1	5	3	-	2	1	2	5	1	-	-	-	-
Roncador stearnsii	-	2	9	8	-	-	-	-	-	-	-	-	-	-	-	-
Seriphus politus	10	3	12	19	18	11	2	12	23	27	36	43	21	22	37	45
GIRELLIDAE																
Girella nigricans	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
SCORPIDIDAE																
Medialuna californiensis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
EMBIOTOCIDAE																
Amphistichus argenteus	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Cymatogaster aggregata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Damalichthys vacca	-	1	1	-	-	-	-	-	-	-	-	2	-	-	-	-
Embiotoca jacksoni	-	1	-	-	-	-	-	-	-	-	-	1	-	3	-	-
Hyperprosopon argenteum	-	1	-	-	2	2	-	-	-	1	-	-	2	3	-	-
Micrometrus minimus	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phanerodon furcatus	-	-	-	-	-	-	-	1	-	1	-	-	1	-	-	1
Rhacochilus toxotes	-	1	2	-	-	-	-	-	-	-	-	-	1	-	1	-
LABRIDAE																
Pimelometopon pulchrum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1

(CONTINUED),30 FOOT GILL NETS: SURVEY OF APRIL 17-18, 1979

TAXA	SONGS (ZONE 0A)						DON LIGHT (ZONE 6)						SAN MATEO POINT			
	STATION 1		STATION 2		STATION 3		STATION 6		STATION 7		STATION 8		STATION 11		STATION 12	
	REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE	
	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
CHORDATA																
STROMATEIDAE																
Peprilus simillimus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SCORPAENIDAE																
Scorpaena guttata	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-
COTTIDAE																
Scorpaenichthys marmoratus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BOTHIDAE																
Paralichthys californicus	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
PLEURONECTIDAE																
Pleuronichthys verticalis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN REPLICATE GILL NETS AT OFFSHORE AREAS SONGS (ZONE 0B), DON LIGHT (ZONE 6), AND SAN MATEO POINT (ZONE 3B) AT 45 FEET ON APRIL 17-18, 1979

TAXA	SONGS (ZONE 0B)				DON LIGHT (ZONE 6)				SAN MATEO (ZONE 3B)			
	STATION 4		STATION 5		STATION 9		STATION 10		STATION 13		STATION 14	
	REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE	
	1	2	1	2	1	2	1	2	1	2	1	2
CHORDATA												
CARCHARHINIDAE												
Mustelus californicus	1	-	-	-	-	-	-	1	-	-	-	-
Mustelus henlei	-	-	-	-	-	-	-	-	1	-	-	-
Triakis semifasciata	1	-	-	-	-	-	-	-	-	-	-	-
SQUALIDAE												
Squalus acanthias	-	-	-	-	-	-	-	-	-	-	-	-
RHINOBATIDAE												
Rhinobatos productus	-	-	-	-	-	-	-	-	-	-	-	-
SYNODONTIDAE												
Synodus lucioceps	-	-	-	-	1	-	-	-	-	-	-	-
ATHERINIDAE												
Atherinopsis californiensis	-	-	-	-	-	-	-	-	-	-	-	-
SERRANIDAE												
Paralabrax clathratus	8	-	1	-	-	-	-	-	-	-	-	-
Paralabrax maculatofasciatus	-	1	-	-	-	-	-	-	-	-	-	-
Paralabrax nebulifer	1	-	-	-	2	-	1	1	-	2	-	2
PRISTIPOMATIDAE												
Anisotremus davidsonii	-	-	-	-	-	-	-	-	-	-	-	-
Xenistius californiensis	5	-	1	1	1	-	-	-	-	-	-	-
SCIAENIDAE												
Cheilotrema saturnum	5	1	3	-	1	-	-	1	-	-	-	-
Cynoscion nobilis	-	-	2	-	-	-	-	-	-	1	-	1
Genyonemus lineatus	6	1	25	20	7	11	11	14	22	28	-	5
Menticirrhus undulatus	-	-	1	-	1	1	1	-	4	-	-	-
Roncador stearnsii	-	-	-	-	-	-	-	-	-	-	-	-
Seriphus politus	4	16	41	32	32	26	22	49	27	52	-	35
GIRELLIDAE												
Girella nigricans	-	-	-	-	-	-	-	-	-	-	-	-
SCORPIDIDAE												
Medialuna californiensis	-	1	-	-	-	-	-	-	-	-	-	-
EMBIOTOCIDAE												
Amphistichus argenteus	-	-	-	-	-	-	-	-	-	-	-	-
Cymatogaster aggregata	-	4	2	-	1	-	-	-	-	2	-	-
Damalichthys vacca	1	-	1	-	-	-	-	-	-	-	-	-
Embiotoca jacksoni	1	1	1	3	-	-	-	-	-	-	-	-
Hyperprosopon argenteum	-	-	1	-	2	-	-	-	2	-	-	6
Micrometrus minimus	-	-	-	-	-	-	-	-	-	-	-	-
Phanerodon furcatus	7	-	-	-	4	1	-	-	13	6	-	4
Rhacochilus toxotes	-	-	-	-	-	-	-	-	-	-	-	-
LABRIDAE												
Pimelometopon pulchrum	-	-	-	-	-	-	-	-	-	-	-	-

(CONTINUED),45 FOOT GILL NETS: SURVEY OF APRIL 17-18, 1979

TAXA	SONGS (ZONE OB)				DON LIGHT (ZONE 6)				SAN MATEO (ZONE 3B)			
	STATION 4		STATION 5		STATION 9		STATION 10		STATION 13		STATION 14	
	REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE	
	1	2	1	2	1	2	1	2	1	2	1	2
CHORDATA												
STROMATEIDAE												
Peprilus simillimus	-	-	-	1	-	-	-	-	-	-	-	-
SCORPAENIDAE												
Scorpaena guttata	-	-	-	-	-	-	-	-	-	-	-	-
COTTIDAE												
Scorpaenichthys marmoratus	1	-	-	-	-	-	-	-	-	-	-	-
BOTHIDAE												
Paralichthys californicus	-	1	-	-	-	1	-	-	2	-	-	1
PLEURONECTIDAE												
Pleuronichthys verticalis	-	-	-	-	-	-	-	-	1	-	-	-

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN FOUR REPLICATE 5-MINUTE OTTER TRAWLS CONDUCTED OFFSHORE SAN MATEO POINT AT 20, 40, AND 60 FEET ON APRIL 17-18, 1979 **REPLICATES 1 AND 2 WERE TAKEN ON THE 17TH AND 3 AND 4 ON THE 18TH.**

TAXA	20 FEET				40 FEET				60 FEET				TOTALS		
	REPLICATE				REPLICATE				REPLICATE				DEPTH		
	1	2	3	4	1	2	3	4	1	2	3	4	20	40	60
TIME	1122	1102	1038	1052	1148	1211	1109	1127	1237	1303	1155	1245			
CHORDATA															
RHINOBATIDAE															
Rhinobatos productus	-	-	-	-	1	1	-	-	-	-	-	-	0	2	0
PLATYRHINIDAE															
Platyrhinoidis triseriata	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
DASYATIDAE															
Urolophus halleri	-	-	-	-	1	-	-	-	-	-	-	-	0	1	0
MYLIOBATIDAE															
Myliobatis californica	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
ENGRAULIDAE															
Engraulis mordax	-	-	1	-	2	-	-	1	-	-	23	1	1	3	24
Engraulidae species complex	33	700	67	15	93	12	94	83	80	-	188	84	815	282	352
ATHERINIDAE															
Atherinops affinis	1	-	-	-	-	-	-	-	-	-	-	-	1	0	0
Atherinopsis californiensis	-	6	-	-	-	-	-	-	-	-	-	-	6	0	0
SYNGNATHIDAE															
Syngnathus spp.	-	1	-	-	-	1	-	-	-	-	-	-	1	1	0
SCIAENIDAE															
Genyonemus lineatus	-	1	-	-	62	41	1	1	-	-	1	1	1	105	2
Menticirrhus undulatus	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Seriphus politus	1	5	-	-	27	62	1	-	-	-	1	3	6	90	4
Umbrina roncador	-	-	1	-	-	-	-	-	-	-	-	-	1	0	0
EMBIOTOCIDAE															
Amphistichus argenteus	-	6	-	-	-	-	-	-	-	-	-	-	6	0	0
Cymatogaster aggregata	-	-	-	-	-	-	-	-	-	-	-	2	0	0	2
Damalichthys vacca	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Hyperprosopon argenteum	-	2	-	-	2	2	-	-	-	-	1	2	2	4	3
Micrometrus minimus	-	-	1	-	-	-	-	-	-	-	-	-	1	0	0
Phanerodon furcatus	-	4	-	-	-	-	-	-	-	-	-	2	4	0	2
STROMATEIDAE															
Peprilus simillimus	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
BOTHIDAE															
Citharichthys stigmaeus	-	1	-	-	-	-	-	-	2	-	-	-	1	0	2
Paralichthys californicus	-	-	-	-	1	-	-	-	-	-	1	-	0	1	1
PLEURONECTIDAE															
Pleuronichthys ritteri	-	-	-	-	1	-	-	-	-	-	-	-	0	1	0
Pleuronichthys verticalis	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN FOUR REPLICATE 5-MINUTE OTTER TRAWLS CONDUCTED OFFSHORE SAN ONOFRE AT 2Ø, 4Ø, AND 6Ø FEET ON APRIL 17-18, 1979 **REPLICATES 1 AND 2 WERE TAKEN ON THE 17TH AND 3 AND 4 ON THE 18TH.**

TAXA	2Ø FEET				4Ø FEET				6Ø FEET				TOTALS		
	REPLICATE				REPLICATE				REPLICATE				DEPTH		
	1	2	3	4	1	2	3	4	1	2	3	4	2Ø	4Ø	6Ø
TIME	1540	1558	1432	1502	1500	1519	1346	1409	1420	1440	1254	1315			
CHORDATA															
RHINOBATIDAE															
Rhinobatos productus	-	-	-	-	-	-	-	-	-	-	-	1	Ø	Ø	1
PLATYRHINIDAE															
Platyrhinoidis triseriata	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
DASYATIDAE															
Urolophus halleri	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
MYLIOBATIDAE															
Myliobatis californica	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
ENGRAULIDAE															
Engraulis mordax	-	-	3	-	-	-	1	3	-	-	-	-	3	4	Ø
Engraulidae species complex	-	-	133	-	-	1	144	98	-	-	46	45	133	243	91
ATHERINIDAE															
Atherinops affinis	3	-	-	-	-	-	-	-	-	-	-	-	3	Ø	Ø
Atherinopsis californiensis	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
SYNGNATHIDAE															
Syngnathus spp.	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
SCIAENIDAE															
Genyonemus lineatus	-	-	-	2	-	-	9	1	-	-	-	1	2	1Ø	1
Menticirrhus undulatus	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Seriphus politus	-	-	2	14	-	-	45	45	-	-	-	-	16	9Ø	Ø
Umbrina roncador	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
EMBIOTOCIDAE															
Amphistichus argenteus	-	-	1	-	-	-	-	-	-	-	-	-	1	Ø	Ø
Cymatogaster aggregata	-	-	-	-	-	-	-	-	-	-	-	1	Ø	Ø	1
Damalichthys vacca	-	-	-	-	-	-	-	1	-	-	-	-	Ø	1	Ø
Hyperprosopon argenteum	-	-	-	-	-	-	-	1	-	-	-	-	Ø	1	Ø
Micrometrus minimus	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Phanerodon furcatus	-	-	-	-	-	-	-	-	-	-	2	-	Ø	Ø	2
STROMATEIDAE															
Peprilus simillimus	-	-	-	-	-	-	3	-	-	-	-	-	Ø	3	Ø
BOTHIDAE															
Citharichthys stigmaeus	-	-	-	-	-	-	3	-	-	-	-	3	Ø	3	3
Paralichthys californicus	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
PLEURONECTIDAE															
Pleuronichthys ritteri	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Pleuronichthys verticalis	-	-	-	-	-	-	-	-	-	1	-	1	Ø	Ø	2

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN FOUR REPLICATE 5-MINUTE OTTER TRAWLS CONDUCTED OFFSHORE DON LIGHT AT 2Ø, 4Ø, AND 6Ø FEET ON APRIL 17-18, 1979 REPLICATES 1 AND 2 WERE TAKEN ON THE 17TH AND 3 AND 4 ON THE 18TH.

TAXA	2Ø FEET				4Ø FEET				6Ø FEET				TOTALS		
	REPLICATE				REPLICATE				REPLICATE				DEPTH		
	1	2	3	4	1	2	3	4	1	2	3	4	2Ø	4Ø	6Ø
TIME	0710	0811	0720	0741	0841	0901	0834	0852	0925	0944	0917	0940			
CHORDATA															
RHINOBATIDAE															
Rhinobatos productus	-	-	-	-	-	-	1	-	-	-	-	-	Ø	1	Ø
PLATYRHINIDAE															
Platyrhinoidis triseriata	1	-	-	-	-	-	-	-	-	-	-	-	1	Ø	Ø
DASYATIDAE															
Urolophus halleri	-	1	-	-	-	-	-	-	-	-	-	-	1	Ø	Ø
MYLIOBATIDAE															
Myliobatis californica	-	-	-	-	-	-	1	-	-	-	-	-	Ø	1	Ø
ENGRAULIDAE															
Engraulis mordax	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Engraulidae species complex	-	89	7Ø	1Ø4	23	-	58	75	2Ø	-	4Ø	-	263	156	6Ø
ATHERINIDAE															
Atherinops affinis	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Atherinopsis californiensis	1	-	-	-	-	-	-	-	-	-	-	-	1	Ø	Ø
SYNGNATHIDAE															
Syngnathus spp.	-	7	-	-	-	-	-	-	-	-	-	-	7	Ø	Ø
SCIAENIDAE															
Genyonemus lineatus	51	35	1	-	-	-	4	-	-	-	-	-	87	4	Ø
Menticirrhus undulatus	1	1	-	-	-	-	-	-	-	-	-	-	2	Ø	Ø
Seriphus politus	118	459	1	7	-	-	31	-	-	-	-	-	585	31	Ø
Umbrina roncador	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
EMBIOTOCIDAE															
Amphistichus argenteus	-	3	-	-	-	-	-	-	-	-	-	-	3	Ø	Ø
Cymatogaster aggregata	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Damalichthys vacca	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Hyperprosopon argenteum	1	-	-	-	-	-	-	-	-	-	-	-	1	Ø	Ø
Micrometrus minimus	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Phanerodon furcatus	-	-	-	-	-	-	2	1	-	-	-	-	Ø	3	Ø
STROMATEIDAE															
Peprilus simillimus	-	-	-	-	-	-	-	-	-	-	17	-	Ø	Ø	17
BOTHIDAE															
Citharichthys stigmaeus	1	2	-	-	-	2	-	-	-	1	-	-	3	2	1
Paralichthys californicus	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
PLEURONECTIDAE															
Pleuronichthys ritteri	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Pleuronichthys verticalis	-	-	-	-	-	-	1	-	-	-	-	1	Ø	1	1

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN REPLICATE GILL NETS AT OFFSHORE AREAS SONGS (ZONE OA), DON LIGHT (ZONE 6), AND SAN MATEO POINT (ZONE 3A) AT 30 FEET ON JUNE 27-28, 1979

TAXA	SONGS (ZONE OA)						DON LIGHT (ZONE 6)						SAN MATEO POINT			
	STATION 1		STATION 2		STATION 3		STATION 6		STATION 7		STATION 8		STATION11		STATION12	
	REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE	
	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
CHORDATA																
HETERODONTIDAE																
Heterodontus francisci	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CARCHARHINIDAE																
Mustelus californicus	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Triakis semifasciata	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
SQUALIDAE																
Squalus acanthias	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
ENGRAULIDAE																
Engraulis mordax	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
SYNODONTIDAE																
Synodus lucioceps	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BATRACHOIDIDAE																
Porichthys notatus	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-
OPHIDIIDAE																
Otophidium scrippsi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ATHERINIDAE																
Atherinopsis californiensis	-	-	-	-	1	-	-	-	-	-	-	-	-	2	-	-
SERRANIDAE																
Paralabrax clathratus	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
Paralabrax maculatofasciatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax nebulifer	-	1	-	-	-	-	-	-	-	-	-	-	1	2	-	-
PRISTIPOMATIDAE																
Xenistius californiensis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SCIAENIDAE																
Cheilotrema saturnum	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Cynoscion nobilis	-	4	2	-	-	-	-	-	-	-	-	-	2	1	3	-
Genyonemus lineatus	2	-	9	7	13	13	10	25	23	22	18	12	-	1	12	15
Menticirrhus undulatus	-	-	2	1	3	3	3	1	2	-	-	-	-	1	2	-
Roncador stearnsii	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Seriphus politus	44	5	42	19	18	11	16	13	26	22	20	12	1	9	19	29
GIRELLIDAE																
Girella nigricans	-	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-
SCORPIDIDAE																
Medialuna californiensis	-	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-
EMBIOTOCIDAE																
Amphistichus argenteus	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Cymatogaster aggregata	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Damalichthys vacca	1	1	2	-	-	-	-	-	-	-	-	-	1	1	-	-
Embiotoca jacksoni	1	-	-	1	-	-	-	-	-	-	-	1	4	1	-	-
Hyperprosopon argenteum	2	-	-	-	-	-	-	-	-	3	1	1	-	7	-	-
Phanerodon furcatus	-	-	1	-	-	-	-	2	-	4	3	10	1	2	-	-
Rhacochilus toxotes	-	1	-	-	-	-	-	-	-	-	-	-	2	1	-	-

(CONTINUED),30 FOOT GILL NETS: SURVEY OF JUNE 27-28, 1979

TAXA	SONGS (ZONE OA)						DON LIGHT (ZONE 6)						SAN MATEO POINT			
	STATION 1		STATION 2		STATION 3		STATION 6		STATION 7		STATION 8		STATION11		STATION12	
	REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE	
	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
CHORDATA																
POMACENTRIDAE																
Hypsypops rubicundus	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
LABRIDAE																
Halichoeres semicinctus	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
Pimelometopon pulchrum	-	-	-	-	-	-	-	-	-	-	-	-	2	1	-	-
SPHYRAENIDAE																
Sphyraena argentea	1	2	-	2	-	-	-	-	2	2	-	1	-	2	1	-
CLINIDAE																
Heterostichus rostratus	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
SCOMBRIDAE																
Sarda chiliensis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
Scomber japonicus	-	-	-	-	-	-	-	-	1	2	1	-	-	-	2	-
STROMATEIDAE																
Peprilus simillimus	2	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-
SCORPAENIDAE																
Scorpaena guttata	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
Sebastes rastrelliger	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BOTHIDAE																
Paralichthys californicus	-	-	-	-	-	-	-	-	-	1	-	-	-	-	2	-
PLEURONECTIDAE																
Pleuronichthys verticalis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN REPLICATE GILL NETS AT OFFSHORE AREAS SONGS (ZONE 0B), DON LIGHT (ZONE 6), AND SAN MATEO POINT (ZONE 3B) AT 45 FEET ON JUNE 27-28, 1979

TAXA	SONGS (ZONE 0B)				DON LIGHT (ZONE 6)				SAN MATEO (ZONE 3B)			
	STATION 4		STATION 5		STATION 9		STATION 10		STATION 13		STATION 14	
	REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE	
	1	2	1	2	1	2	1	2	1	2	1	2
CHORDATA												
HETERODONTIDAE												
Heterodontus francisci	-	-	-	-	-	-	-	-	-	-	-	-
CARCHARHINIDAE												
Mustelus californicus	-	-	-	-	-	-	-	-	-	-	1	-
Triakis semifasciata	1	-	1	-	-	-	-	-	-	-	1	-
SQUALIDAE												
Squalus acanthias	-	-	-	-	-	-	-	-	-	-	-	-
ENGRAULIDAE												
Engraulis mordax	-	-	-	-	-	-	-	-	-	-	-	-
SYNODONTIDAE												
Synodus lucioceps	-	-	-	-	-	2	3	-	4	-	-	-
BATRACHOIDIDAE												
Porichthys notatus	-	1	-	1	-	-	1	-	-	-	-	-
OPHIDIIDAE												
Otophidium scrippsi	-	-	1	-	-	-	-	-	-	-	-	-
ATHERINIDAE												
Atherinopsis californiensis	-	-	-	-	-	-	-	-	-	-	-	-
SERRANIDAE												
Paralabrax clathratus	-	-	-	-	-	-	-	3	-	-	1	-
Paralabrax maculatofasciatus	-	-	-	-	-	-	-	3	-	-	-	-
Paralabrax nebulifer	2	3	-	1	1	-	-	1	1	-	2	10
PRISTIPOMATIDAE												
Xenistius californiensis	1	1	-	-	-	-	-	1	-	-	-	-
SCIAENIDAE												
Cheilotrema saturnum	5	-	-	-	1	-	-	-	-	-	6	1
Cynoscion nobilis	-	-	-	-	-	-	-	-	-	-	-	-
Genyonemus lineatus	2	5	6	1	10	23	36	70	12	13	-	-
Menticirrhus undulatus	-	-	-	-	-	-	-	-	-	-	-	-
Roncador stearnsii	-	-	-	-	-	-	-	-	-	-	-	-
Seriphus politus	10	5	8	11	6	3	4	11	3	2	5	3
GIRELLIDAE												
Girella nigricans	-	-	-	-	-	-	-	-	-	-	-	-
SCORPIDIDAE												
Medialuna californiensis	-	-	-	-	-	-	-	3	-	-	2	-
EMBIOTOCIDAE												
Amphistichus argenteus	-	-	-	-	-	-	-	-	-	-	-	-
Cymatogaster aggregata	-	-	-	1	-	-	-	-	-	-	-	-
Damalichthys vacca	2	1	-	1	2	-	-	-	-	-	1	-
Embiotoca jacksoni	2	1	-	-	-	-	-	2	-	-	-	-
Hyperprosopon argenteum	1	3	6	-	-	-	1	3	1	-	2	1
Phanerodon furcatus	51	5	2	11	3	-	-	11	-	-	-	-
Rhacochilus toxotes	-	-	-	-	1	-	-	2	-	-	-	2

(CONTINUED),45 FOOT GILL NETS: SURVEY OF JUNE 27-28, 1979

TAXA	SONGS (ZONE OB)				DON LIGHT (ZONE 6)				SAN MATEO (ZONE 3B)			
	STATION 4		STATION 5		STATION 9		STATION 10		STATION 13		STATION 14	
	REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE	
	1	2	1	2	1	2	1	2	1	2	1	2
CHORDATA												
POMACENTRIDAE												
Hypsypops rubicundus	-	-	-	-	-	-	-	-	-	-	-	-
LABRIDAE												
Halichoeres semicinctus	-	-	-	-	-	-	-	-	-	-	2	4
Pimelometopon pulchrum	2	-	-	2	-	-	-	-	-	-	3	1
SPHYRAENIDAE												
Sphyraena argentea	1	-	-	-	-	-	1	-	-	-	-	-
CLINIDAE												
Heterostichus rostratus	-	-	-	-	-	-	-	-	-	-	-	-
SCOMBRIDAE												
Sarda chiliensis	-	-	-	-	-	-	-	-	-	-	-	-
Scomber japonicus	-	-	7	4	1	3	1	-	-	-	3	-
STROMATEIDAE												
Peprilus simillimus	-	-	-	-	-	-	1	-	-	-	-	-
SCORPAENIDAE												
Scorpaena guttata	1	-	-	1	-	1	-	1	1	-	-	1
Sebastes rastrelliger	-	-	-	-	1	-	-	-	1	-	-	-
BOTHIDAE												
Paralichthys californicus	-	-	-	1	-	2	1	-	-	-	-	1
PLEURONECTIDAE												
Pleuronichthys verticalis	-	-	-	-	-	-	-	-	1	-	-	-

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN FOUR REPLICATE 5-MINUTE OTTER TRAWLS CONDUCTED OFFSHORE SAN MATEO POINT AT 2Ø, 4Ø, AND 6Ø FEET ON JUNE 27-28, 1979 **REPLICATES 1 AND 2 WERE TAKEN ON THE 27TH AND 3 AND 4 ON THE 28TH.**

TAXA	2Ø FEET				4Ø FEET				6Ø FEET				TOTALS		
	REPLICATE				REPLICATE				REPLICATE				DEPTH		
	1	2	3	4	1	2	3	4	1	2	3	4	2Ø	4Ø	6Ø
TIME	1030	1046	1007	1024	1107	1126	1116	1133	1150	1208	1158	1219			
CHORDATA															
PLATYRHINIDAE															
Platyrhinoidis triseriata	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
RAJIDAE															
Raja binoculata	-	-	-	-	-	-	-	-	-	-	-	3	Ø	Ø	3
MYLIOBATIDAE															
Myliobatis californica	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
ENGRAULIDAE															
Engraulis mordax	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Engraulidae species complex	2	5	-	-	28	-	-	-	-	-	-	-	7	28	Ø
SYNODONTIDAE															
Synodus lucioceps	-	-	-	-	-	-	1	-	-	2	1	-	Ø	1	3
BATRACHOIDIDAE															
Porichthys myriaster	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
ATHERINIDAE															
Leuresthes tenuis	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
SYNGNATHIDAE															
Syngnathus spp.	1	-	-	-	-	-	-	-	-	-	-	-	1	Ø	Ø
SERRANIDAE															
Paralabrax nebulifer	-	-	-	1	-	-	-	-	-	1	-	1	1	Ø	2
SCIAENIDAE															
Genyonemus lineatus	-	15	84	27	-	-	-	-	-	-	-	-	126	Ø	Ø
Menticirrhus undulatus	-	-	-	1	-	-	-	-	-	-	-	-	1	Ø	Ø
Seriphus politus	21	1Ø3	4Ø5	73	-	-	-	-	-	-	-	-	6Ø2	Ø	Ø
EMBIOTOCIDAE															
Amphistichus argenteus	1	-	2	1	-	-	-	-	-	-	-	-	4	Ø	Ø
Cymatogaster aggregata	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Embiotoca jacksoni	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Hyperprosopon argenteum	1	2	11	38	-	-	-	-	-	-	-	-	52	Ø	Ø
Phanerodon furcatus	-	-	5	3	-	-	-	-	-	-	-	-	8	Ø	Ø
STROMATEIDAE															
Peprilus simillimus	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
SCORPAENIDAE															
Scorpaena guttata	-	-	-	-	-	-	-	-	-	2	-	-	Ø	Ø	2
BOTHIDAE															
Citharichthys stigmaeus	1	-	1	-	-	5	-	5	-	2	1	3	2	1Ø	6
Citharichthys xanthostigma	-	-	-	-	-	-	-	1	-	-	-	2	Ø	1	2
Paralichthys californicus	-	2	-	1	-	-	1	3	-	-	-	1	3	4	1
Xystreurys liolepis	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
PLEURONECTIDAE															
Hypsopsetta guttulata	1	-	-	-	-	-	-	-	-	-	-	-	1	Ø	Ø
Parophrys vetulus	-	-	-	-	-	-	1	-	-	-	1	-	Ø	1	1
Pleuronichthys decurrens	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Pleuronichthys ritteri	-	2	-	-	-	-	-	-	-	1	1	-	2	Ø	2
Pleuronichthys verticalis	-	-	-	-	-	-	-	2	1	5	1	6	Ø	2	13

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN FOUR REPLICATE 5-MINUTE OTTER TRAWLS CONDUCTED OFFSHORE SAN ONOFRE AT 2Ø, 4Ø, AND 6Ø FEET ON JUNE 27-28, 1979 REPLICATES 1 AND 2 WERE TAKEN ON THE 27TH AND 3 AND 4 ON THE 28TH.

TAXA	2Ø FEET				4Ø FEET				6Ø FEET				TOTALS		
	REPLICATE				REPLICATE				REPLICATE				DEPTH		
	1	2	3	4	1	2	3	4	1	2	3	4	2Ø	4Ø	6Ø
TIME	1453	1532	1440	1457	1402	1427	1359	1418	1248	1314	1302	1327			
CHORDATA															
PLATYRHINIDAE															
Platyrhinoidis triseriata	-	-	-	-	-	-	1	1	-	-	-	-	Ø	2	Ø
RAJIDAE															
Raja binoculata	-	-	-	-	-	-	-	1	-	-	-	-	Ø	1	Ø
MYLIOBATIDAE															
Myliobatis californica	-	-	-	-	-	1	-	1	-	-	-	-	Ø	2	Ø
ENGRAULIDAE															
Engraulis mordax	6	-	1	1	-	1	-	-	-	-	-	-	8	1	Ø
Engraulidae species complex	36	17	1	1Ø	481	13	-	8	54	1Ø	-	-	64	5Ø2	64
SYNODONTIDAE															
Synodus lucioceps	-	-	-	-	-	-	-	-	-	-	1	1	Ø	Ø	2
BATRACHOIDIDAE															
Porichthys myriaster	-	-	-	-	-	-	1	-	-	-	-	-	Ø	1	Ø
ATHERINIDAE															
Leuresthes tenuis	-	1	-	-	-	-	-	-	-	-	-	-	1	Ø	Ø
SYNGNATHIDAE															
Syngnathus spp.	2	3	-	-	-	-	1	-	-	-	-	-	5	1	Ø
SERRANIDAE															
Paralabrax nebulifer	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
SCIAENIDAE															
Genyonemus lineatus	158	58	34	-	195	82	198	47	-	-	-	-	25Ø	522	Ø
Menticirrhus undulatus	-	-	-	-	-	-	-	1	-	-	-	-	Ø	1	Ø
Seriphus politus	14	5	11	7	7	2	13	-	-	-	-	-	37	22	Ø
EMBIOTOCIDAE															
Amphistichus argenteus	-	-	-	-	-	1	-	-	-	-	-	-	Ø	1	Ø
Cymatogaster aggregata	-	-	-	-	-	1	-	-	-	-	-	-	Ø	1	Ø
Embiotoca jacksoni	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Hyperprosopon argenteum	-	1	-	-	-	-	-	-	-	-	-	-	1	Ø	Ø
Phanerodon furcatus	-	-	-	-	1	6	4	-	-	-	-	-	Ø	11	Ø
STROMATEIDAE															
Peprilus simillimus	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
SCORPAENIDAE															
Scorpaena guttata	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
BOTHIDAE															
Citharichthys stigmaeus	-	-	-	-	2	6	3	-	1	2	11	4	Ø	11	18
Citharichthys xanthostigma	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Paralichthys californicus	-	-	-	-	2	3	1	3	-	1	1	-	Ø	9	2
Xystreurys liolepis	-	-	-	-	-	-	-	-	-	-	-	1	Ø	Ø	1
PLEURONECTIDAE															
Hypsopsetta guttulata	-	-	-	-	-	1	-	-	-	-	-	-	Ø	1	Ø
Parophrys vetulus	-	-	-	-	-	-	-	-	-	1	-	-	Ø	Ø	1
Pleuronichthys decurrens	-	-	-	-	-	-	-	-	-	1	-	-	Ø	Ø	1
Pleuronichthys ritteri	-	-	-	-	1	-	-	-	1	1	-	-	Ø	1	2
Pleuronichthys verticalis	-	-	-	-	-	-	1	-	1	3	3	2	Ø	1	9

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN FOUR REPLICATE 5-MINUTE OTTER TRAWLS CONDUCTED OFFSHORE DON LIGHT AT 2Ø, 4Ø, AND 6Ø FEET ON JUNE 27-28, 1979 REPLICATES 1 AND 2 WERE TAKEN ON THE 27TH AND 3 AND 4 ON THE 28TH.

TAXA	2Ø FEET				4Ø FEET				6Ø FEET				TOTALS		
	REPLICATE				REPLICATE				REPLICATE				DEPTH		
	1	2	3	4	1	2	3	4	1	2	3	4	2Ø	4Ø	6Ø
CHORDATA TIME	0741	0800	0740	0754	0834	0853	0818	0835	0915	0935	0855	0914			
PLATYRHINIDAE															
Platyrhinoidis triseriata	-	1	-	-	-	-	-	-	-	-	-	-	1	Ø	Ø
RAJIDAE															
Raja binoculata	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
MYLIOBATIDAE															
Myliobatis californica	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
ENGRAULIDAE															
Engraulis mordax	1	1	45	2	-	-	-	-	-	-	-	-	49	Ø	Ø
Engraulidae species complex	-	-	-	25	11	1	1Ø7	31	-	16	3	1	25	15Ø	2Ø
SYNODONTIDAE															
Synodus lucioceps	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
BATRACHOIDIDAE															
Porichthys myriaster	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
ATHERINIDAE															
Leuresthes tenuis	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
SYNGNATHIDAE															
Syngnathus spp.	-	-	-	2	-	-	-	-	-	-	-	-	2	Ø	Ø
SERRANIDAE															
Paralabrax nebulifer	-	1	-	-	-	-	-	-	-	-	-	-	1	Ø	Ø
SCIAENIDAE															
Genyonemus lineatus	278	128	5	38	5	-	-	-	-	-	-	-	449	5	Ø
Menticirrhus undulatus	-	2	-	-	-	-	-	-	-	-	-	-	2	Ø	Ø
Seriphus politus	2Ø	96	18	5Ø	-	-	-	-	-	-	-	-	184	Ø	Ø
EMBIOTOCIDAE															
Amphistichus argenteus	1	3	-	-	-	-	-	-	-	-	-	-	4	Ø	Ø
Cymatogaster aggregata	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Embiotoca jacksoni	-	1	-	-	-	-	-	-	-	-	-	-	1	Ø	Ø
Hyperprosopon argenteum	6	38	-	2	1	-	-	-	-	-	-	-	46	1	Ø
Phanerodon furcatus	18	19	-	4	-	-	-	-	-	-	-	-	41	Ø	Ø
STROMATEIDAE															
Peprilus simillimus	3	-	-	1	-	-	-	-	-	-	-	-	4	Ø	Ø
SCORPAENIDAE															
Scorpaena guttata	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
BOTHIDAE															
Citharichthys stigmaeus	-	2	-	-	-	-	-	-	2	-	-	-	2	Ø	2
Citharichthys xanthostigma	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Paralichthys californicus	1	7	-	-	-	-	-	-	1	-	-	-	8	Ø	1
Xystreurys liolepis	-	-	-	-	-	-	-	-	1	1	-	-	Ø	Ø	2
PLEURONECTIDAE															
Hypsopsetta guttulata	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Parophrys vetulus	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Pleuronichthys decurrens	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Pleuronichthys ritteri	-	3	-	-	-	-	-	-	-	-	-	-	3	Ø	Ø
Pleuronichthys verticalis	-	-	-	-	-	-	-	-	2	2	-	-	Ø	Ø	4

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN REPLICATE GILL NETS AT OFFSHORE AREAS SONGS (ZONE OA), DON LIGHT (ZONE 6), AND SAN MATEO POINT (ZONE 3A) AT 30 FEET ON AUGUST 26-27, 1979

TAXA	SONGS (ZONE OA)						DON LIGHT (ZONE 6)						SAN MATEO POINT			
	STATION 1		STATION 2		STATION 3		STATION 6		STATION 7		STATION 8		STATION11		STATION12	
	REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE	
	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
CHORDATA																
HETERODONTIDAE																
Heterodontus francisci	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CARCHARHINIDAE																
Mustelus californicus	-	9	-	-	1	-	-	-	-	-	1	-	-	-	-	1
Triakis semifasciata	1	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-
SQUATINIDAE																
Squatina californica	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SYNODONTIDAE																
Synodus lucioceps	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BATRACHOIDIDAE																
Porichthys notatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ATHERINIDAE																
Atherinops affinis	-	-	-	-	-	-	1	-	3	-	-	-	-	-	-	-
Atherinopsis californiensis	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	1
SERRANIDAE																
Paralabrax clathratus	1	1	1	1	-	-	-	-	-	-	-	-	2	1	-	-
Paralabrax nebulifer	-	2	1	-	1	-	-	-	-	-	-	1	1	2	-	-
Stereolepis gigas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PRISTIPOMATIDAE																
Anisotremus davidsonii	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-
Xenistius californiensis	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-
SCIAENIDAE																
Cheilotrema saturnum	-	7	-	-	1	-	-	-	-	-	-	-	10	5	-	-
Cynoscion nobilis	-	-	2	-	1	-	-	-	-	-	-	-	-	-	2	-
Genyonemus lineatus	1	1	2	5	16	8	11	12	7	13	9	3	-	-	8	21
Menticirrhus undulatus	1	-	-	3	5	10	3	6	4	4	2	-	5	1	2	-
Roncador stearnsii	-	1	2	-	-	-	-	-	-	-	-	-	9	-	1	-
Seriphus politus	34	13	27	27	43	21	64	27	28	49	45	51	3	4	51	60
Umbrina roncador	-	1	-	-	6	2	-	-	-	-	-	-	68	75	3	17
GIRELLIDAE																
Girella nigricans	1	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
SCORPIDIDAE																
Medialuna californiensis	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KYPHOSIDAE																
Hermosilla azurea	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
EMBIOTOCIDAE																
Amphistichus argenteus	-	-	-	-	-	-	2	-	1	1	4	-	-	-	-	-
Cymatogaster aggregata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Damalichthys vacca	-	-	-	1	-	-	-	-	1	1	-	-	-	-	-	-
Embiotoca jacksoni	2	2	-	-	-	-	-	-	1	-	-	-	2	-	-	-
Hyperprosopon argenteum	1	12	-	1	2	-	1	1	-	-	-	1	2	-	-	-
Hypsurus caryi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(CONTINUED),30 FOOT GILL NETS: SURVEY OF AUGUST 26-27, 1979

TAXA	SONGS (ZONE 0A)						DON LIGHT (ZONE 6)						SAN MATEO POINT			
	STATION 1		STATION 2		STATION 3		STATION 6		STATION 7		STATION 8		STATION11		STATION12	
	REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE	
	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
CHORDATA																
EMBIOTOCIDAE																
Phanerodon furcatus	-	-	1	3	1	-	-	1	-	-	-	2	-	-	-	-
Rhacochilus toxotes	1	3	-	-	-	-	-	-	-	-	-	-	1	-	-	-
POMACENTRIDAE																
Chromis punctipinnis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LABRIDAE																
Halichoeres semicinctus	-	1	-	-	-	-	-	-	-	-	-	-	6	5	-	-
Pimelometopon pulchrum	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-
SPHYRAENIDAE																
Sphyraena argentea	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-
SCOMBRIDAE																
Sarda chiliensis	2	1	-	-	1	2	2	8	2	4	8	3	-	-	-	-
Scomber japonicus	-	-	-	-	-	1	-	-	1	1	-	-	-	-	-	-
STROMATEIDAE																
Peprilus simillimus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SCORPAENIDAE																
Scorpaena guttata	2	2	-	3	-	-	-	-	-	-	-	-	-	3	-	1
Sebastes rastrelliger	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-
Sebastes serranoides	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BOTHIDAE																
Paralichthys californicus	-	-	3	1	-	-	-	-	-	-	-	1	-	-	-	-
PLEURONECTIDAE																
Hypsopsetta guttulata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN REPLICATE GILL NETS AT OFFSHORE AREAS SONGS (ZONE OB), DON LIGHT (ZONE 6), AND SAN MATEO POINT (ZONE 3B) AT 45 FEET ON AUGUST 26-27, 1979

TAXA	SONGS (ZONE OB)				DON LIGHT (ZONE 6)				SAN MATEO (ZONE 3B)			
	STATION 4		STATION 5		STATION 9		STATION 10		STATION 13		STATION 14	
	REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE	
	1	2	1	2	1	2	1	2	1	2	1	2
CHORDATA												
HETERODONTIDAE												
Heterodontus francisci	-	-	-	-	-	-	-	-	-	-	-	-
CARCHARHINIDAE												
Mustelus californicus	-	-	-	-	-	-	-	-	-	-	-	-
Triakis semifasciata	2	-	-	-	-	-	-	-	-	-	-	-
SQUATINIDAE												
Squatina californica	-	-	-	-	-	-	-	-	-	-	1	-
SYNODONTIDAE												
Synodus lucioceps	-	-	1	-	-	2	-	-	1	1	-	-
BATRACHOIDIDAE												
Porichthys notatus	-	-	-	-	-	1	-	-	-	-	-	-
ATHERINIDAE												
Atherinops affinis	-	-	-	-	-	-	-	-	-	-	-	-
Atherinopsis californiensis	-	-	-	-	-	-	-	-	-	-	-	-
SERRANIDAE												
Paralabrax clathratus	4	1	3	-	-	-	-	2	1	-	5	-
Paralabrax nebulifer	2	1	-	-	1	1	2	3	-	-	4	2
Stereolepis gigas	-	-	-	-	-	-	-	-	-	-	1	-
PRISTIPOMATIDAE												
Anisotremus davidsonii	-	-	-	-	-	-	-	-	-	-	-	-
Xenistius californiensis	-	-	-	-	-	-	-	-	-	-	-	-
SCIAENIDAE												
Cheilotrema saturnum	2	-	2	1	-	-	-	-	-	-	3	-
Cynoscion nobilis	-	-	-	-	-	-	-	-	-	-	-	-
Genyonemus lineatus	4	4	2	3	2	3	1	-	19	9	2	2
Menticirrhus undulatus	-	-	-	-	-	-	-	-	-	-	-	-
Roncador stearnsii	-	-	-	-	-	-	-	-	-	-	-	-
Seriphus politus	4	7	9	6	-	1	-	-	4	3	9	13
Umbrina roncador	-	-	-	-	-	-	-	-	2	-	6	4
GIRELLIDAE												
Girella nigricans	-	-	-	-	-	-	-	-	-	-	1	-
SCORPIDIDAE												
Medialuna californiensis	1	-	-	1	-	-	-	-	1	-	4	-
KYPHOSIDAE												
Hermosilla azurea	-	-	-	-	-	-	-	-	-	-	-	-
EMBIOTOCIDAE												
Amphistichus argenteus	-	-	-	-	-	-	-	-	-	-	-	-
Cymatogaster aggregata	3	5	-	8	-	-	-	-	1	1	-	-
Damalichthys vacca	1	-	-	-	-	-	-	-	-	2	2	-
Embiotoca jacksoni	2	-	3	2	-	-	-	-	-	-	-	1
Hyperprosopon argenteum	2	3	1	2	-	-	-	-	1	1	3	-
Hypsurus caryi	-	-	1	-	-	-	-	-	-	-	-	-

(CONTINUED),45 FOOT GILL NETS: SURVEY OF AUGUST 26-27, 1979

TAXA	SONGS (ZONE OB)				DON LIGHT (ZONE 6)				SAN MATEO (ZONE 3B)			
	STATION 4		STATION 5		STATION 9		STATION10		STATION13		STATION14	
	REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE	
	1	2	1	2	1	2	1	2	1	2	1	2
CHORDATA												
EMBIOTOCIDAE												
Phanerodon furcatus	22	3	3	1	1	-	-	-	12	17	4	3
Rhacochilus toxotes	2	-	-	1	-	-	-	-	-	-	4	-
POMACENTRIDAE												
Chromis punctipinnis	-	-	-	-	-	-	-	-	-	-	8	-
LABRIDAE												
Halichoeres semicinctus	3	-	1	-	-	-	-	-	-	-	12	2
Pimelometopon pulchrum	2	-	2	1	-	-	-	-	-	-	5	-
SPHYRAENIDAE												
Sphyraena argentea	-	-	-	-	-	-	-	-	-	1	-	-
SCOMBRIDAE												
Sarda chiliensis	-	-	-	-	-	-	-	-	-	-	-	-
Scomber japonicus	-	-	-	-	-	-	-	-	-	-	-	-
STROMATEIDAE												
Peprilus simillimus	-	-	-	-	-	1	-	-	-	-	-	-
SCORPAENIDAE												
Scorpaena guttata	2	-	-	-	1	1	1	1	-	-	-	-
Sebastes rastrelliger	-	-	-	-	-	-	-	-	-	-	-	-
Sebastes serranoides	1	1	-	-	-	-	-	-	-	-	-	-
BOTHIDAE												
Paralichthys californicus	-	-	-	-	-	-	-	-	-	-	1	-
PLEURONECTIDAE												
Hypsopsetta guttulata	-	-	-	-	-	-	-	-	-	1	-	1

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN FOUR REPLICATE 5-MINUTE OTTER TRAWLS CONDUCTED OFFSHORE SAN MATEO POINT AT 2Ø, 4Ø, AND 6Ø FEET ON AUGUST 26-27, 1979 REPLICATES 1 AND 2 WERE TAKEN ON THE 26TH AND 3 AND 4 ON THE 27TH.

TAXA	2Ø FEET				4Ø FEET				6Ø FEET				TOTALS		
	REPLICATE				REPLICATE				REPLICATE				DEPTH		
	1	2	3	4	1	2	3	4	1	2	3	4	2Ø	4Ø	6Ø
TIME	0953	1010	0955	1015	1033	1051	1041	1101	1113	1135	1128	1149			
CHORDATA															
CARCHARHINIDAE															
Mustelus californicus	1	-	-	1	-	-	-	-	-	-	-	-	2	Ø	Ø
RHINOBATIDAE															
Rhinobatos productus	-	-	3	-	-	-	-	-	-	-	-	-	3	Ø	Ø
PLATYRHINIDAE															
Platyrhinoidis triseriata	-	-	-	1	-	-	-	-	-	-	-	-	1	Ø	Ø
TORPEDINIDAE															
Torpedo californica	-	-	-	-	-	-	-	-	1	-	-	-	Ø	Ø	1
RAJIDAE															
Raja inornata	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
DASYATIDAE															
Urolophus halleri	-	1	-	1	-	-	-	-	-	-	-	-	2	Ø	Ø
MYLIOBATIDAE															
Myliobatis californica	-	1	1	1	-	-	-	-	-	-	-	-	3	Ø	Ø
ENGRAULIDAE															
Anchoa compressa	-	-	12	8	-	-	-	-	-	-	-	-	2Ø	Ø	Ø
Engraulis mordax	-	6Ø54	1	1	7	-	159	1	-	-	-	-	6Ø56	167	Ø
Engraulidae species complex	-	-	-	-	-	-	282	381	-	-	-	-	Ø	663	Ø
SYNODONTIDAE															
Synodus lucioceps	-	-	-	-	-	1	-	3	1	-	-	-	Ø	4	1
SYNGNATHIDAE															
Syngnathus spp.	1	4	4	1Ø	-	-	-	-	-	-	-	-	19	Ø	Ø
SERRANIDAE															
Paralabrax nebulifer	-	-	1	-	-	-	-	-	-	-	-	-	1	Ø	Ø
SCIAENIDAE															
Cynoscion nobilis	-	1	-	2	-	-	-	-	-	-	-	-	3	Ø	Ø
Genyonemus lineatus	-	1	11	31	-	-	44	18	-	-	-	-	43	62	Ø
Menticirrhus undulatus	1	-	1	-	1	-	3	1	-	-	-	-	2	5	Ø
Roncador stearnsii	-	-	-	-	-	-	1	-	-	-	-	-	Ø	1	Ø
Seriphus politus	7	3	49	1541	-	-	3	-	-	-	-	-	16ØØ	3	Ø
Umbrina roncador	2	-	4	-	-	-	-	-	-	-	-	-	6	Ø	Ø
EMBIOTOCIDAE															
Amphistichus argenteus	2	5	8	-	-	-	1	-	-	-	-	-	15	1	Ø
Cymatogaster aggregata	-	-	-	-	-	-	3	-	-	-	-	-	Ø	3	Ø
Damalichthys vacca	-	-	-	-	-	-	-	4	-	3	-	-	Ø	4	3
Embiotoca jacksoni	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Hyperprosopon argenteum	-	-	14	2	-	-	4	9	-	-	-	-	16	13	Ø
Micrometrus minimus	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Phanerodon furcatus	-	4	1	2	2	-	19	25	-	-	-	1	7	46	1
Rhacochilus toxotes	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
CLINIDAE															
Heterostichus rostratus	-	1	-	-	-	-	-	-	-	-	-	-	1	Ø	Ø

AREA SAN MATEO POINT ON AUGUST 26-27, 1979

TAXA	20 FEET REPLICATE 1	2	3	4	40 FEET REPLICATE 1	2	3	4	60 FEET REPLICATE 1	2	3	4	TOTALS DEPTH 20	40	60
CHORDATA															
STROMATEIDAE															
Peprilus simillimus	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
SCORPAENIDAE															
Scorpaena guttata	-	-	-	-	-	1	-	-	-	-	-	-	Ø	1	Ø
BOTHIDAE															
Citharichthys stigmaeus	-	3	2	-	7	6	3	5	5	5	6	1Ø	5	21	26
Citharichthys xanthostigma	-	-	-	-	2	1	1	1	3	2	2	-	Ø	5	7
Hippoglossina stomata	-	-	-	-	-	-	-	-	-	-	-	1	Ø	Ø	1
Paralichthys californicus	3	1	11	4	2	1	6	5	-	1	-	1	19	14	2
Xystreurys liolepis	-	-	-	-	-	4	2	-	2	3	5	8	Ø	6	18
PLEURONECTIDAE															
Hypsopsetta guttulata	-	-	-	-	2	-	-	1	-	-	-	-	Ø	3	Ø
Parophrys vetulus	-	-	-	-	-	-	-	-	-	1	1	1	Ø	Ø	3
Pleuronichthys decurrens	-	-	-	-	-	-	1	-	-	-	-	-	Ø	1	Ø
Pleuronichthys ritteri	-	1	2	1	2	-	-	2	-	2	2	-	4	4	4
Pleuronichthys verticalis	-	-	-	-	1	1	-	-	2	1	2	2	Ø	2	7

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN FOUR REPLICATE 5-MINUTE OTTER TRAWLS CONDUCTED OFFSHORE SAN ONOFRE AT 20, 40, AND 60 FEET ON AUGUST 26-27, 1979 REPLICATES 1 AND 2 WERE TAKEN ON THE 26TH AND 3 AND 4 ON THE 27TH.

TAXA	20 FEET				40 FEET				60 FEET				TOTALS		
	REPLICATE				REPLICATE				REPLICATE				DEPTH		
	1	2	3	4	1	2	3	4	1	2	3	4	20	40	60
TIME	1346	1410	1447	1502	1258	1319	1358	1420	1210	1231	1255	1336			
CHORDATA															
CARCHARHINIDAE															
Mustelus californicus	-	-	-	-	-	1	-	-	-	-	-	-	0	1	0
RHINOBATIDAE															
Rhinobatos productus	-	2	3	18	-	1	-	-	-	-	-	-	23	1	0
PLATYRHINIDAE															
Platyrhinoidis triseriata	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
TORPEDINIDAE															
Torpedo californica	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
RAJIDAE															
Raja inornata	-	-	-	-	-	-	-	1	-	-	-	-	0	1	0
DASYATIDAE															
Urolophus halleri	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
MYLIOBATIDAE															
Myliobatis californica	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
ENGRAULIDAE															
Anchoa compressa	1	8	1	-	-	-	-	-	-	-	-	-	10	0	0
Engraulis mordax	4	95	1848	-	9	15	-	20	-	-	-	-	1947	44	0
Engraulidae species complex	-	-	-	21	-	-	84	-	-	-	-	-	21	84	0
SYNODONTIDAE															
Synodus lucioceps	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
SYNGNATHIDAE															
Syngnathus spp.	3	-	20	-	-	2	-	-	-	-	-	-	23	2	0
SERRANIDAE															
Paralabrax nebulifer	-	-	-	-	-	-	2	-	-	1	-	-	0	2	1
SCIAENIDAE															
Cynoscion nobilis	1	1	-	-	-	-	-	-	-	-	-	-	2	0	0
Genyonemus lineatus	4	11	13	-	44	134	162	186	-	-	-	-	28	526	0
Menticirrhus undulatus	2	-	-	8	1	-	2	-	-	-	-	-	10	3	0
Roncador stearnsii	1	-	-	-	-	1	-	-	-	-	-	-	1	1	0
Seriphus politus	248	251	62	2	94	131	93	47	-	-	-	-	563	365	0
Umbrina roncador	2	-	1	1	-	-	-	-	-	-	-	-	4	0	0
EMBIOTOCIDAE															
Amphistichus argenteus	5	3	2	21	-	-	1	-	-	-	-	-	31	1	0
Cymatogaster aggregata	-	-	-	-	-	-	4	-	-	-	-	-	0	4	0
Damalichthys vacca	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Embiotoca jacksoni	-	-	-	-	1	1	1	4	-	-	-	-	0	7	0
Hyperprosopon argenteum	35	1	1	1	5	28	11	42	-	-	-	-	38	86	0
Micrometrus minimus	4	1	-	-	-	-	-	-	-	-	-	-	5	0	0
Phanerodon furcatus	-	-	-	-	-	1	4	9	-	-	-	-	0	14	0
Rhacochilus toxotes	-	-	-	-	-	-	-	4	-	-	-	-	0	4	0
CLINIDAE															
Heterostichus rostratus	-	-	-	-	-	-	1	-	-	-	-	-	0	1	0

AREA SAN ONOFRE ON AUGUST 26-27, 1979

TAXA	20 FEET REPLICATE 1	2	3	4	40 FEET REPLICATE 1	2	3	4	60 FEET REPLICATE 1	2	3	4	TOTALS DEPTH 20	40	60
CHORDATA															
STROMATEIDAE															
Peprilus simillimus	-	2	-	-	-	-	1	-	-	-	-	-	2	1	Ø
SCORPAENIDAE															
Scorpaena guttata	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
BOTHIDAE															
Citharichthys stigmaeus	-	3	-	-	-	3	-	7	5	4	9	7	3	1Ø	25
Citharichthys xanthostigma	-	-	-	-	-	-	-	-	1	2	3	1	Ø	Ø	7
Hippoglossina stomata	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Paralichthys californicus	-	4	-	3	-	2	4	3	4	2	1	3	7	9	1Ø
Xystreurys liolepis	-	-	-	-	-	-	-	5	-	-	3	2	Ø	5	5
PLEURONECTIDAE															
Hypsopsetta guttulata	-	-	-	-	-	-	-	1	-	-	-	1	Ø	1	1
Parophrys vetulus	-	-	-	-	-	-	-	-	-	1	2	-	Ø	Ø	3
Pleuronichthys decurrens	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Pleuronichthys ritteri	-	-	-	-	-	-	-	-	-	1	-	-	Ø	Ø	1
Pleuronichthys verticalis	-	-	-	-	-	-	4	2	2	3	1	1	Ø	6	7

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN FOUR REPLICATE 5-MINUTE OTTER TRAWLS CONDUCTED OFFSHORE DON LIGHT AT 2Ø, 4Ø, AND 6Ø FEET ON AUGUST 26-27, 1979 REPLICATES 1 AND 2 WERE TAKEN ON THE 26TH AND 3 AND 4 ON THE 27TH.

TAXA	2Ø FEET				4Ø FEET				6Ø FEET				TOTALS		
	REPLICATE				REPLICATE				REPLICATE				DEPTH		
	1	2	3	4	1	2	3	4	1	2	3	4	2Ø	4Ø	6Ø
TIME	0704	0724	0700	0720	0751	0815	0749	0811	0844	0907	0838	0900			
CHORDATA															
CARCHARHINIDAE															
Mustelus californicus	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
RHINOBATIDAE															
Rhinobatos productus	-	1	-	-	-	-	-	-	-	-	-	-	1	Ø	Ø
PLATYRHINIDAE															
Platyrhinoidis triseriata	-	-	-	-	2	2	-	-	-	-	-	-	Ø	4	Ø
TORPEDINIDAE															
Torpedo californica	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
RAJIDAE															
Raja inornata	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
DASYATIDAE															
Urolophus halleri	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
MYLIOBATIDAE															
Myliobatis californica	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
ENGRAULIDAE															
Anchoa compressa	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Engraulis mordax	122	61	21	17	89	1Ø4	172	63	-	-	-	-	221	428	Ø
Engraulidae species complex	18	26	-	-	-	-	391	2Ø5	-	-	6Ø	-	44	596	6Ø
SYNODONTIDAE															
Synodus lucioceps	-	-	-	-	-	1	-	1	-	-	2	2	Ø	2	4
SYNGNATHIDAE															
Syngnathus spp.	5	3	1	3	1	-	-	-	-	-	-	-	12	1	Ø
SERRANIDAE															
Paralabrax nebulifer	-	-	-	-	-	-	1	2	-	1	2	1	Ø	3	4
SCIAENIDAE															
Cynoscion nobilis	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Genyonemus lineatus	6Ø	289	91	459	194	178	71	55	-	-	-	-	899	498	Ø
Menticirrhus undulatus	4	4	1	4	2	1	2	1	-	-	-	-	13	6	Ø
Roncador stearnsii	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Seriphus politus	76	121	271	449	266	42	7	1	-	-	-	-	917	316	Ø
Umbrina roncador	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
EMBIOTOCIDAE															
Amphistichus argenteus	1	1	5	4	-	-	-	-	-	-	-	-	11	Ø	Ø
Cymatogaster aggregata	-	-	1	-	-	-	6	18	-	-	-	-	1	24	Ø
Damalichthys vacca	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Embiotoca jacksoni	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Hyperprosopon argenteum	2	1	9	1	32	42	8	-	1	-	-	-	13	82	1
Micrometrus minimus	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Phanerodon furcatus	-	2	-	-	13	6	94	41	2	-	1	-	2	154	3
Rhacochilus toxotes	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
CLINIDAE															
Heterostichus rostratus	-	-	-	1	-	-	-	-	-	-	-	-	1	Ø	Ø

AREA DON LIGHT ON AUGUST 26-27, 1979

TAXA	20 FEET REPLICATE 1	2	3	4	40 FEET REPLICATE 1	2	3	4	60 FEET REPLICATE 1	2	3	4	TOTALS DEPTH 20	40	60
CHORDATA															
STROMATEIDAE															
Peprilus simillimus	-	-	-	-	-	-	-	16	-	-	-	-	0	16	0
SCORPAENIDAE															
Scorpaena guttata	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
BOTHIDAE															
Citharichthys stigmaeus	-	-	-	1	17	9	5	16	7	-	2	4	1	47	13
Citharichthys xanthostigma	-	-	-	-	-	-	-	-	-	-	4	1	0	0	5
Hippoglossina stomata	-	-	-	-	1	-	-	-	-	-	-	-	0	1	0
Paralichthys californicus	-	1	1	2	9	3	3	2	2	-	-	1	4	17	3
Xystreurys liolepis	-	-	-	-	-	1	-	3	3	4	3	7	0	4	17
PLEURONECTIDAE															
Hypsopsetta guttulata	-	-	-	-	-	-	-	2	-	-	-	-	0	2	0
Parophrys vetulus	-	-	-	-	-	-	-	-	1	2	1	-	0	0	4
Pleuronichthys decurrens	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Pleuronichthys ritteri	-	-	-	-	-	-	-	-	-	1	-	3	0	0	4
Pleuronichthys verticalis	-	-	-	-	3	-	-	1	1	1	2	2	0	4	6

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN REPLICATE GILL NETS AT OFFSHORE AREAS SONGS (ZONE OA), DON LIGHT (ZONE 6), AND SAN MATEO POINT (ZONE 3A) AT 30 FEET ON OCTOBER 16-17, 1979

TAXA	SONGS (ZONE OA)						DON LIGHT (ZONE 6)						SAN MATEO POINT			
	STATION 1		STATION 2		STATION 3		STATION 6		STATION 7		STATION 8		STATION11		STATION12	
	REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE	
	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
CHORDATA																
VERTEBRATA																
Elasmobranch, unident.	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
CARCHARHINIDAE																
Mustelus californicus	3	-	-	1	-	1	-	-	-	-	-	-	2	-	-	-
Triakis semifasciata	3	1	-	-	-	-	-	1	-	-	-	-	1	1	-	-
SQUALIDAE																
Squalus acanthias	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
SYNODONTIDAE																
Synodus lucioceps	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-
ATHERINIDAE																
Atherinopsis californiensis	-	-	-	-	4	13	8	6	8	-	4	3	-	-	-	1
SERRANIDAE																
Paralabrax clathratus	-	-	-	-	-	-	1	-	-	1	-	-	3	-	-	-
Paralabrax nebulifer	3	1	2	7	-	-	-	-	1	-	-	1	1	3	-	1
PRISTIPOMATIDAE																
Anisotremus davidsonii	-	2	-	-	-	-	-	-	-	-	-	1	-	1	-	-
Xenistius californiensis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
SCIAENIDAE																
Cheilotrema saturnum	1	29	10	-	-	-	-	-	-	16	-	-	1	5	-	-
Cynoscion nobilis	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Genyonemus lineatus	1	1	18	4	12	2	8	2	3	-	13	4	-	-	2	-
Menticirrhus undulatus	-	1	-	-	4	3	5	3	3	-	-	2	-	-	1	1
Seriphus politus	5	2	13	5	22	12	9	4	19	5	14	21	-	5	24	8
EMBIOTOCIDAE																
Amphistichus argenteus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Embiotoca jacksoni	-	10	4	1	-	-	-	-	-	2	1	-	-	1	-	-
Hyperprosopon argenteum	1	-	1	-	3	4	1	3	-	1	1	-	-	2	2	1
Phanerodon furcatus	-	-	1	-	1	-	-	2	1	-	-	-	-	1	2	-
Rhacochilus toxotes	-	-	2	-	-	-	-	-	-	1	-	-	-	3	-	-
POMACENTRIDAE																
Chromis punctipinnis	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	1
LABRIDAE																
Halichoeres semicinctus	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
Pimelometopon pulchrum	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
CLINIDAE																
Heterostichus rostratus	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
SCOMBRIDAE																
Sarda chiliensis	-	-	-	1	1	2	5	3	6	-	5	3	-	-	-	-
Scomber japonicus	-	-	-	-	-	1	2	1	-	-	-	1	-	-	-	2
SCORPAENIDAE																
Scorpaena guttata	-	-	-	1	-	1	-	-	-	1	-	-	-	-	-	-

(CONTINUED),30 FOOT GILL NETS: SURVEY OF OCTOBER 16-17, 1979

TAXA	SONGS (ZONE OA)						DON LIGHT (ZONE 6)						SAN MATEO POINT			
	STATION 1		STATION 2		STATION 3		STATION 6		STATION 7		STATION 8		STATION 11		STATION 12	
	REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE	
	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
CHORDATA																
COTTIDAE																
Leptocottus armatus	-	-	-	-	-	-	3	-	-	-	2	-	-	-	-	-
BOTHIDAE																
Citharichthys xanthostigma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralichthys californicus	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-
PLEURONECTIDAE																
Hypsopsetta guttulata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pleuronichthys coenosus	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
Pleuronichthys verticalis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN REPLICATE GILL NETS AT OFFSHORE AREAS SONGS (ZONE OB), DON LIGHT (ZONE 6), AND SAN MATEO POINT (ZONE 3B) AT 45 FEET ON OCTOBER 16-17, 1979

TAXA	SONGS (ZONE OB)				DON LIGHT (ZONE 6)				SAN MATEO (ZONE 3B)			
	STATION 4		STATION 5		STATION 9		STATION 10		STATION 13		STATION 14	
	REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE	
	1	2	1	2	1	2	1	2	1	2	1	2
CHORDATA												
VERTEBRATA												
Elasmobranch, unident.	-	-	-	-	-	-	-	-	-	-	-	-
CARCHARHINIDAE												
Mustelus californicus	-	-	1	-	1	-	1	-	1	-	-	-
Triakis semifasciata	-	-	-	-	-	-	-	-	-	-	-	1
SQUALIDAE												
Squalus acanthias	-	-	-	-	-	-	-	-	-	-	-	-
SYNODONTIDAE												
Synodus lucioceps	-	-	-	-	-	-	-	-	1	-	-	-
ATHERINIDAE												
Atherinopsis californiensis	-	-	-	-	-	-	1	-	-	-	-	-
SERRANIDAE												
Paralabrax clathratus	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax nebulifer	-	2	-	1	-	-	2	1	-	-	-	-
PRISTIPOMATIDAE												
Anisotremus davidsonii	-	-	-	-	-	-	-	-	-	-	-	-
Xenistius californiensis	-	-	-	-	-	-	-	-	-	-	-	-
SCIAENIDAE												
Cheilotrema saturnum	-	-	-	-	-	-	1	-	-	-	-	-
Cynoscion nobilis	-	-	-	3	-	-	-	-	-	-	-	-
Genyonemus lineatus	22	-	15	5	-	1	2	-	1	-	-	-
Menticirrhus undulatus	4	-	4	6	-	-	2	-	-	-	-	-
Seriphus politus	18	-	41	4	5	-	4	4	8	-	-	-
EMBIOTOCIDAE												
Amphistichus argenteus	-	-	-	-	-	-	1	-	-	-	-	-
Embiotoca jacksoni	-	-	-	-	-	-	-	3	-	-	-	-
Hyperprosopon argenteum	-	-	5	4	1	-	-	-	-	-	-	-
Phanerodon furcatus	2	1	7	7	-	-	23	6	-	-	-	-
Rhacochilus toxotes	-	-	-	-	-	-	-	-	-	-	-	-
POMACENTRIDAE												
Chromis punctipinnis	-	-	-	-	-	-	-	-	-	-	-	-
LABRIDAE												
Halichoeres semicinctus	-	-	-	-	-	-	-	-	-	-	-	-
Pimelometopon pulchrum	-	-	-	-	-	-	-	-	-	-	-	-
CLINIDAE												
Heterostichus rostratus	-	-	-	-	-	-	-	-	-	-	-	-
SCOMBRIDAE												
Sarda chiliensis	-	-	-	1	-	1	-	-	-	-	-	-
Scomber japonicus	2	-	-	-	1	-	3	-	1	-	-	-
SCORPAENIDAE												
Scorpaena guttata	-	-	-	-	-	-	1	-	2	-	-	1

(CONTINUED),45 FOOT GILL NETS: SURVEY OF OCTOBER 16-17, 1979

TAXA	SONGS (ZONE OB)				DON LIGHT (ZONE 6)				SAN MATEO (ZONE 3B)			
	STATION 4		STATION 5		STATION 9		STATION 10		STATION 13		STATION 14	
	REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE	
	1	2	1	2	1	2	1	2	1	2	1	2
CHORDATA												
COTTIDAE												
Leptocottus armatus	-	-	-	-	-	-	-	-	-	-	-	-
BOTHIDAE												
Citharichthys xanthostigma	-	-	-	-	-	-	-	-	-	1	-	-
Paralichthys californicus	-	-	-	-	-	-	-	-	-	-	-	-
PLEURONECTIDAE												
Hypsopsetta guttulata	-	-	-	1	-	-	-	-	-	-	-	-
Pleuronichthys coenosus	-	-	-	-	-	-	-	-	-	-	-	-
Pleuronichthys verticalis	-	-	-	-	-	1	-	-	-	-	-	-

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN FOUR REPLICATE 5-MINUTE OTTER TRAWLS CONDUCTED OFFSHORE SAN MATEO POINT AT 20, 40, AND 60 FEET ON OCTOBER 16-17, 1979 REPLICATES 1 AND 2 WERE TAKEN ON THE 16TH AND 3 AND 4 ON THE 17TH.

TAXA	20 FEET				40 FEET				60 FEET				TOTALS		
	REPLICATE				REPLICATE				REPLICATE				DEPTH		
	1	2	3	4	1	2	3	4	1	2	3	4	20	40	60
CHORDATA															
CARCHARHINIDAE															
Mustelus californicus	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Triakis semifasciata	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
RHINOBATIDAE															
Rhinobatos productus	1	-	-	1	-	-	-	-	-	-	-	-	2	0	0
PLATYRHINIDAE															
Platyrhinoidis triseriata	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
TORPEDINIDAE															
Torpedo californica	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
RAJIDAE															
Raja inornata	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
DASYATIDAE															
Urolophus halleri	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
MYLIOBATIDAE															
Myliobatis californica	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
ENGRAULIDAE															
Anchoa compressa	-	-	7	7	-	-	-	-	-	-	-	-	14	0	0
Engraulis mordax	69	3	-	16	-	-	-	-	-	-	-	-	88	0	0
Engraulidae species complex	-	-	-	-	-	-	-	33	-	-	-	-	0	33	0
SYNODONTIDAE															
Synodus lucioceps	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
SYNGNATHIDAE															
Syngnathus spp.	1	1	-	2	-	-	-	-	-	-	-	1	4	0	1
SERRANIDAE															
Paralabrax nebulifer	-	-	-	2	-	-	-	-	-	-	-	-	2	0	0
SCIAENIDAE															
Cynoscion nobilis	-	-	3	5	-	-	-	-	-	-	-	-	8	0	0
Genyonemus lineatus	20	8	12	189	-	-	-	-	-	-	-	-	229	0	0
Menticirrhus undulatus	-	-	-	1	-	-	-	-	-	-	-	-	1	0	0
Seriphus politus	34	111	360	1639	-	-	-	-	-	-	-	-	2144	0	0
EMBIOTOCIDAE															
Amphistichus argenteus	1	-	2	-	-	-	-	-	-	-	-	-	3	0	0
Amphistichus koelzi	1	-	-	-	-	-	-	-	-	-	-	-	1	0	0
Cymatogaster aggregata	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Damalichthys vacca	-	-	-	-	-	-	-	-	-	2	-	-	0	0	2
Hyperprosopon argenteum	6	-	1	9	-	-	-	-	-	-	-	-	16	0	0
Micrometrus minimus	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Phanerodon furcatus	2	1	-	7	-	-	-	-	-	-	-	-	10	0	0
Rhacochilus toxotes	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
LABRIDAE															
Halichoeres semicinctus	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0

(CONTINUED), AREA SAN MATEO POINT ON OCTOBER 16-17, 1979

TAXA	20 FEET				40 FEET				60 FEET				TOTALS		
	REPLICATE				REPLICATE				REPLICATE				DEPTH		
	1	2	3	4	1	2	3	4	1	2	3	4	20	40	60
CHORDATA															
CLINIDAE															
Gibbonsia erythra	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Heterostichus rostratus	-	1	-	2	-	-	-	-	-	-	-	-	3	0	0
BLENNIIDAE															
Hypsoblennius spp.	-	-	-	-	1	-	-	-	-	-	-	-	0	1	0
STROMATEIDAE															
Peprilus simillimus	1	15	-	-	-	-	-	-	-	-	-	-	16	0	0
SCORPAENIDAE															
Scorpaena guttata	-	-	-	-	-	-	-	-	-	1	1	-	0	0	2
COTTIDAE															
Leptocottus armatus	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
BOTHIDAE															
Citharichthys stigmaeus	-	-	-	-	4	-	14	4	9	2	5	5	0	22	21
Citharichthys xanthostigma	-	-	-	-	-	-	-	-	-	-	1	-	0	0	1
Hippoglossina stomata	-	-	-	-	-	-	-	-	-	1	-	-	0	0	1
Paralichthys californicus	1	-	2	-	1	1	2	1	-	-	1	-	3	5	1
Xystreurys liolepis	-	-	-	-	-	-	-	-	1	2	-	3	0	0	6
PLEURONECTIDAE															
Hypsopsetta guttulata	-	-	-	-	1	-	-	-	-	-	-	-	0	1	0
Pleuronichthys coenosus	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Pleuronichthys ritteri	-	-	-	-	1	-	-	-	-	-	-	-	0	1	0
Pleuronichthys verticalis	-	-	-	-	-	-	-	-	-	-	2	2	0	0	4

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN FOUR REPLICATE 5-MINUTE OTTER TRAWLS CONDUCTED OFFSHORE SAN ONOFRE AT 20, 40, AND 60 FEET ON OCTOBER 16-17, 1979 REPLICATES 1 AND 2 WERE TAKEN ON THE 16TH AND 3 AND 4 ON THE 17TH.

TAXA	20 FEET				40 FEET				60 FEET				TOTALS		
	REPLICATE				REPLICATE				REPLICATE				DEPTH		
	1	2	3	4	1	2	3	4	1	2	3	4	20	40	60
Time of Day	1406	1421	1122	1138	1314	1336	1039	1100	1228	1249	0956	1017			
CHORDATA															
CARCHARHINIDAE															
Mustelus californicus	-	-	-	-	-	-	1	-	-	-	-	-	0	1	3
Triakis semifasciata	-	1	-	-	-	-	-	-	-	-	-	-	1	0	0
RHINOBATIDAE															
Rhinobatos productus	-	-	-	1	-	2	-	1	-	1	-	-	1	3	1
PLATYRHINIDAE															
Platyrhinoidis triseriata	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
TORPEDINIDAE															
Torpedo californica	-	-	-	-	-	-	-	-	1	-	-	-	0	0	1
RAJIDAE															
Raja inornata	-	-	-	-	-	-	1	-	1	-	-	-	0	1	1
DASYATIDAE															
Urolophus halleri	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
MYLIOBATIDAE															
Myliobatis californica	-	-	-	-	-	-	-	1	-	-	-	-	0	1	0
ENGRAULIDAE															
Anchoa compressa	15	2	-	42	-	-	-	-	-	-	-	-	59	0	0
Engraulis mordax	15	7	1	8	-	-	-	-	-	-	-	-	31	0	0
Engraulidae species complex	-	-	-	-	-	-	16	17	-	-	40	9	0	33	49
SYNODONTIDAE															
Synodus lucioceps	-	-	-	-	1	1	-	-	-	-	-	-	0	2	0
SYNGNATHIDAE															
Syngnathus spp.	-	1	-	-	-	-	-	-	-	-	-	-	1	0	0
SERRANIDAE															
Paralabrax nebulifer	-	-	-	1	2	2	-	3	-	-	-	-	1	7	0
SCIAENIDAE															
Cynoscion nobilis	-	-	-	1	-	-	-	-	-	-	-	-	1	0	0
Genyonemus lineatus	11	21	4	42	5	235	145	87	-	-	-	-	78	472	0
Menticirrhus undulatus	2	-	2	-	-	2	1	1	-	-	-	-	4	4	0
Seriphus politus	33	439	168	242	-	280	14	46	-	-	-	-	882	340	0
EMBIOTOCIDAE															
Amphistichus argenteus	1	6	2	2	-	-	-	-	-	-	-	-	11	0	0
Amphistichus koelzi	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Cymatogaster aggregata	-	-	-	-	-	14	2	2	-	-	-	-	0	18	0
Damalichthys vacca	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Hyperprosopon argenteum	-	-	6	1	-	3	2	3	-	-	-	-	7	8	0
Micrometrus minimus	-	1	-	-	-	-	-	-	-	-	-	-	1	0	0
Phanerodon furcatus	1	1	-	-	19	44	42	18	-	-	-	-	2	123	0
Rhacochilus toxotes	-	-	-	-	3	1	-	-	-	-	-	-	0	4	0
LABRIDAE															
Halichoeres semicinctus	-	-	-	-	1	1	-	-	-	-	-	-	0	2	0

(CONTINUED), AREA SAN ONOFRE ON OCTOBER 16-17, 1979

TAXA	20 FEET				40 FEET				60 FEET				TOTALS		
	REPLICATE				REPLICATE				REPLICATE				DEPTH		
	1	2	3	4	1	2	3	4	1	2	3	4	20	40	60
CHORDATA															
CLINIDAE															
Gibbonsia erythra	-	-	-	-	1	-	-	-	-	-	-	-	0	1	0
Heterostichus rostratus	-	1	-	-	-	-	1	-	-	-	-	-	1	1	0
BLENNIIDAE															
Hypsoblennius spp.	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
STROMATEIDAE															
Peprilus simillimus	-	-	-	-	-	-	1	3	-	-	-	-	0	4	0
SCORPAENIDAE															
Scorpaena guttata	-	-	-	-	-	2	2	-	-	1	1	-	0	4	2
COTTIDAE															
Leptocottus armatus	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
BOTHIDAE															
Citharichthys stigmaeus	-	-	-	-	16	24	18	9	18	8	4	12	0	67	42
Citharichthys xanthostigma	-	-	-	-	-	-	-	-	10	2	2	2	0	0	16
Hippoglossina stomata	-	-	-	-	-	-	-	-	-	-	1	-	0	0	1
Paralichthys californicus	2	2	2	3	6	5	8	4	-	-	-	-	9	22	0
Xystreurys liolepis	-	-	-	-	1	1	2	1	2	2	3	3	0	9	10
PLEURONECTIDAE															
Hypsopsetta guttulata	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Pleuronichthys coenosus	-	-	-	-	-	-	-	-	1	-	-	-	0	0	1
Pleuronichthys ritteri	-	-	-	-	-	2	2	-	-	-	-	-	0	4	0
Pleuronichthys verticalis	-	-	-	-	1	-	-	3	-	2	-	-	0	4	2

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN FOUR REPLICATE 5-MINUTE OTTER TRAWLS CONDUCTED OFFSHORE DON LIGHT AT 2Ø, 4Ø, AND 6Ø FEET ON OCTOBER 16-17, 1979 REPLICATES 1 AND 2 WERE TAKEN ON THE 16TH AND 3 AND 4 ON THE 17TH.

TAXA	2Ø FEET				4Ø FEET				6Ø FEET				TOTALS		
	REPLICATE				REPLICATE				REPLICATE				DEPTH		
	1	2	3	4	1	2	3	4	1	2	3	4	2Ø	4Ø	6Ø
Time of Day	0747	0729	1208	1225	0808	0830	1248	1305	0855	0915	1330	1352			
CHORDATA															
CARCHARHINIDAE															
Mustelus californicus	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Triakis semifasciata	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
RHINOBATIDAE															
Rhinobatos productus	1	-	4	-	1	-	-	-	-	-	-	-	5	1	Ø
PLATYRHINIDAE															
Platyrhinoidis triseriata	1	-	1	-	-	-	-	-	-	-	-	-	2	Ø	Ø
TORPEDINIDAE															
Torpedo californica	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
RAJIDAE															
Raja inornata	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
DASYATIDAE															
Urolophus halleri	-	-	1	-	-	-	-	-	-	-	1	-	1	Ø	1
MYLIOBATIDAE															
Myliobatis californica	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
ENGRAULIDAE															
Anchoa compressa	1	-	12	18	-	-	-	-	-	-	-	-	31	Ø	Ø
Engraulis mordax	26	14	21	113	-	-	64	142	-	-	-	-	174	2Ø6	Ø
Engraulidae species complex	13	31	-	-	646	5ØØ	-	-	1Ø4	6Ø	9	-	44	1146	173
SYNODONTIDAE															
Synodus lucioceps	-	-	-	-	-	-	-	2	-	-	-	-	Ø	2	Ø
SYNGNATHIDAE															
Syngnathus spp.	1	-	1	-	-	-	-	-	-	-	-	-	2	Ø	Ø
SERRANIDAE															
Paralabrax nebulifer	-	1	-	-	-	-	-	-	-	-	-	-	1	Ø	Ø
SCIAENIDAE															
Cynoscion nobilis	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Genyonemus lineatus	76	2	54	15	-	-	46	11	-	-	-	-	147	57	Ø
Menticirrhus undulatus	1	-	1	-	-	-	2	-	-	-	-	-	2	2	Ø
Seriphus politus	133	52	273	343	-	-	152	19	-	-	-	-	8Ø1	171	Ø
EMBIOTOCIDAE															
Amphistichus argenteus	2	-	1Ø	3	-	-	-	-	-	-	-	-	15	Ø	Ø
Amphistichus koelzi	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Cymatogaster aggregata	-	-	-	-	-	-	7	18	-	-	-	-	Ø	25	Ø
Damalichthys vacca	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Hyperprosopon argenteum	2	-	3	-	-	-	-	-	-	-	-	-	5	Ø	Ø
Micrometrus minimus	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Phanerodon furcatus	1	-	-	-	-	-	89	97	-	-	-	-	1	186	Ø
Rhacochilus toxotes	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
LABRIDAE															
Halichoeres semicinctus	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø

(CONTINUED), AREA DON LIGHT ON OCTOBER 16-17, 1979

TAXA	20 FEET				40 FEET				60 FEET				TOTALS		
	REPLICATE				REPLICATE				REPLICATE				DEPTH		
	1	2	3	4	1	2	3	4	1	2	3	4	20	40	60
CHORDATA															
CLINIDAE															
Gibbonsia erythra	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Heterostichus rostratus	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
BLENNIIDAE															
Hypsoblennius spp.	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
STROMATEIDAE															
Peprilus simillimus	-	-	-	-	-	-	7	5	-	-	-	-	0	12	0
SCORPAENIDAE															
Scorpaena guttata	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
COTTIDAE															
Leptocottus armatus	-	-	1	-	-	-	-	-	-	-	-	-	1	0	0
BOTHIDAE															
Citharichthys stigmaeus	2	-	3	-	7	4	10	35	1	2	13	10	5	56	26
Citharichthys xanthostigma	-	-	-	-	-	-	-	-	-	1	-	-	0	0	1
Hippoglossina stomata	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Paralichthys californicus	7	3	12	4	-	-	2	-	-	-	-	-	26	2	0
Xystreurys liolepis	-	-	2	-	-	-	1	-	4	-	5	-	2	1	9
PLEURONECTIDAE															
Hypsopsetta guttulata	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Pleuronichthys coenosus	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Pleuronichthys ritteri	-	-	-	-	-	-	-	-	-	-	2	2	0	0	4
Pleuronichthys verticalis	-	-	-	-	-	-	-	3	-	1	1	3	0	3	5

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN REPLICATE GILL NETS AT OFFSHORE AREAS SONGS (ZONE OA), DON LIGHT (ZONE 6), AND SAN MATEO POINT (ZONE 3A) AT 30 FEET ON DECEMBER 12-13,1979

TAXA	SONGS (ZONE OA)						DON LIGHT (ZONE 6)						SAN MATEO POINT			
	STATION 1		STATION 2		STATION 3		STATION 6		STATION 7		STATION 8		STATION11		STATION12	
	REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE	
	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
CHORDATA																
CARCHARHINIDAE																
Mustelus californicus	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-
Triakis semifasciata	7	1	-	1	-	-	-	-	-	-	-	-	4	2	-	-
SQUALIDAE																
Squalus acanthias	-	-	-	-	-	-	-	1	7	-	-	1	-	-	-	-
RHINOBATIDAE																
Rhinobatos productus	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
DASYATIDAE																
Urolophus halleri	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MYLIOBATIDAE																
Myliobatis californica	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ENGRAULIDAE																
Anchoa compressa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ATHERINIDAE																
Atherinops affinis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Atherinopsis californiensis	-	-	11	-	-	1	-	-	-	1	-	-	1	-	7	5
SERRANIDAE																
Paralabrax clathratus	-	1	-	-	-	-	-	-	-	-	-	-	9	6	-	-
Paralabrax nebulifer	5	1	2	5	-	-	-	1	2	2	-	-	-	-	1	-
CARANGIDAE																
Trachurus symmetricus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PRISTIPOMATIDAE																
Anisotremus davidsonii	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xenistius californiensis	1	-	-	-	-	-	-	-	-	-	-	-	4	4	-	-
SCIAENIDAE																
Cheilotrema saturnum	1	-	-	-	-	-	-	-	-	1	-	-	141	103	2	7
Cynoscion nobilis	-	-	-	-	1	-	-	-	-	-	-	-	16	7	7	7
Genyonemus lineatus	8	1	-	1	23	6	-	1	-	-	1	-	1	-	1	1
Menticirrhus undulatus	-	-	-	-	6	5	-	-	-	-	-	-	-	1	-	1
Seriphus politus	4	-	4	2	3	5	-	-	-	-	-	-	20	11	56	38
Umbrina roncador	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-
Sciaenidae species complex	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GIRELLIDAE																
Girella nigricans	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-
SCORPIDIDAE																
Medialuna californiensis	1	-	-	-	-	-	-	-	-	-	-	-	7	1	-	-
EMBIOTOCIDAE																
Amphistichus argenteus	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Cymatogaster aggregata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Damalichthys vacca	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Embiotoca jacksoni	4	39	-	1	-	-	-	-	-	-	-	-	3	1	-	-
Hyperprosopon argenteum	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-

(CONTINUED),30 FOOT GILL NETS: SURVEY OF DECEMBER 12-13,1979

TAXA	SONGS (ZONE OA)						DON LIGHT (ZONE 6)						SAN MATEO POINT			
	STATION 1		STATION 2		STATION 3		STATION 6		STATION 7		STATION 8		STATION11		STATION12	
	REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE	
	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
CHORDATA																
EMBIOTOCIDAE																
Hypsurus caryi	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phanerodon furcatus	-	2	-	1	2	1	-	-	-	-	3	-	21	1	-	-
Rhacochilus toxotes	4	29	-	2	-	-	-	-	-	-	-	-	1	1	-	-
POMACENTRIDAE																
Chromis punctipinnis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LABRIDAE																
Halichoeres semicinctus	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
Oxyjulis californica	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
Pimelometopon pulchrum	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
SPHYRAENIDAE																
Sphyraena argentea	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-
CLINIDAE																
Heterostichus rostratus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SCOMBRIDAE																
Sarda chiliensis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Scomber japonicus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SCORPAENIDAE																
Scorpaena guttata	-	-	-	-	-	2	-	1	-	-	1	-	-	2	-	-
BOTHIDAE																
Paralichthys californicus	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN REPLICATE GILL NETS AT OFFSHORE AREAS SONGS (ZONE OB), DON LIGHT (ZONE 6), AND SAN MATEO POINT (ZONE 3B) AT 45 FEET ON DECEMBER 12-13,1979

TAXA	SONGS (ZONE OB)				DON LIGHT (ZONE 6)				SAN MATEO (ZONE 3B)			
	STATION 4		STATION 5		STATION 9		STATION 10		STATION 13		STATION 14	
	REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE	
	1	2	1	2	1	2	1	2	1	2	1	2
CHORDATA												
CARCHARHINIDAE												
Mustelus californicus	-	-	1	-	-	-	-	-	-	1	-	-
Triakis semifasciata	1	-	-	-	-	-	-	-	-	-	1	1
SQUALIDAE												
Squalus acanthias	-	-	-	-	-	-	-	-	-	-	-	-
RHINOBATIDAE												
Rhinobatos productus	-	-	-	-	-	-	-	-	-	-	-	-
DASYATIDAE												
Urolophus halleri	-	-	-	-	-	-	-	-	-	-	-	-
MYLIOBATIDAE												
Myliobatis californica	-	-	-	-	-	-	-	-	1	-	-	-
ENGRAULIDAE												
Anchoa compressa	-	-	-	-	-	-	-	-	-	-	1	-
ATHERINIDAE												
Atherinops affinis	-	-	-	-	-	-	1	-	-	-	-	-
Atherinopsis californiensis	-	-	1	-	-	-	-	-	-	-	-	-
SERRANIDAE												
Paralabrax clathratus	1	5	2	-	1	2	-	9	-	-	10	3
Paralabrax nebulifer	-	-	4	-	5	6	-	4	-	1	9	1
CARANGIDAE												
Trachurus symmetricus	-	1	1	-	-	-	1	-	2	2	-	1
PRISTIPOMATIDAE												
Anisotremus davidsonii	-	-	1	-	-	-	-	-	-	-	-	-
Xenistius californiensis	1	2	-	-	1	-	-	-	-	-	-	1
SCIAENIDAE												
Cheilotrema saturnum	6	2	5	1	-	-	-	4	-	1	4	3
Cynoscion nobilis	3	-	2	-	-	-	-	-	-	1	2	1
Genyonemus lineatus	2	-	1	-	-	2	-	-	5	5	-	-
Menticirrhus undulatus	-	-	-	-	-	-	-	-	1	5	-	-
Seriphus politus	7	8	9	2	1	1	1	2	-	1	21	10
Umbrina roncador	-	-	-	-	-	-	-	-	-	-	-	-
GIRELLIDAE												
Girella nigricans	-	-	-	-	-	-	-	-	-	-	-	-
SCORPIDIDAE												
Medialuna californiensis	-	1	-	1	-	-	-	-	-	-	8	-
EMBIOTOCIDAE												
Amphistichus argenteus	-	-	-	-	-	-	-	-	-	-	-	-
Cymatogaster aggregata	-	-	-	-	3	-	-	-	-	-	-	-
Damalichthys vacca	-	-	1	-	-	-	-	-	-	-	1	2
Embiotoca jacksoni	1	-	1	-	-	-	-	-	-	-	-	-
Hyperprosopon argenteum	2	-	-	-	-	-	-	-	-	-	2	-
Hypsurus caryi	-	-	-	-	-	-	-	-	-	-	-	-

(CONTINUED),45 FOOT GILL NETS: SURVEY OF DECEMBER 12-13,1979

TAXA	SONGS (ZONE OB)				DON LIGHT (ZONE 6)				SAN MATEO (ZONE 3B)			
	STATION 4		STATION 5		STATION 9		STATION 10		STATION 13		STATION 14	
	REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE		REPLICATE	
	1	2	1	2	1	2	1	2	1	2	1	2
CHORDATA												
EMBIOTOCIDAE												
Phanerodon furcatus	8	2	3	1	16	-	-	2	1	3	4	4
Rhacochilus toxotes	-	-	-	-	-	-	-	-	-	-	1	1
POMACENTRIDAE												
Chromis punctipinnis	-	-	-	-	-	-	-	-	-	-	-	1
LABRIDAE												
Halichoeres semicinctus	-	-	-	-	-	-	-	-	-	-	-	-
Oxyjulis californica	-	-	-	-	-	-	-	-	-	-	-	-
Pimelometopon pulchrum	-	-	1	-	-	7	-	-	-	-	1	-
SPHYRAENIDAE												
Sphyraena argentea	-	-	-	-	-	-	-	-	-	-	-	1
CLINIDAE												
Heterostichus rostratus	1	-	-	-	-	-	-	-	-	-	-	-
SCOMBRIDAE												
Sarda chiliensis	-	-	-	-	-	-	-	-	-	-	-	-
Scomber japonicus	-	-	-	-	1	-	-	-	4	3	-	-
SCORPAENIDAE												
Scorpaena guttata	-	-	1	1	-	2	2	-	2	-	-	-
BOTHIDAE												
Paralichthys californicus	-	-	-	-	-	-	-	-	-	-	-	-

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN FOUR REPLICATE 5-MINUTE OTTER TRAWLS CONDUCTED OFFSHORE SAN MATEO POINT AT 2Ø, 4Ø, AND 6Ø FEET ON DECEMBER 12-13,1979 REPLICATES 1 AND 2 WERE TAKEN ON THE 12TH AND 3 AND 4 ON THE 13TH.

TAXA	2Ø FEET				4Ø FEET				6Ø FEET				TOTALS		
	REPLICATE				REPLICATE				REPLICATE				DEPTH		
	1	2	3	4	1	2	3	4	1	2	3	4	2Ø	4Ø	6Ø
CHORDATA															
RHINOBATIDAE															
Rhinobatos productus	-	-	-	-	1	-	-	-	-	-	-	-	Ø	1	Ø
PLATYRHINIDAE															
Platyrhinoidis triseriata	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
TORPEDINIDAE															
Torpedo californica	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
RAJIDAE															
Raja binoculata	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Raja inornata	-	-	-	-	-	-	-	-	-	-	1	-	Ø	Ø	1
DASYATIDAE															
Urolophus halleri	-	-	-	-	3	-	-	2	-	-	-	-	Ø	5	Ø
MYLIOBATIDAE															
Myliobatis californica	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
ENGRAULIDAE															
Engraulis mordax	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Engraulidae species complex	-	1	1	-	-	-	-	-	-	-	-	-	2	Ø	Ø
SYNGNATHIDAE															
Syngnathus spp.	3	1	-	3	-	-	1	-	-	-	-	-	7	1	Ø
SERRANIDAE															
Paralabrax nebulifer	-	-	-	-	-	-	-	-	-	1	-	1	Ø	Ø	2
Stereolepis gigas	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
BRANCHIOSTEGIDAE															
Caulolatilus princeps	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
SCIAENIDAE															
Hentictrrhus undulatus	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Umbrina roncador	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
EMBIOTOCIDAE															
Cymatogaster aggregata	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Hypsurus caryi	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
CLINIDAE															
Heterostichus rostratus	1	1	-	2	-	-	-	-	-	-	-	-	4	Ø	Ø
GOBIIDAE															
Lepidogobis lepidus	-	-	-	-	-	-	-	-	2	1	1	1	Ø	Ø	5
SCORPAENIDAE															
Scorpaena guttata	-	-	1	-	-	-	-	-	-	-	-	1	1	Ø	1
BOTHIDAE															
Citharichthys stigmaeus	-	-	-	-	16	24	9	4	17	22	22	22	Ø	53	83
Citharichthys xanthostigma	-	-	-	-	-	-	-	-	1	1	1	2	Ø	Ø	5
Hippoglossina stomata	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Paralichthys californicus	2	-	1	-	4	1	1	-	1	-	-	1	3	6	2
Xystreurys liolepis	1	-	-	-	1	1	2	-	3	2	2	-	1	4	7
PLEURONECTIDAE															
Hypsopsetta guttulata	-	-	-	-	2	-	-	-	-	-	-	-	Ø	2	Ø
Pleuronichthys ritteri	-	-	1	-	1	-	-	-	-	3	-	-	1	1	3
Pleuronichthys verticalis	-	-	-	-	-	1	-	-	1	1	-	-	Ø	1	2

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN FOUR REPLICATE 5-MINUTE OTTER TRAWLS CONDUCTED OFFSHORE SAN ONOFRE AT 2Ø, 4Ø, AND 6Ø FEET ON DECEMBER 12-13,1979 REPLICATES 1 AND 2 WERE TAKEN ON THE 12TH AND 3 AND 4 ON THE 13TH.

TAXA	2Ø FEET				4Ø FEET				6Ø FEET				TOTALS		
	REPLICATE				REPLICATE				REPLICATE				DEPTH		
	1	2	3	4	1	2	3	4	1	2	3	4	2Ø	4Ø	6Ø
CHORDATA															
RHINOBATIDAE															
Rhinobatos productus	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
PLATYRHINIDAE															
Platyrhinoidis triseriata	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
TORPEDINIDAE															
Torpedo californica	-	-	-	-	-	1	-	-	-	-	-	-	Ø	1	Ø
RAJIDAE															
Raja binoculata	-	-	-	-	1	-	-	-	-	-	-	-	Ø	1	Ø
Raja inornata	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
DASYATIDAE															
Urolophus halleri	-	-	1	-	-	-	1	2	-	-	-	-	1	3	Ø
MYLIOBATIDAE															
Myliobatis californica	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
ENGRAULIDAE															
Engraulis mordax	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Engraulidae species complex	11Ø	6	-	-	-	-	-	-	-	-	-	-	116	Ø	Ø
SYNGNATHIDAE															
Syngnathus spp.	5	1	-	-	-	-	-	-	-	-	-	-	6	Ø	Ø
SERRANIDAE															
Paralabrax nebulifer	-	-	-	-	-	-	-	-	-	1	-	-	Ø	Ø	1
Stereolepis gigas	-	-	1	-	-	-	-	-	-	-	-	-	1	Ø	Ø
BRANCHIOSTEGIDAE															
Caulolatilus princeps	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
SCIAENIDAE															
Menticirrhus undulatus	1	-	-	3	-	-	-	-	-	-	-	-	4	Ø	Ø
Umbrina roncador	-	-	1	-	-	-	-	-	-	-	-	-	1	Ø	Ø
EMBIOTOCIDAE															
Cymatogaster aggregata	-	-	-	-	-	1	-	-	-	-	-	-	Ø	1	Ø
Hypsurus caryi	1	-	-	-	-	-	-	-	-	-	-	-	1	Ø	Ø
CLINIDAE															
Heterostichus rostratus	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
GOBIIDAE															
Lepidogobis lepidus	-	-	-	-	-	-	-	-	-	2	-	1	Ø	Ø	3
SCORPAENIDAE															
Scorpaena guttata	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
BOTHIDAE															
Citharichthys stigmaeus	3	2	1	2	1Ø	8	12	18	29	26	25	25	8	48	1Ø5
Citharichthys xanthostigma	-	-	-	-	-	-	-	-	-	2	-	-	Ø	Ø	2
Hippoglossina stomata	-	-	-	-	-	-	-	-	-	1	-	-	Ø	Ø	1
Paralichthys californicus	2	7	1	3	2	1	-	1	1	1	-	-	13	4	2
Xystreurys liolepis	-	-	1	1	3	3	-	-	1	4	-	5	2	6	1Ø
PLEURONECTIDAE															
Hypsopsetta guttulata	-	-	1	-	1	-	-	-	-	-	-	-	1	1	Ø
Pleuronichthys ritteri	-	-	-	-	3	-	1	1	-	-	-	-	Ø	5	Ø
Pleuronichthys verticalis	-	-	-	-	1	-	-	-	5	6	-	4	Ø	1	15

SPECIES COMPOSITION AND NUMERICAL ABUNDANCE OF FISH SPECIES COLLECTED IN FOUR REPLICATE 5-MINUTE OTTER TRAWLS CONDUCTED OFFSHORE DON LIGHT AT 2Ø, 4Ø, AND 6Ø FEET ON DECEMBER 12-13,1979 REPLICATES 1 AND 2 WERE TAKEN ON THE 12TH AND 3 AND 4 ON THE 13TH.

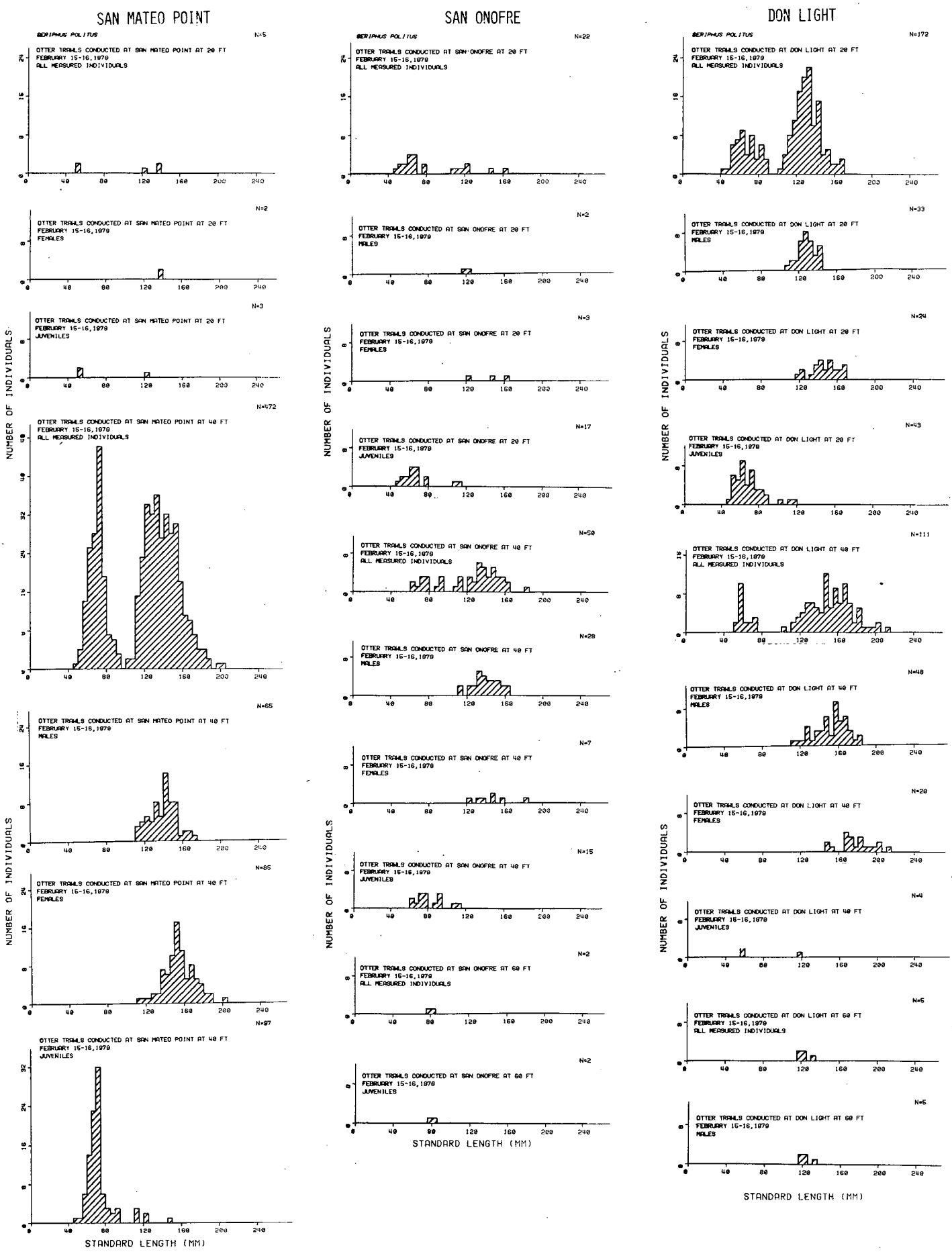
TAXA	2Ø FEET				4Ø FEET				6Ø FEET				TOTALS		
	REPLICATE				REPLICATE				REPLICATE				DEPTH		
	1	2	3	4	1	2	3	4	1	2	3	4	2Ø	4Ø	6Ø
CHORDATA															
RHINOBATIDAE															
Rhinobatos productus	-	-	-	-	-	-	-	2	-	-	-	-	Ø	2	Ø
PLATYRHINIDAE															
Platyrhinoidis triseriata	1	-	3	-	-	-	-	-	-	-	-	-	4	Ø	Ø
TORPEDINIDAE															
Torpedo californica	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
RAJIDAE															
Raja binoculata	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Raja inornata	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
DASYATIDAE															
Urolophus halleri	-	-	-	-	4	3	2	4	-	-	-	-	Ø	13	Ø
MYLIOBATIDAE															
Myliobatis californica	-	-	1	-	-	-	-	-	-	-	-	-	1	Ø	Ø
ENGRAULIDAE															
Engraulis mordax	-	6Ø3Ø	-	-	175	-	-	-	-	-	-	-	6Ø3Ø	175	Ø
Engraulidae species complex	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
SYNGNATHIDAE															
Syngnathus spp.	-	-	3	2	-	-	-	-	-	-	-	-	5	Ø	Ø
SERRANIDAE															
Paralabrax nebulifer	-	-	-	-	-	-	-	-	-	1	-	-	Ø	Ø	1
Stereolepis gigas	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
BRANCHIOSTEGIDAE															
Caulolatilus princeps	-	-	-	-	-	-	-	-	-	-	1	-	Ø	Ø	1
SCIAENIDAE															
Menticirrhus undulatus	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Umbrina roncador	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
EMBIOTOCIDAE															
Cymatogaster aggregata	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Hypsurus caryi	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
CLINIDAE															
Heterostichus rostratus	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
GOBIIDAE															
Lepidogobis lepidus	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
SCORPAENIDAE															
Scorpaena guttata	-	-	-	-	-	-	-	-	-	-	-	1	Ø	Ø	1
BOTHIDAE															
Citharichthys stigmaeus	-	-	2	1	9	27	21	11	6	6	3	15	3	68	3Ø
Citharichthys xanthostigma	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Hippoglossina stomata	-	-	-	-	-	-	-	-	-	-	-	1	Ø	Ø	1
Paralichthys californicus	-	-	11	5	1	1	2	-	-	2	2	2	16	4	6
Xystreurys liolepis	-	-	2	-	-	-	-	-	-	-	1	3	2	Ø	4
PLEURONECTIDAE															
Hypsopsetta guttulata	-	-	-	-	-	-	-	-	-	-	-	-	Ø	Ø	Ø
Pleuronichthys ritteri	-	-	-	-	-	-	-	-	-	-	1	-	Ø	Ø	1
Pleuronichthys verticalis	-	-	-	-	-	-	-	-	-	4	1	-	Ø	Ø	5

D. LENGTH-FREQUENCY HISTOGRAMS

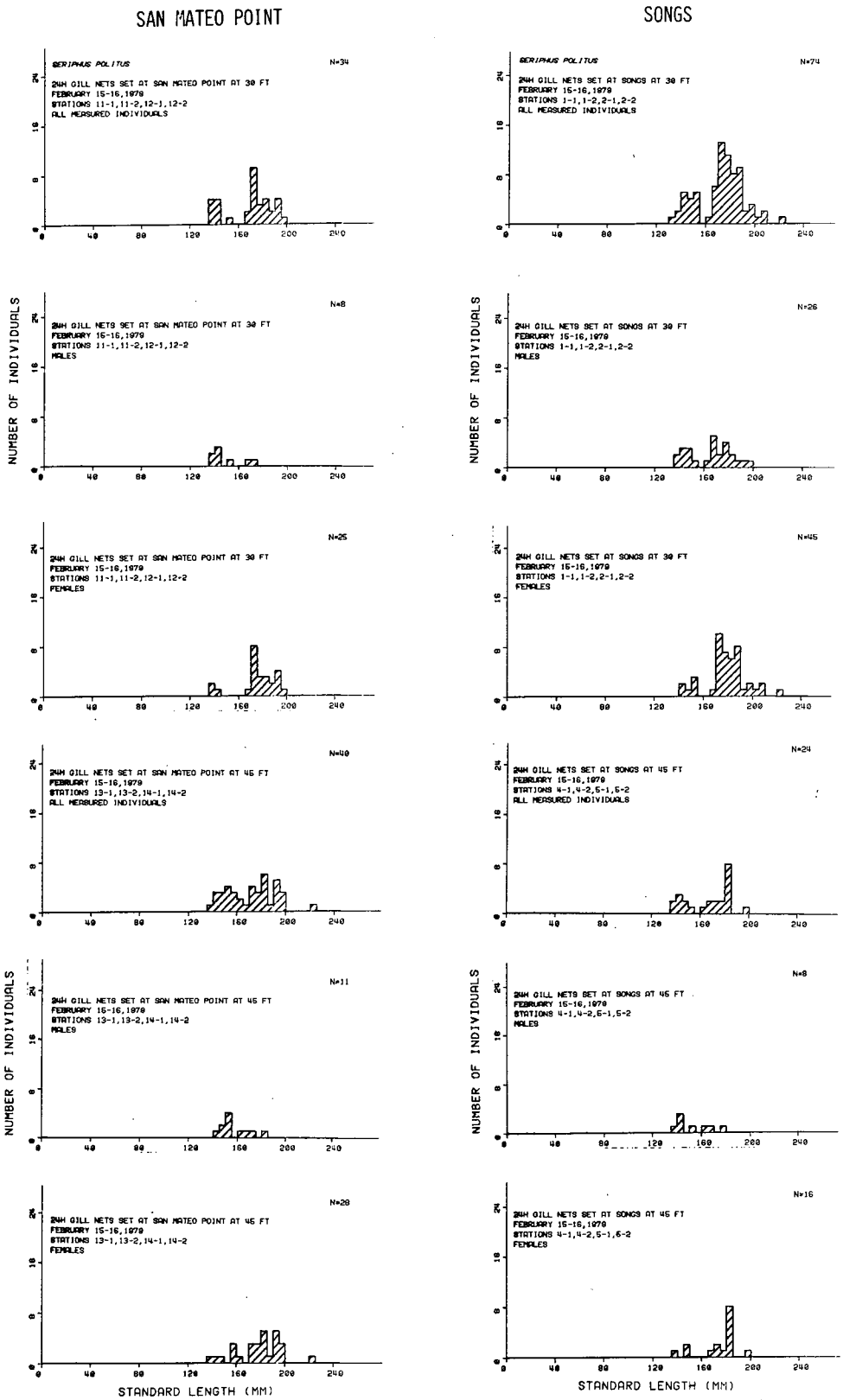
1. SERIPHUS POLITUS

Length frequency histograms of Seriphus politus collected in otter trawls conducted at 20, 40, and 60 ft at San Mateo Point, San Onofre, and Don Light during survey of February 15-16, 1979.

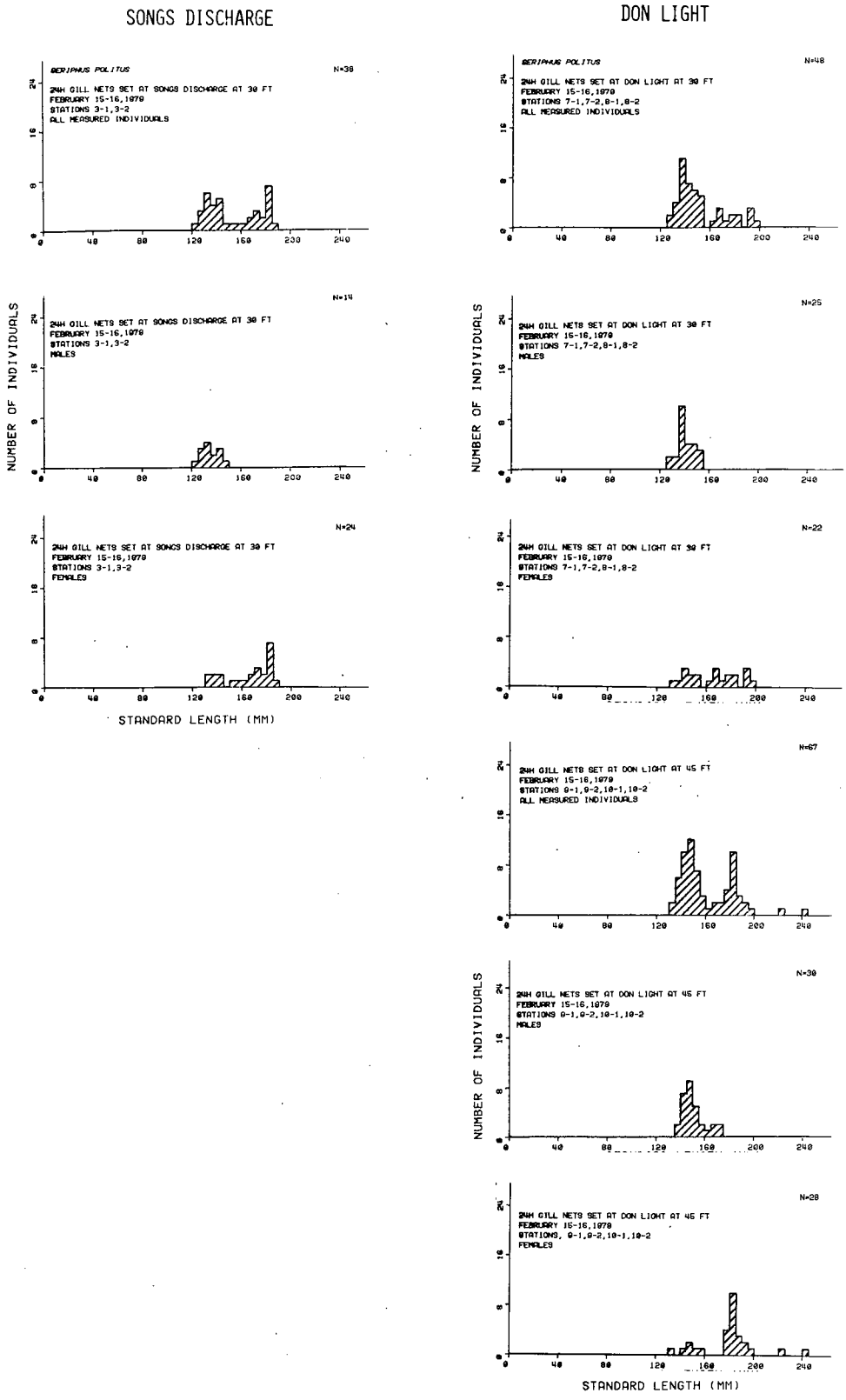
Caption applies to histograms on adjoining page(s).



No Seriphus politus collected at 60 ft.



Length frequency histograms of Seriphus politus collected in gill nets conducted at 30 and 45 ft at San Mateo Point and SONGS during survey of February 15-16, 1979.

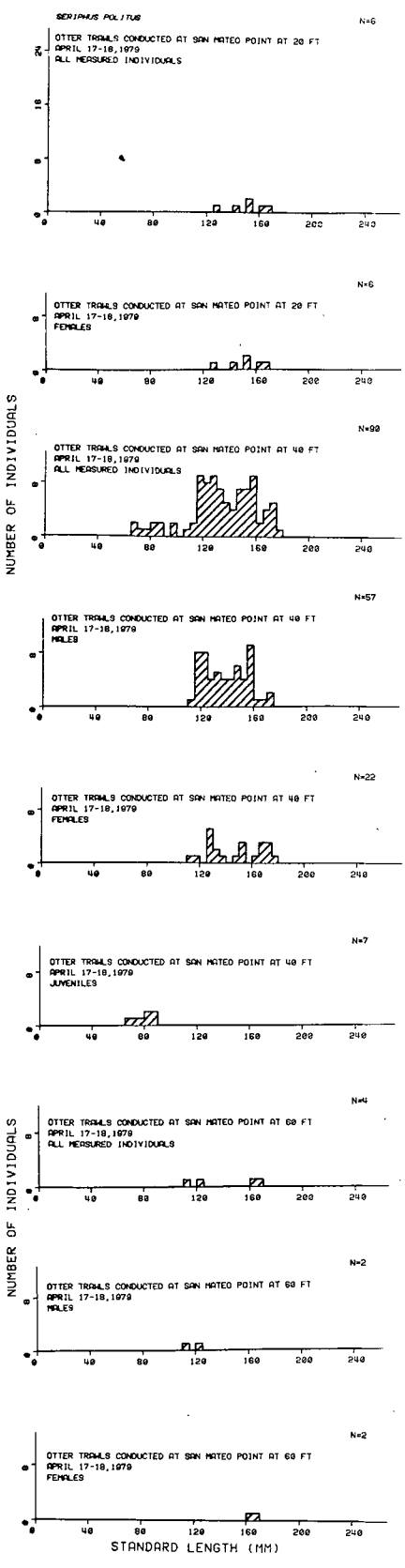


Length frequency histograms of Seriphus politus collected in gill nets conducted at 30 and 45 ft at SONGS Discharge and Don Light during survey of February 15-16, 1979.

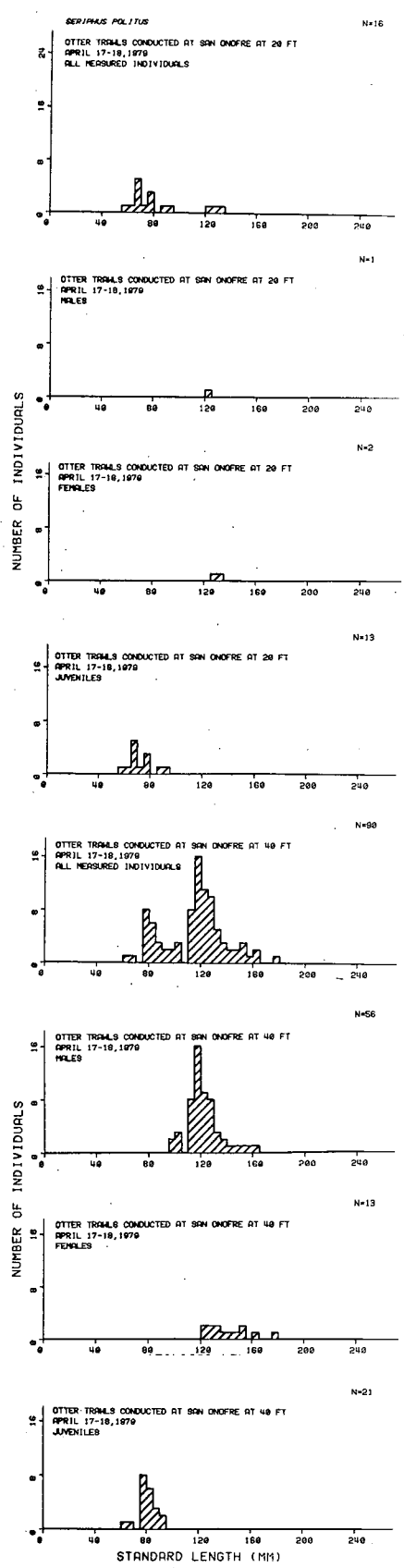
Length frequency histograms of Seriphus politus collected in otter trawls conducted at 20, 40, and 60 ft at San Mateo Point, San Onofre, and Don Light during survey of April 17-18, 1979.

Caption applies to histograms on adjoining page(s).

SAN MATEO POINT

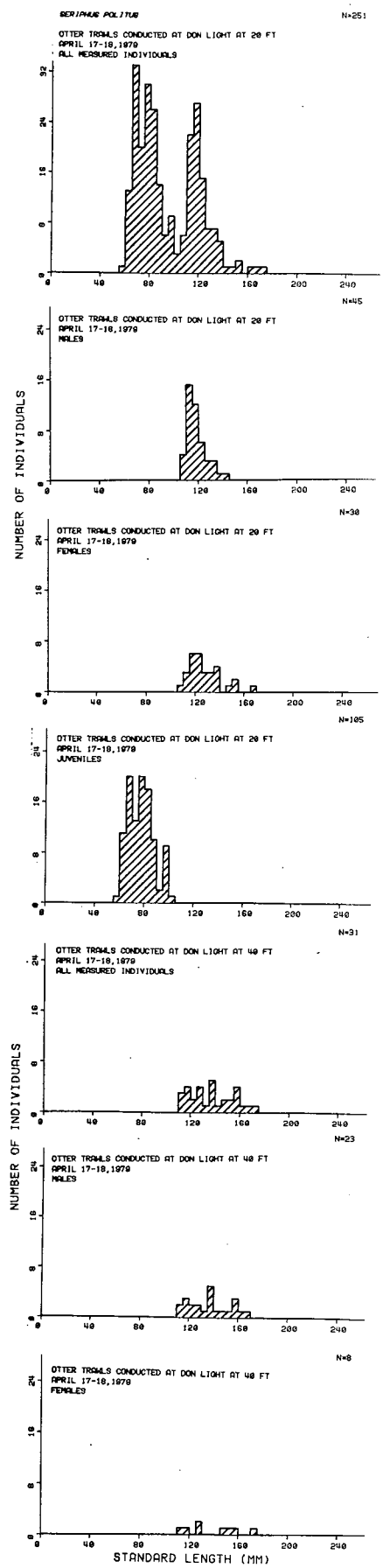


SAN ONOFRE



No Seriphus politus collected at 60 ft.

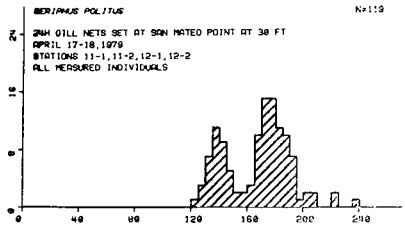
DON LIGHT

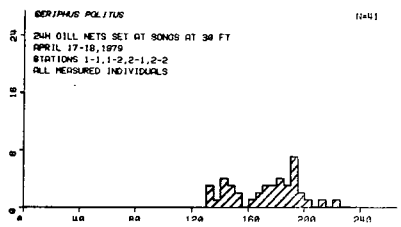


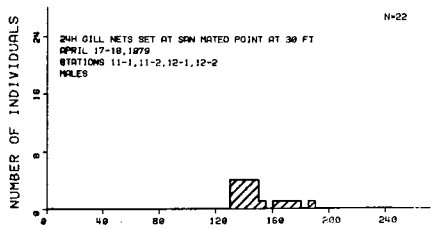
No Seriphus politus collected at 60 ft.

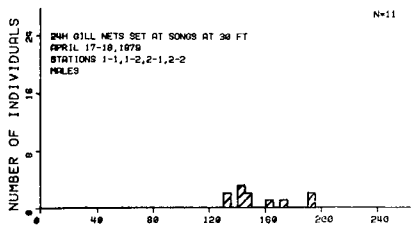
SAN MATEO POINT

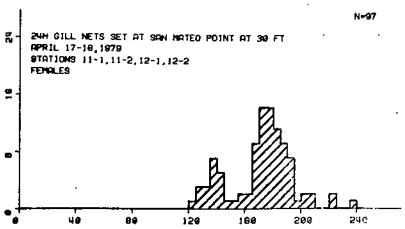
SONGS

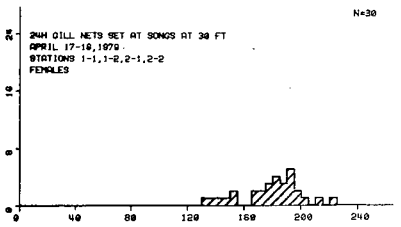


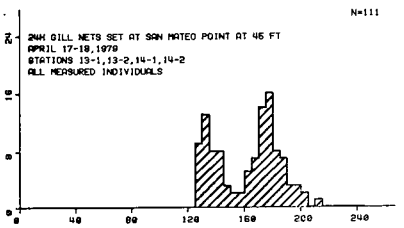


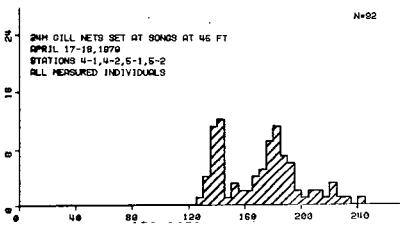


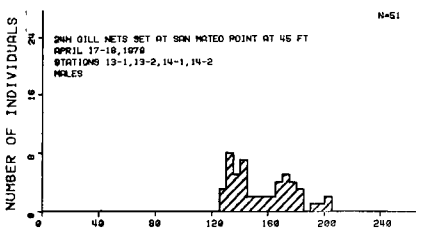


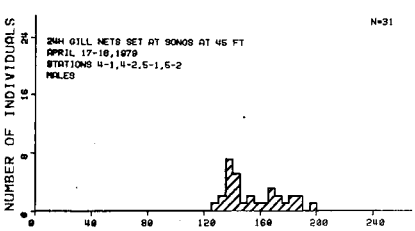


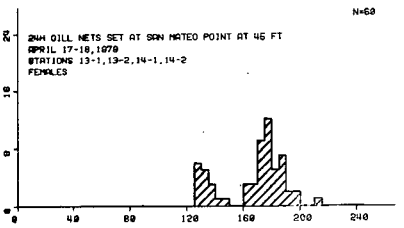


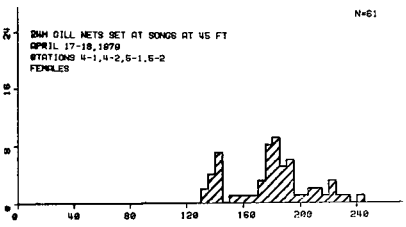




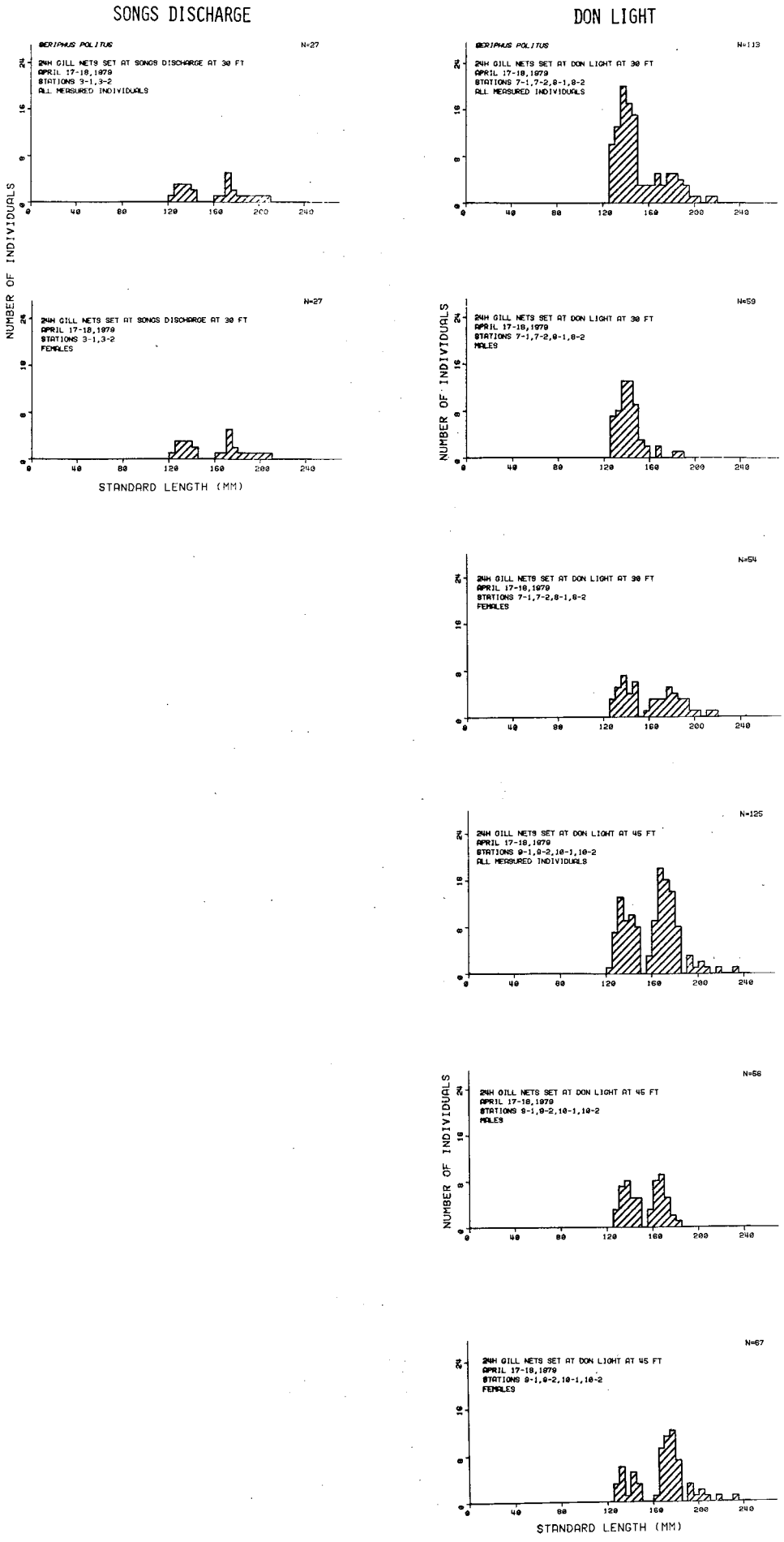








Length frequency histograms of Seriphus politus collected in gill nets conducted at 30 and 45 ft at San Mateo Point and SONGS during survey of April 17-18, 1979.

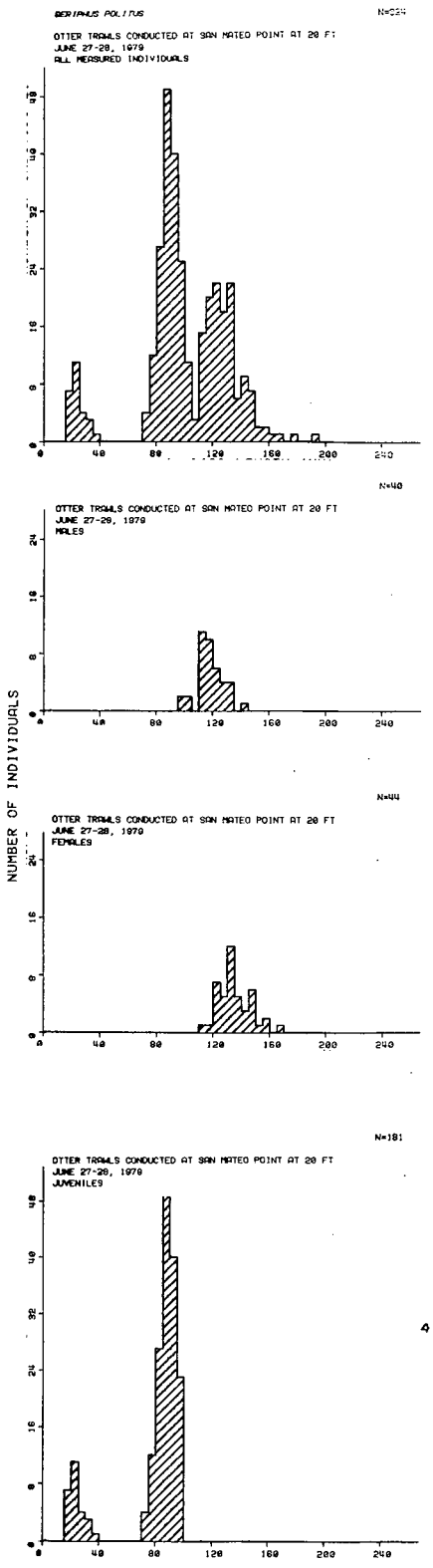


Length frequency histograms of Seriphus politus collected in gill nets conducted at 30 and 45 ft at SONGS Discharge and Don Light during survey of April 17-18, 1979.

Length frequency histograms of Seriphus politus collected in otter trawls conducted at 20, 40, and 60 ft at San Mateo Point, San Onofre, and Don Light during survey of June 27-28, 1979.

Caption applies to histograms on adjoining page(s).

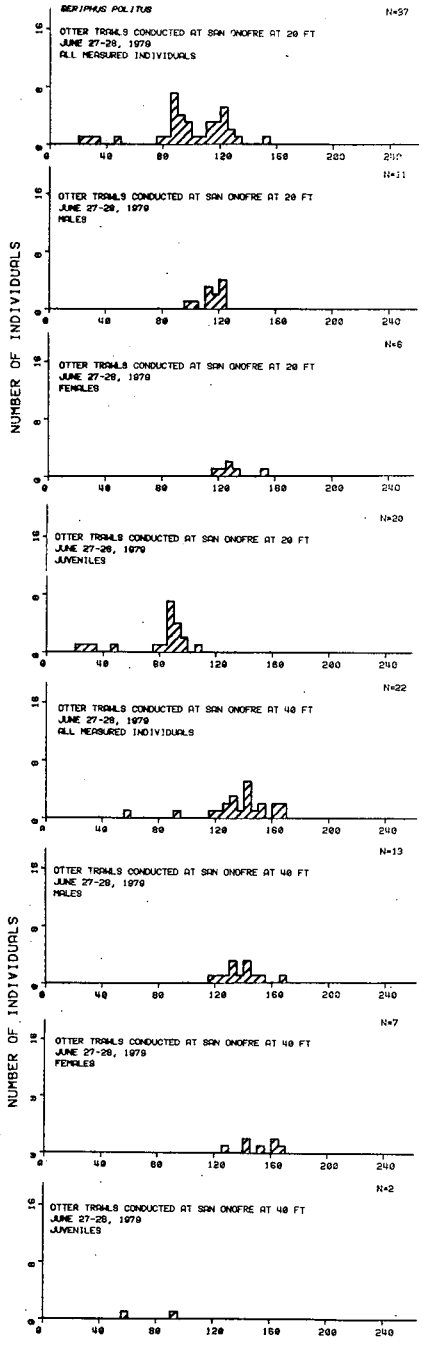
SAN MATEO POINT



No Seriphus politus collected at 40 ft.

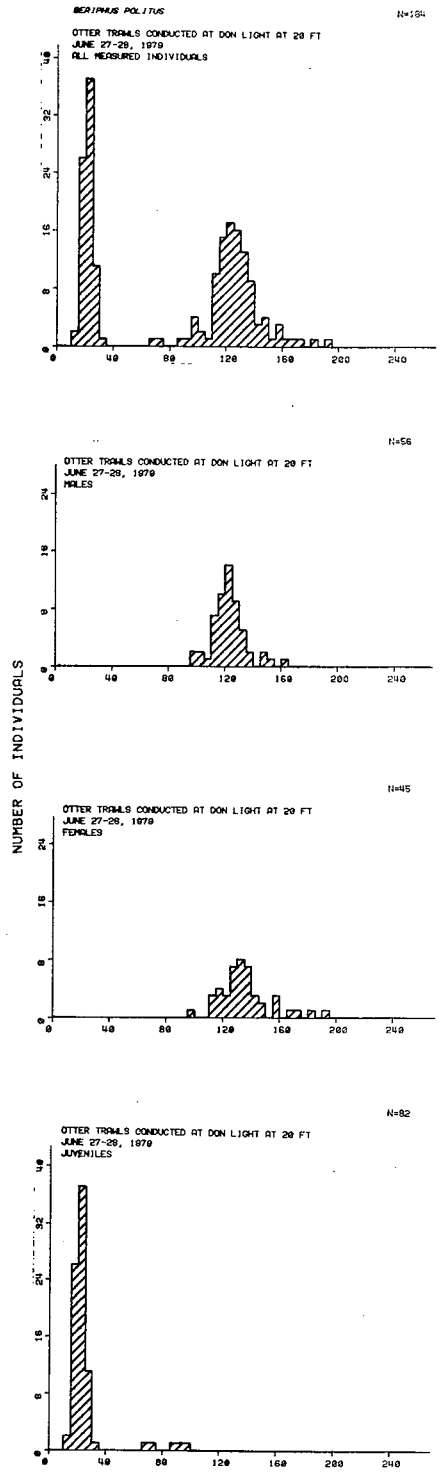
No Seriphus politus collected at 60 ft.

SAN ONOFRE



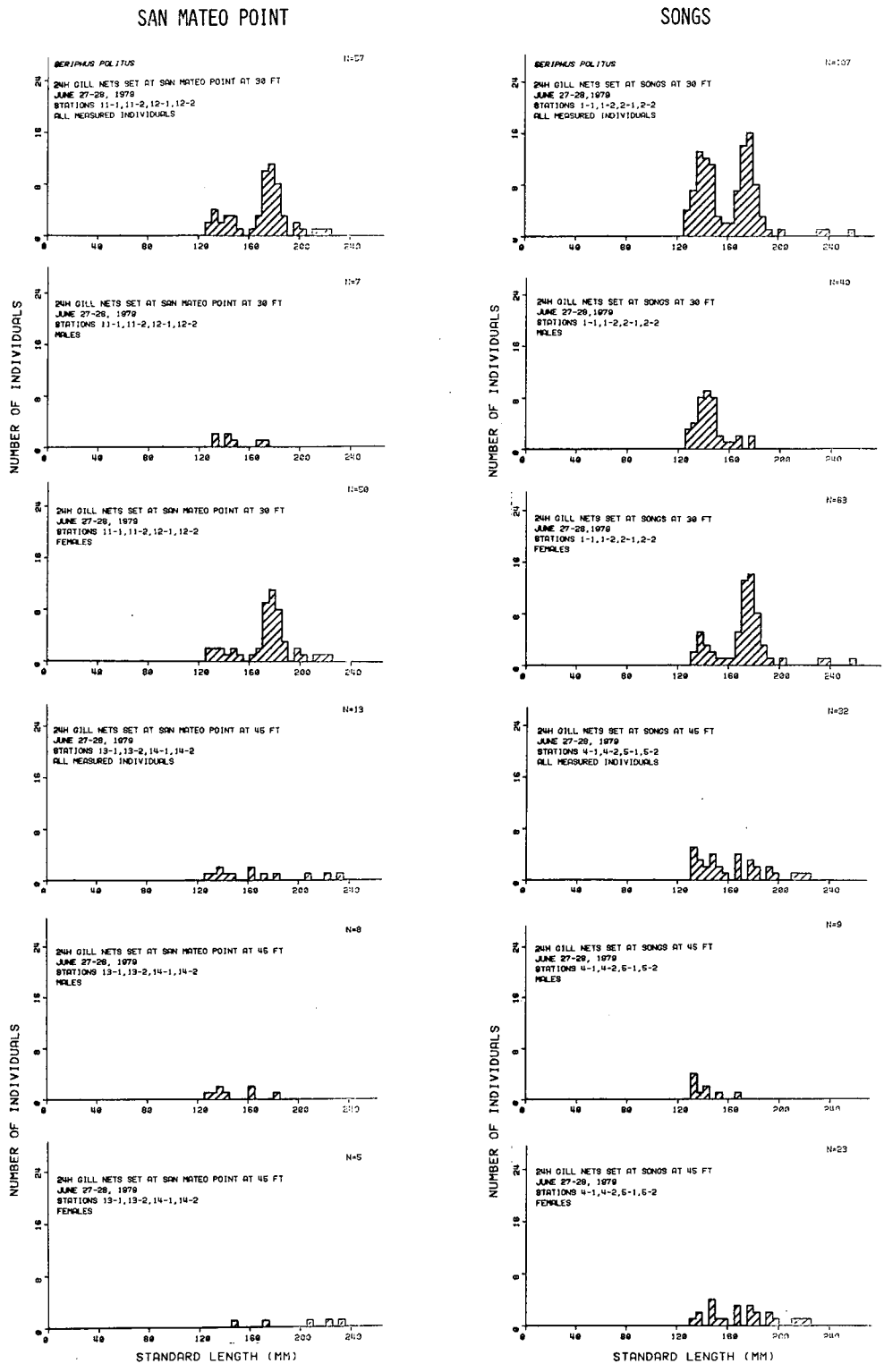
No Seriphus politus collected at 60 ft.

DON LIGHT

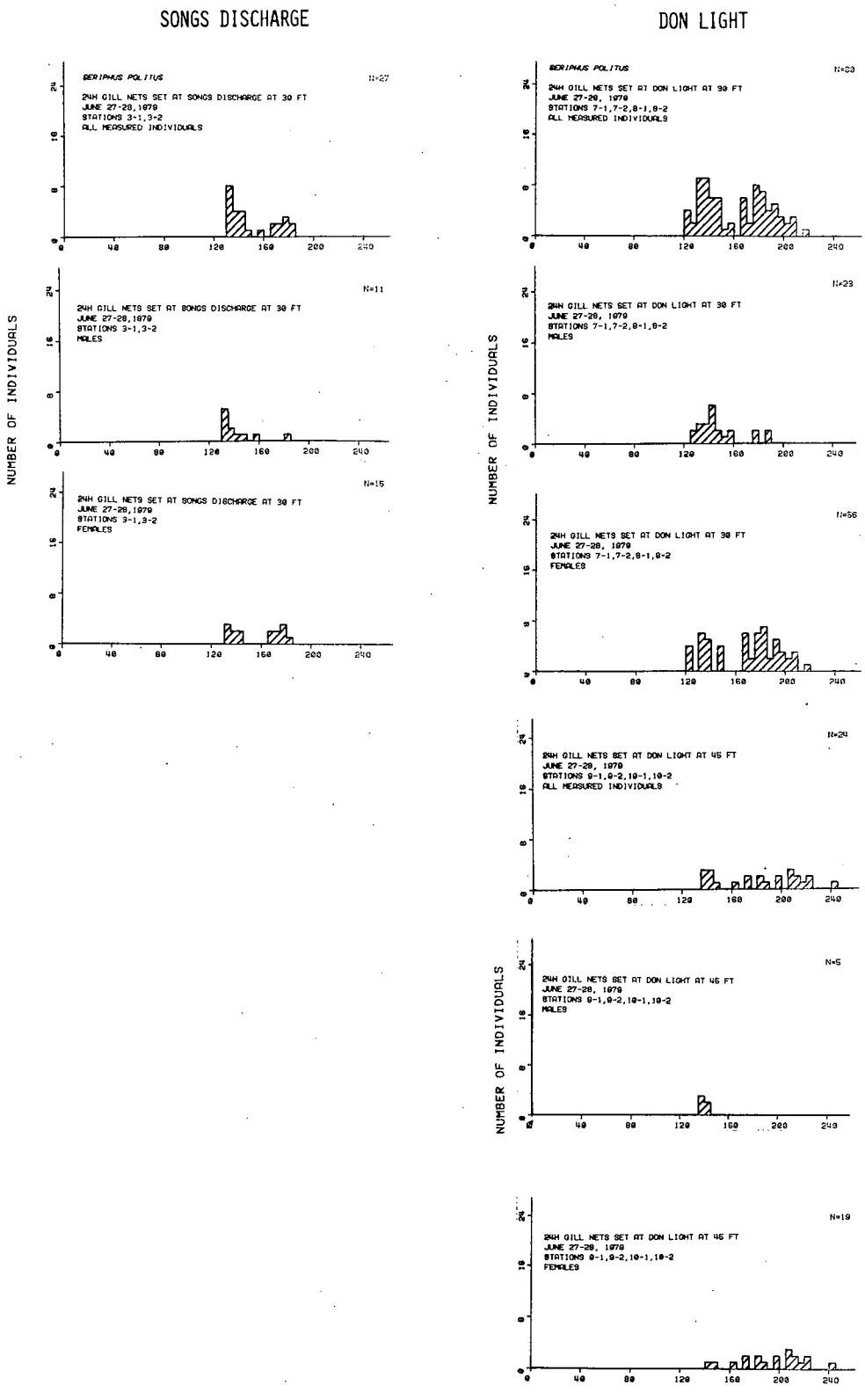


No Seriphus politus collected at 40 ft.

No Seriphus politus collected at 60 ft.



Length frequency histograms of Seriphus politus collected in gill nets conducted at 30 and 45 ft at San Mateo Point and SONGS during survey of June 27-28, 1979.



Length frequency histograms of Seriphus politus collected in gill nets conducted at 30 and 45 ft at SONGS Discharge and Don Light during survey of June 27-28, 1979.

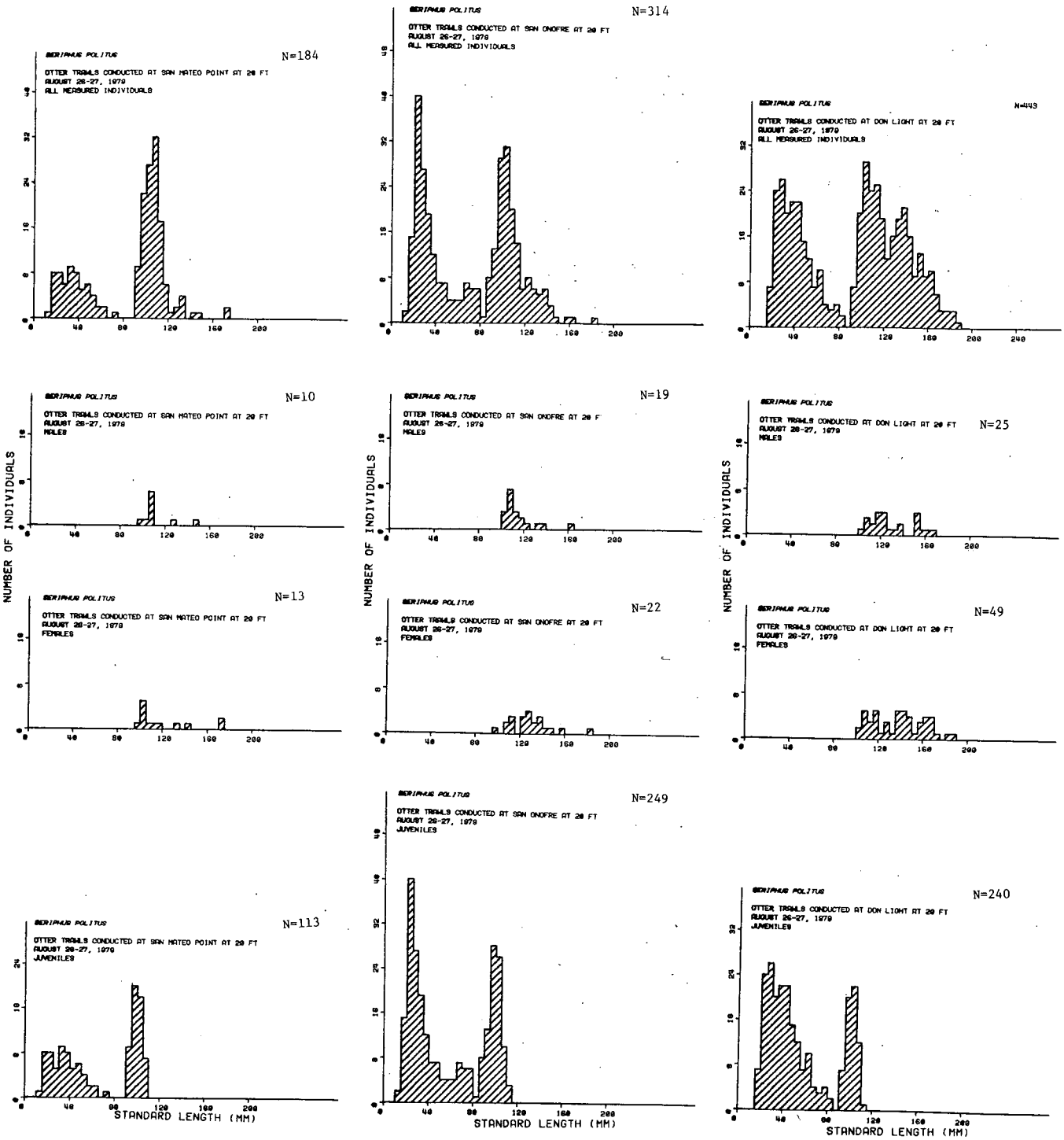
Length frequency histograms of Seriphus politus collected in otter trawls conducted at 20, 40, and 60 ft at San Mateo Point, San Onofre, and Don Light during survey of August 26-27, 1979.

Caption applies to histograms on adjoining page(s).

SAN MATEO POINT

SAN ONOFRE

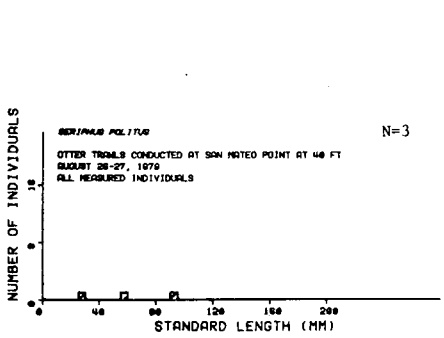
DON LIGHT

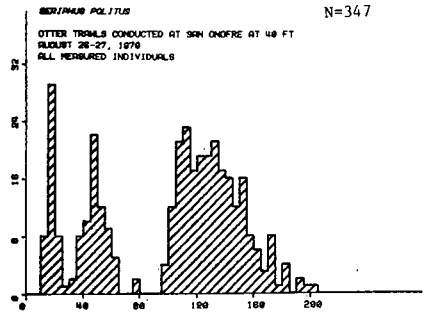


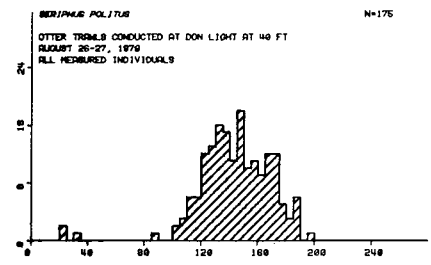
SAN MATEO POINT

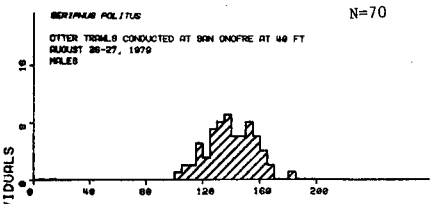
SAN ONOFRE

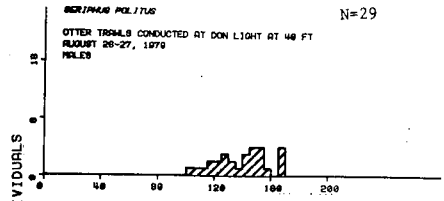
DON LIGHT

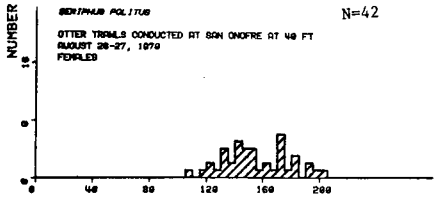


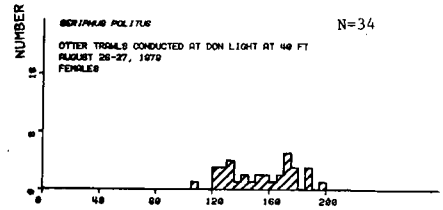


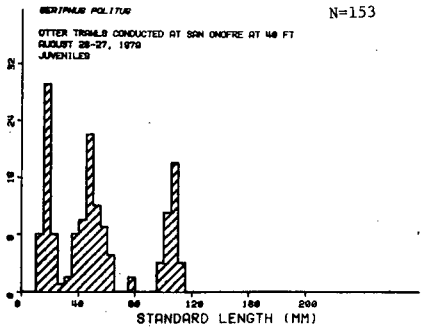


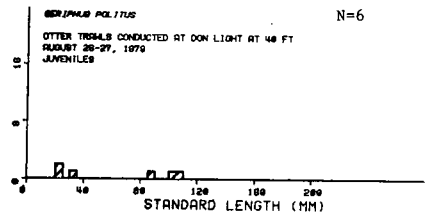












No Seriphus politus collected at 60 ft.

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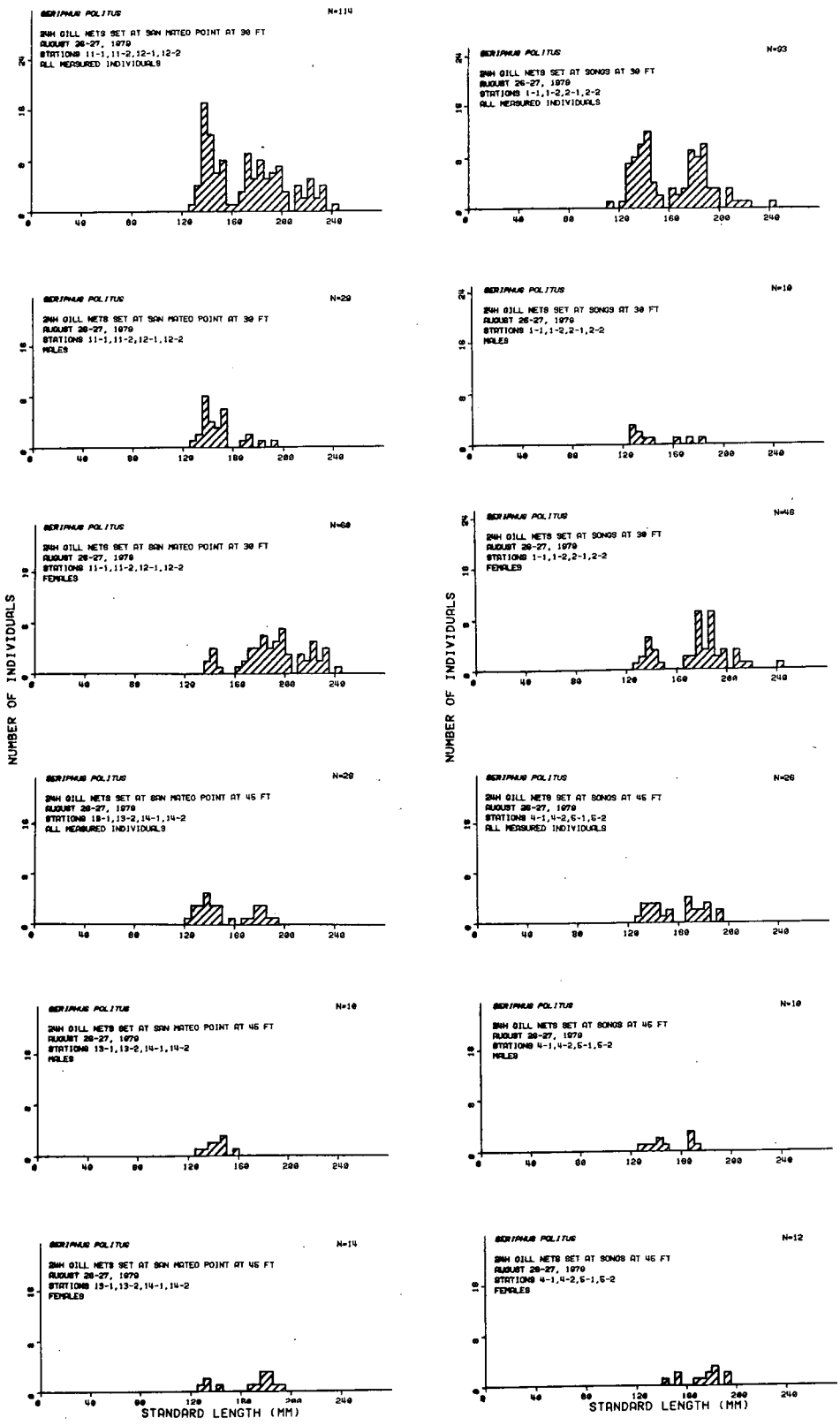
SAN MATEO POINT

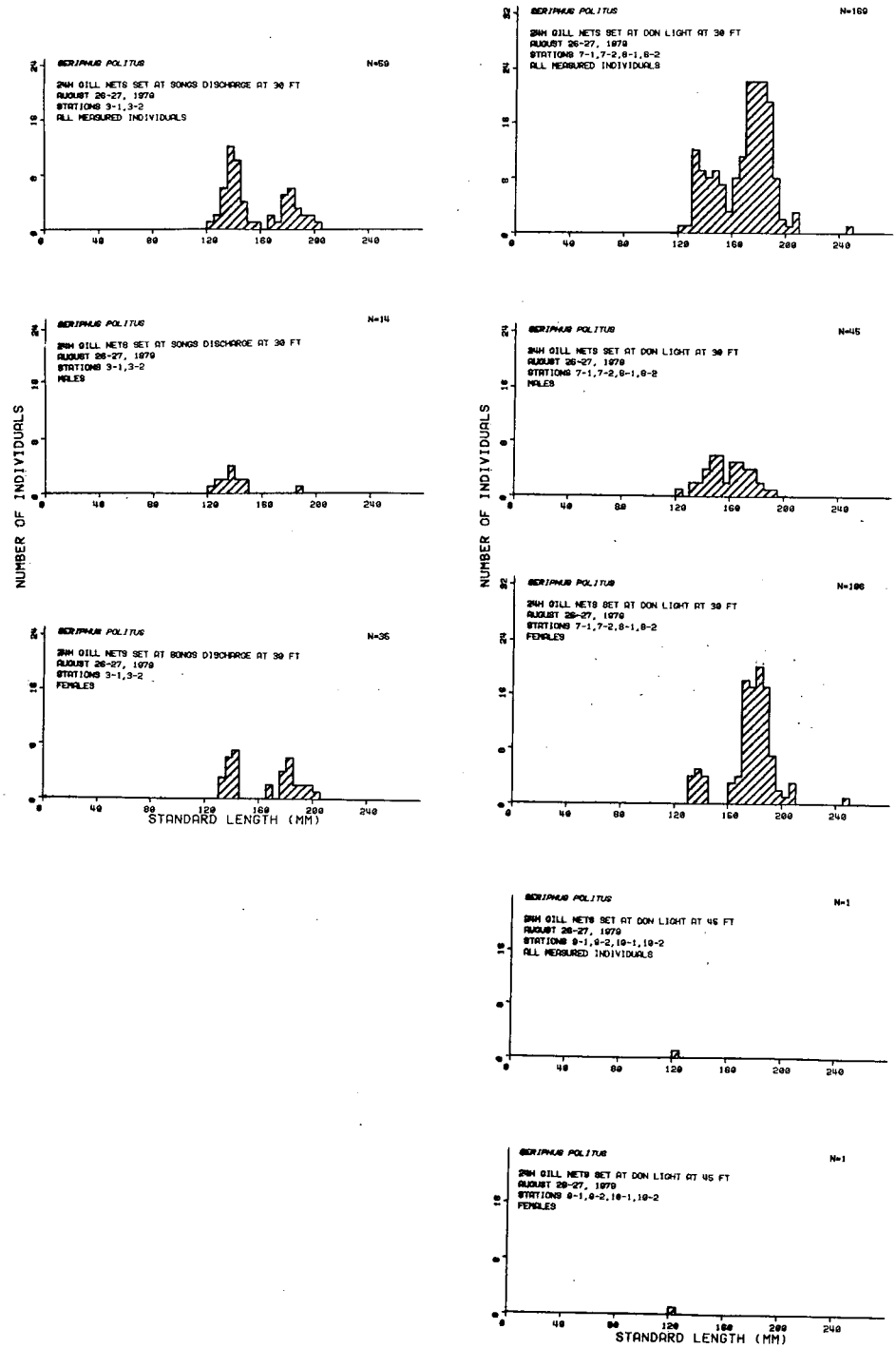
SONGS



Length frequency histograms of Seriphus politus collected in gill nets conducted at 30 and 45 ft at San Mateo Point and SONGS during survey of August 26-27, 1979.

SONGS DISCHARGE

DON LIGHT



Length frequency histograms of Seriphus politus collected in gill nets conducted at 30 and 45 ft at SONGS Discharge and Don Light during survey of August 26-27, 1979.

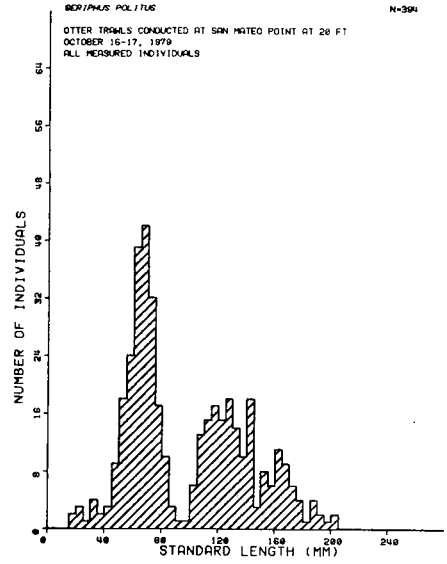
Length frequency histograms of Seriphus politus collected in otter trawls conducted at 20, 40, and 60 ft at San Mateo Point, San Onofre, and Don Light during survey of October 16-17, 1979.

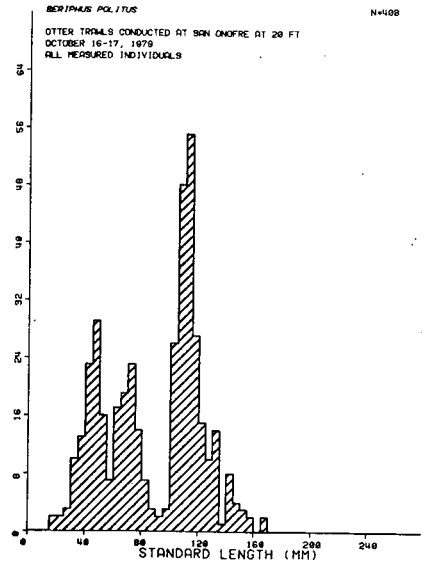
Caption applies to histograms on adjoining page(s).

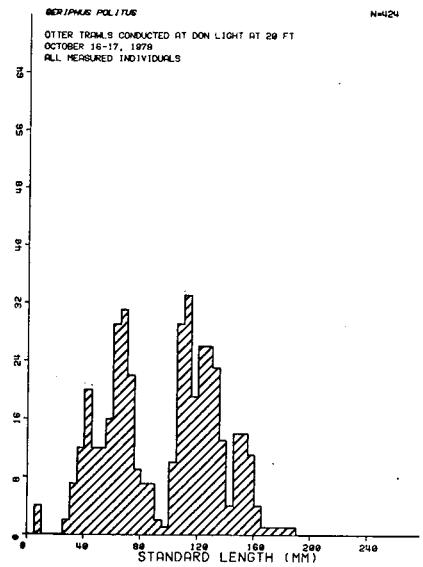
SAN MATEO POINT

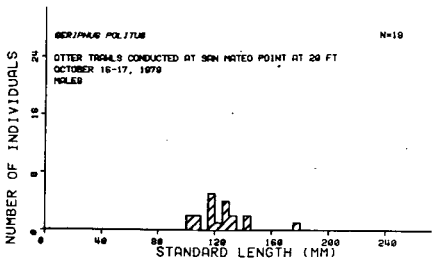
SAN ONOFRE

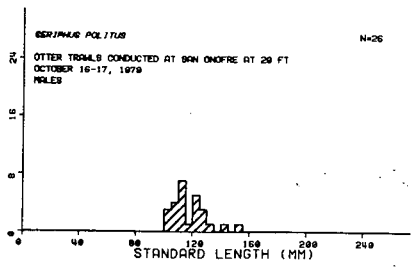
DON LIGHT

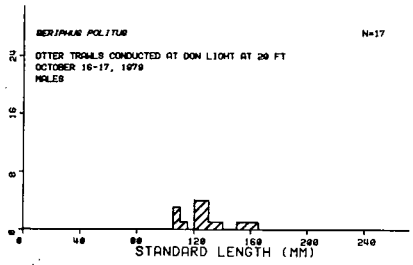


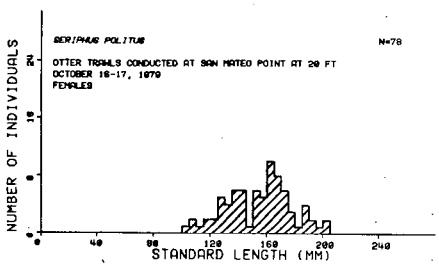


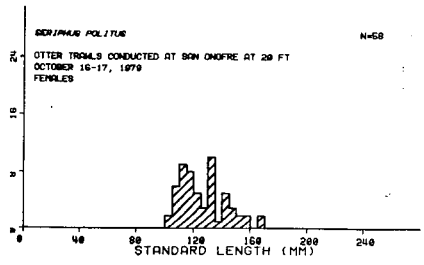


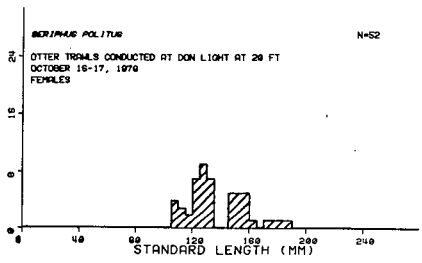


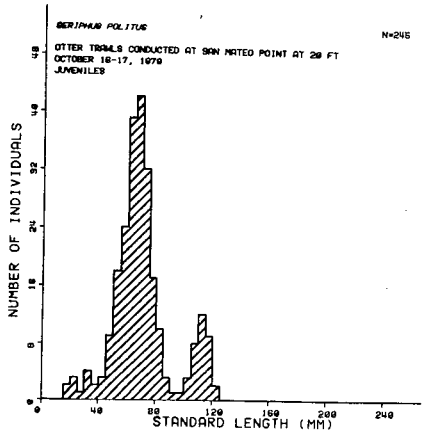


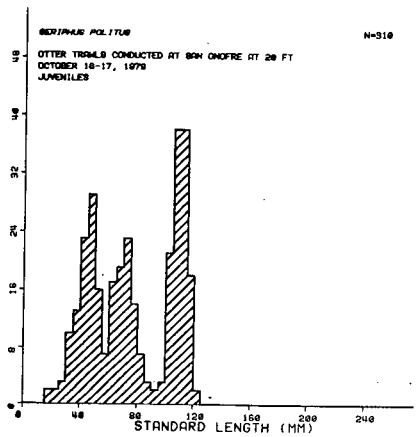


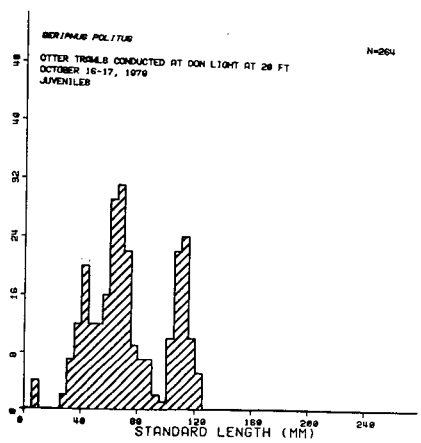










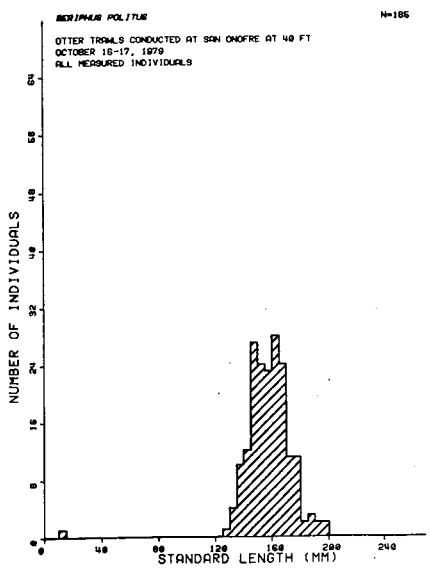


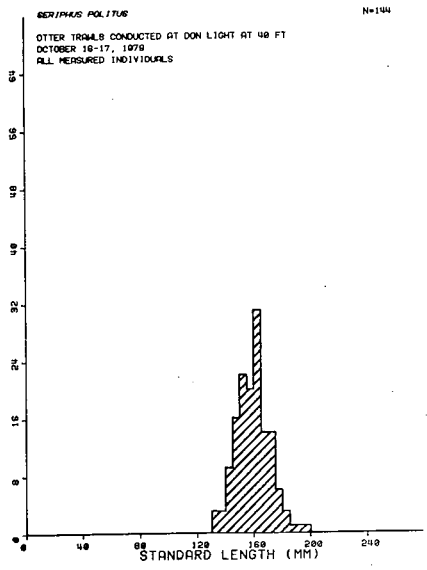
SAN MATEO POINT

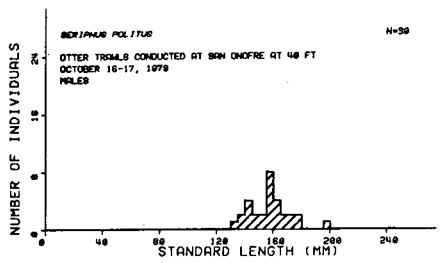
SAN ONOFRE

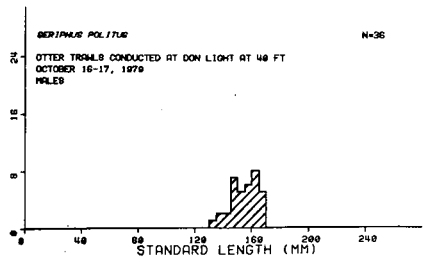
DON LIGHT

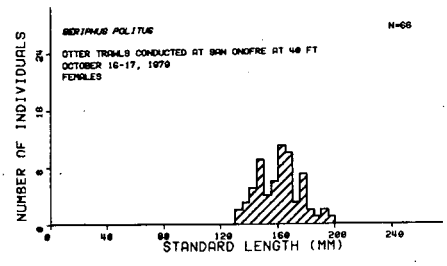
No Seriphus politus collected at 40 ft.

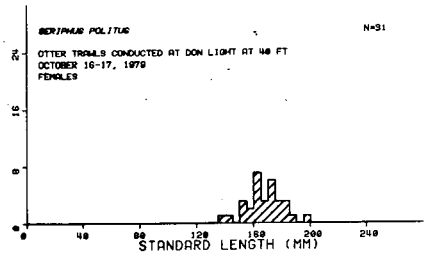












No juveniles caught at 40 ft.

No juveniles caught at 40 ft.

No Seriphus politus collected at 60 ft.

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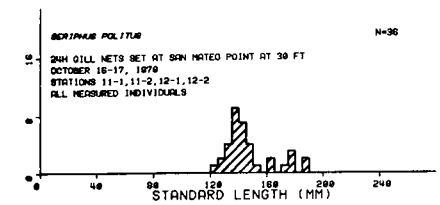
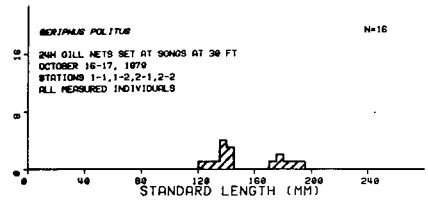
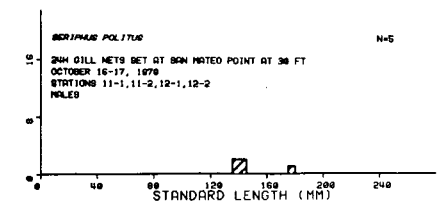
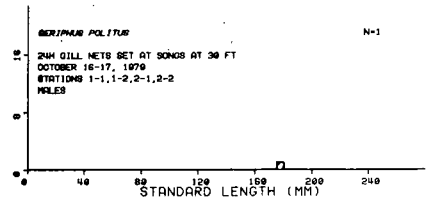
SAN MATEO POINT

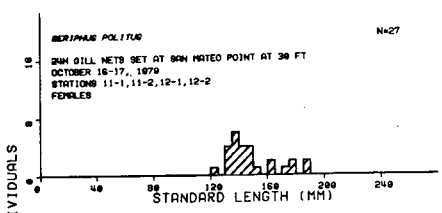
SONGS

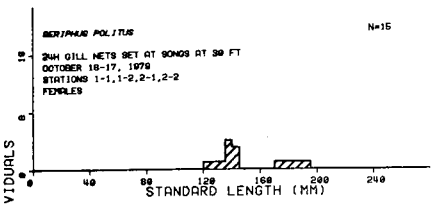


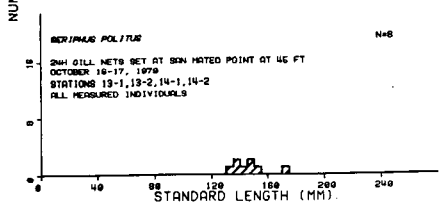


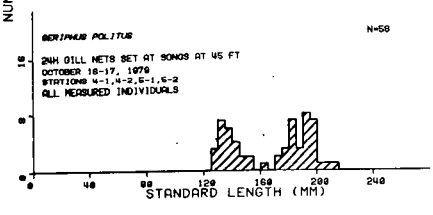




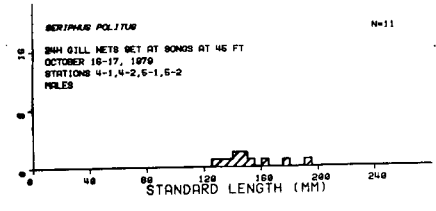


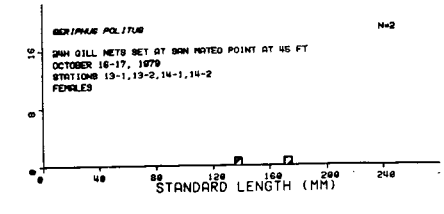


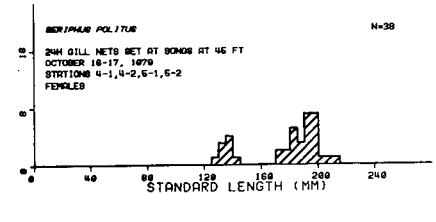




No Seriphus politus males collected.



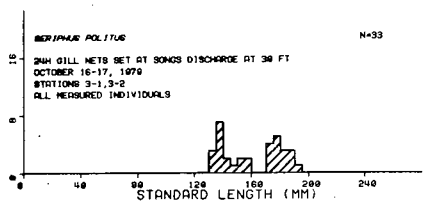


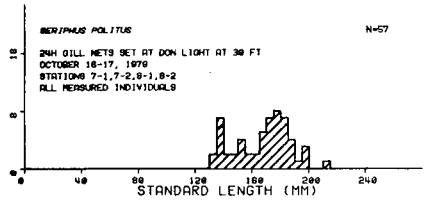


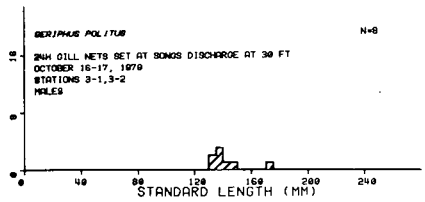
Length frequency histograms of Seriphus politus collected in gill nets conducted at 30 and 45 ft at San Mateo Point and SONGS during survey of October 16-17, 1979.

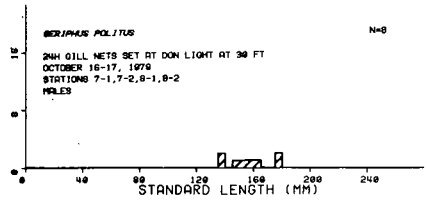
SONGS DISCHARGE

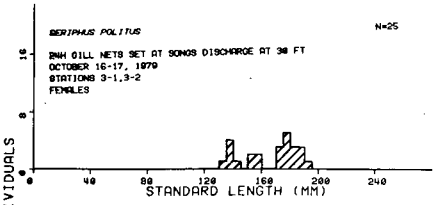
DON LIGHT

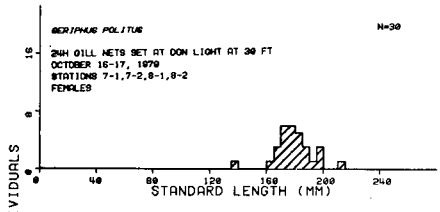


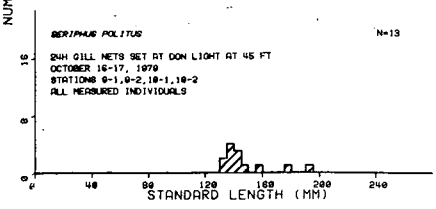




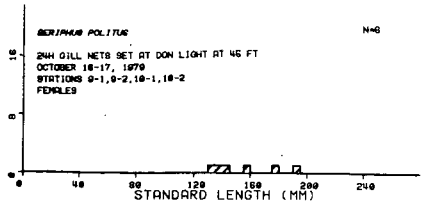








No Seriphus politus males collected.



Length frequency histograms of Seriphus politus collected in gill nets conducted at 30 and 45 ft at SONGS Discharge and Don Light during survey of October 16-17, 1979.

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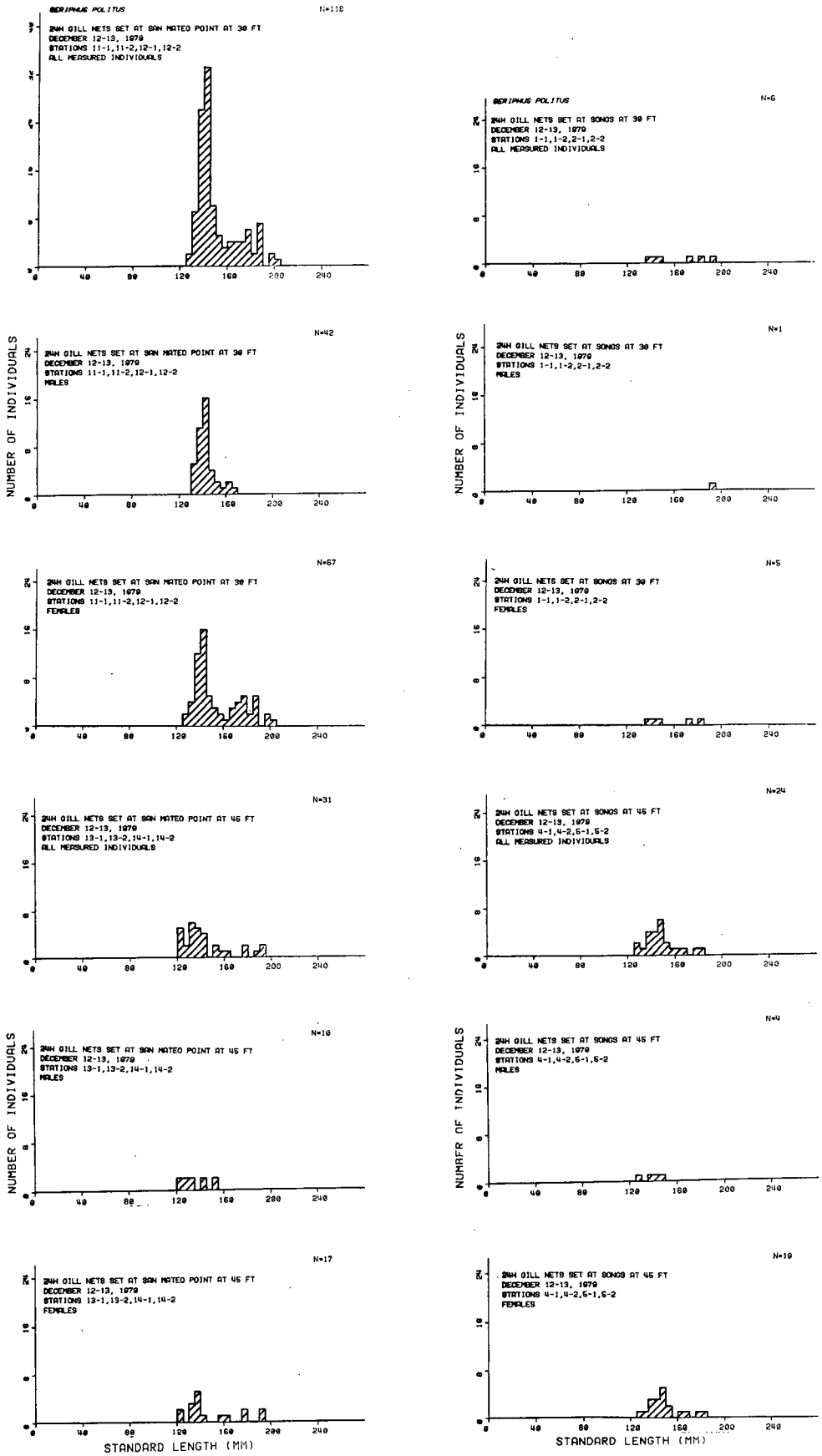
SAN MATEO POINT

SONGS



Length frequency histograms of Seriphus politus collected in gill nets conducted at 30 and 45 ft at San Mateo Point and SONGS during survey of December 12-13, 1979.

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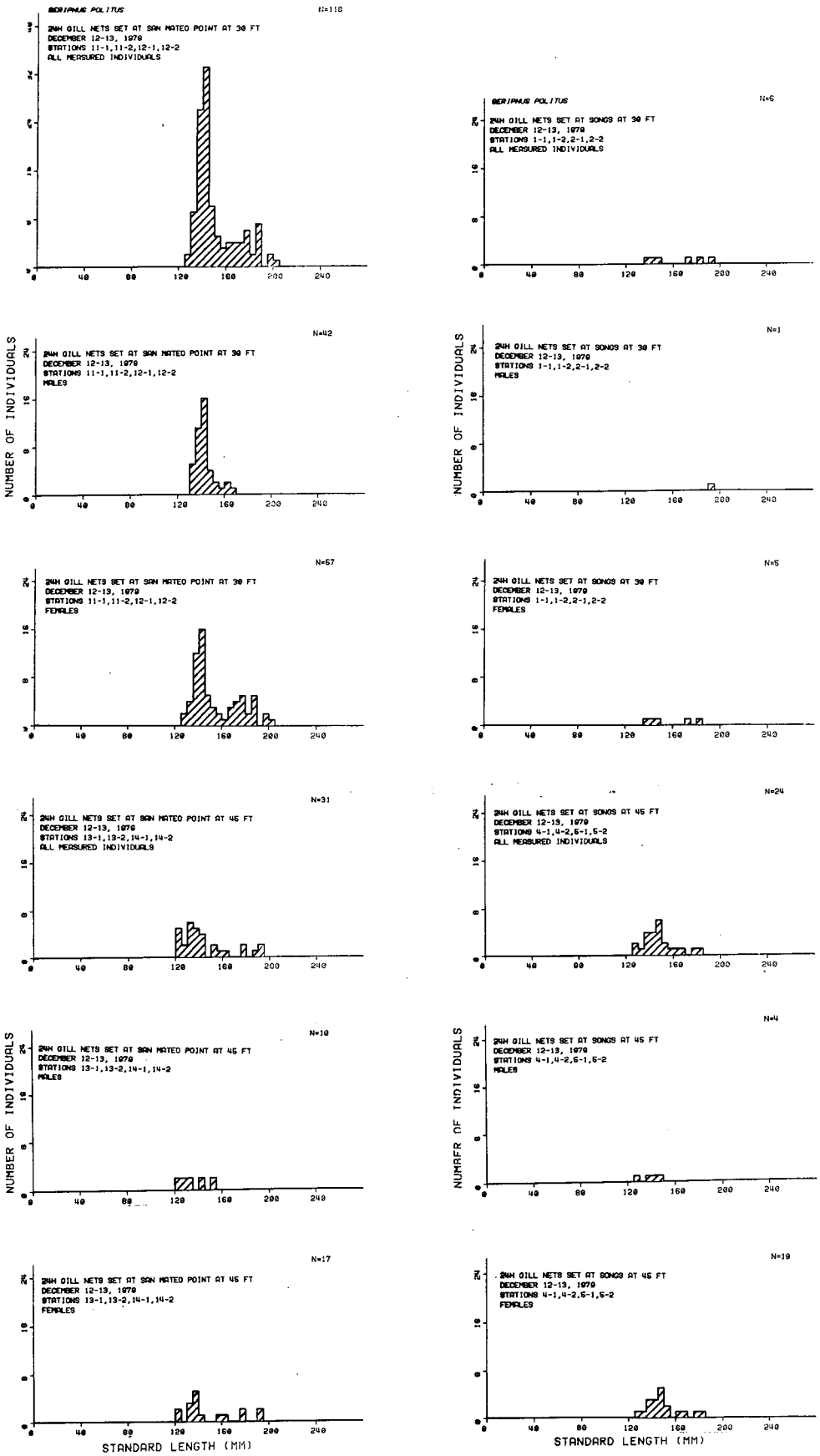
SAN MATEO POINT

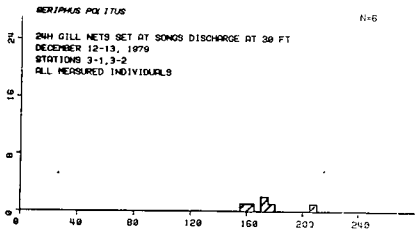
SONGS

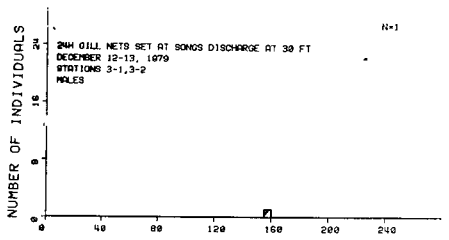


Length frequency histograms of Seriphus politus collected in gill nets conducted at 30 and 45 ft at San Mateo Point and SONGS during survey of December 12-13, 1979.

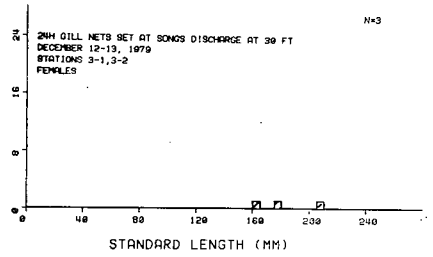
SONGS DISCHARGE

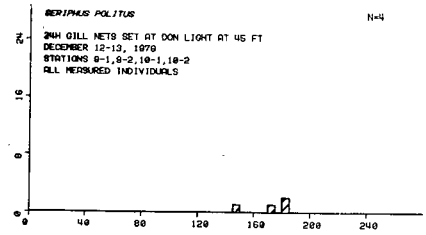
DON LIGHT



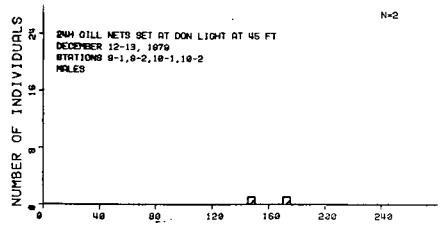


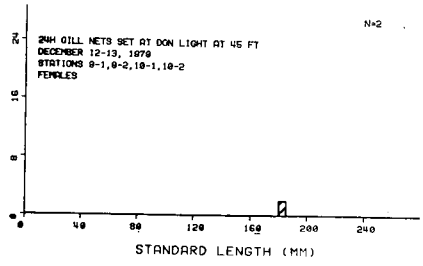
No Seriphus politus caught at 30 ft.





No Seriphus politus caught at 45 ft.





Length frequency histograms of Seriphus politus collected in gill nets conducted at 30 and 45 ft at SONGS Discharge and Don Light during survey of December 12-13, 1979.

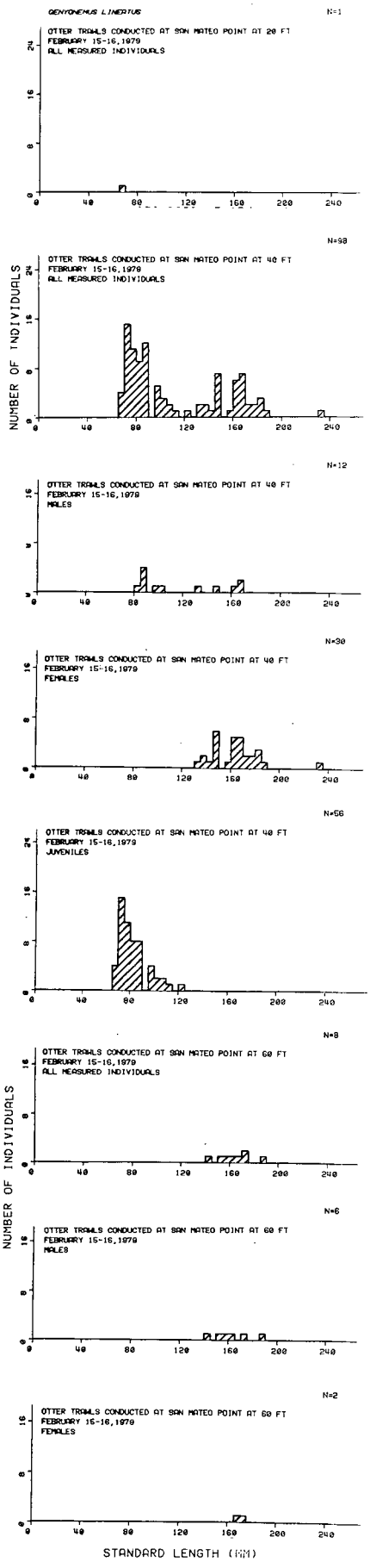
D. LENGTH-FREQUENCY HISTOGRAMS

2. *GENYONEMUS LINEATUS*

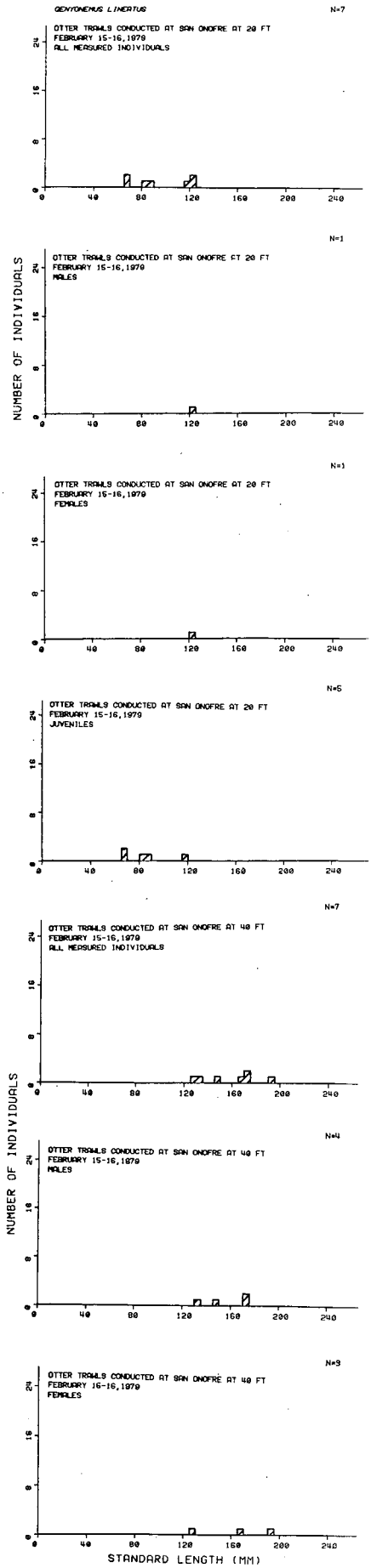
Length frequency histograms of Genyonemus lineatus collected in otter trawls conducted at 20, 40, and 60 ft at San Mateo Point, San Onofre, and Don Light during survey of February 15-16, 1979.

Caption applies to histograms on adjoining page(s).

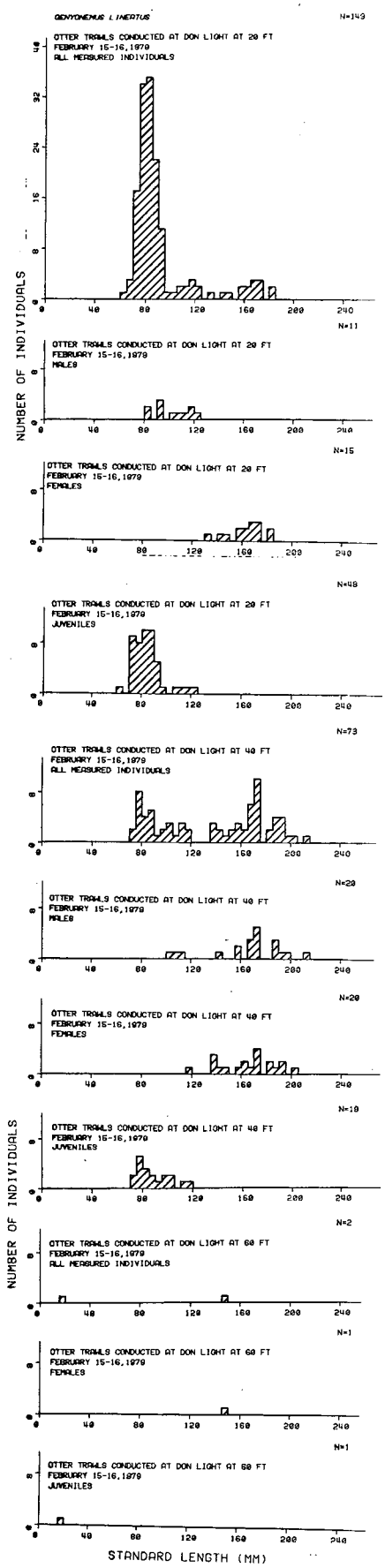
SAN MATEO POINT



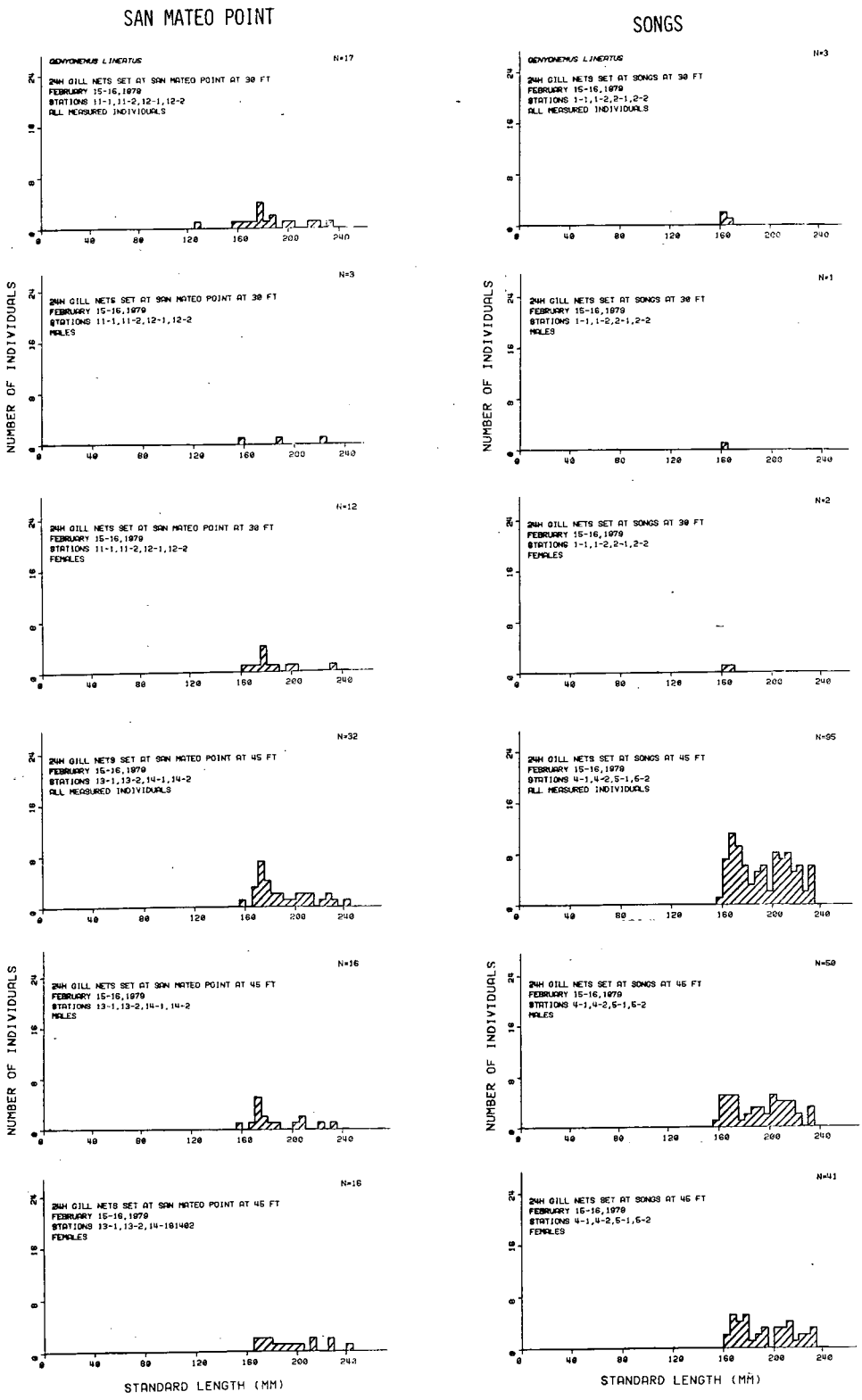
SAN ONOFRE



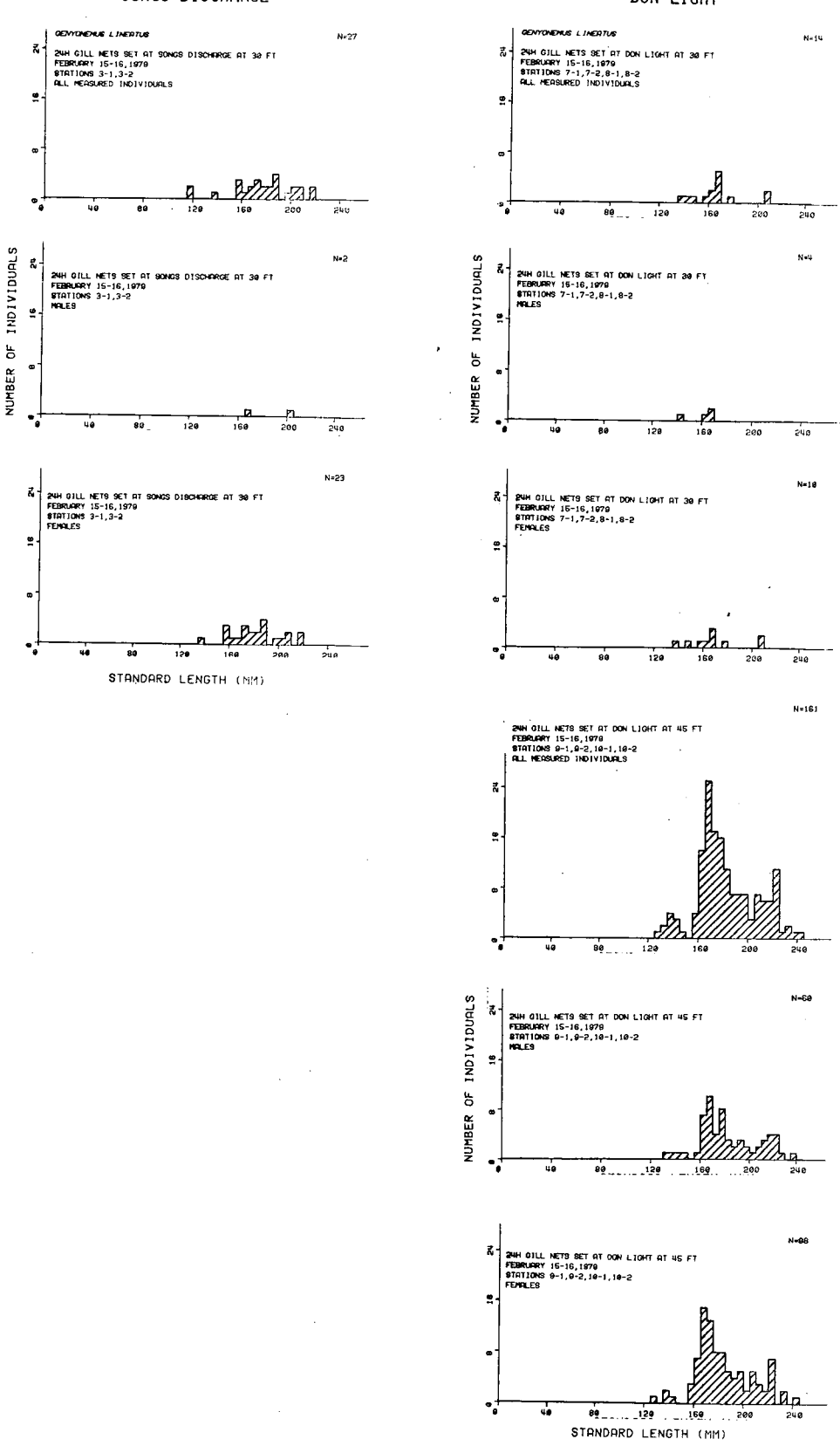
DON LIGHT



No Genyonemus lineatus collected at 60 ft.



Length frequency histograms of Genyonemus lineatus collected in gill nets conducted at 30 and 45 ft at San Mateo Point and SONGS during survey of February 15-16, 1979.

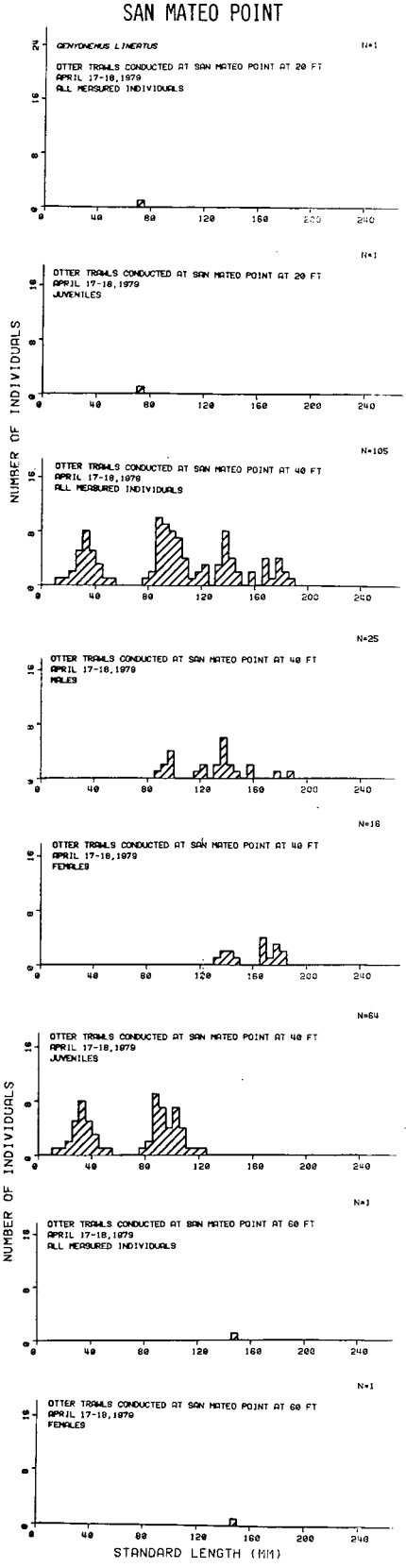


Length frequency histograms of Genyonemus lineatus collected in gill nets conducted at 30 and 45 ft at SONGS Discharge and Don Light during survey of February 15-16, 1979.

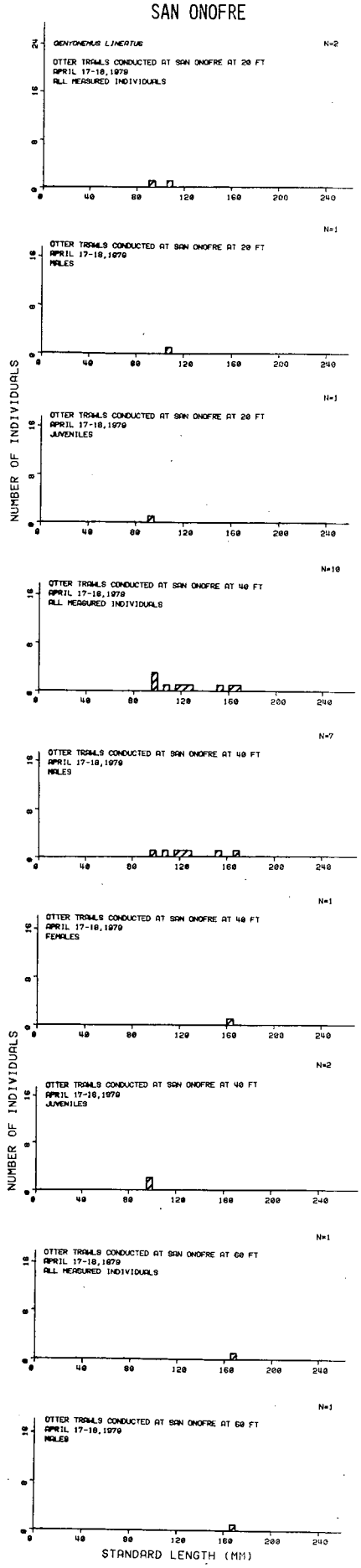
Length frequency histograms of Genyonemus lineatus collected in otter trawls conducted at 20, 40, and 60 ft at San Mateo Point, San Onofre, and Don Light during survey of April 17-18, 1979.

Caption applies to histograms on adjoining page(s).

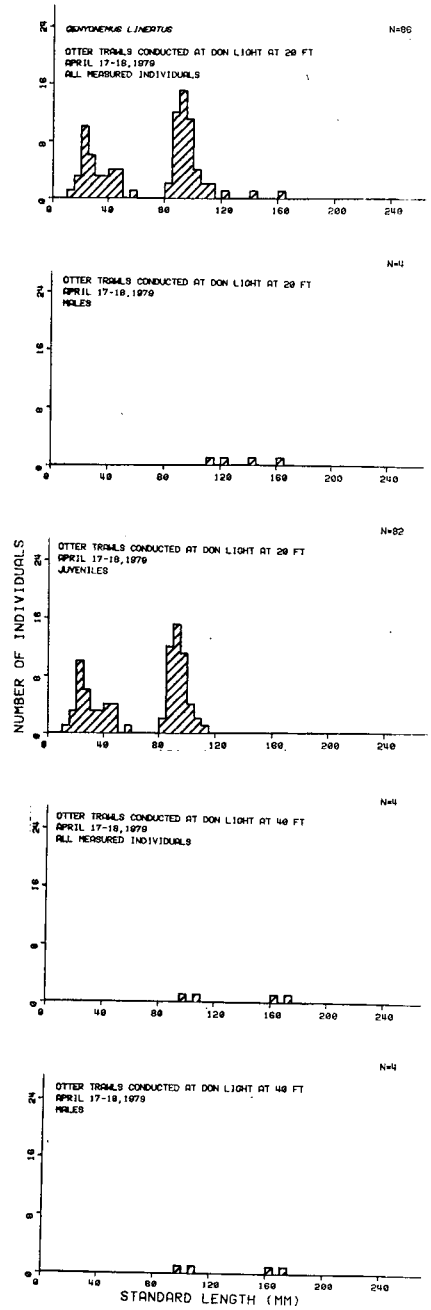
SAN MATEO POINT



SAN ONOFRE



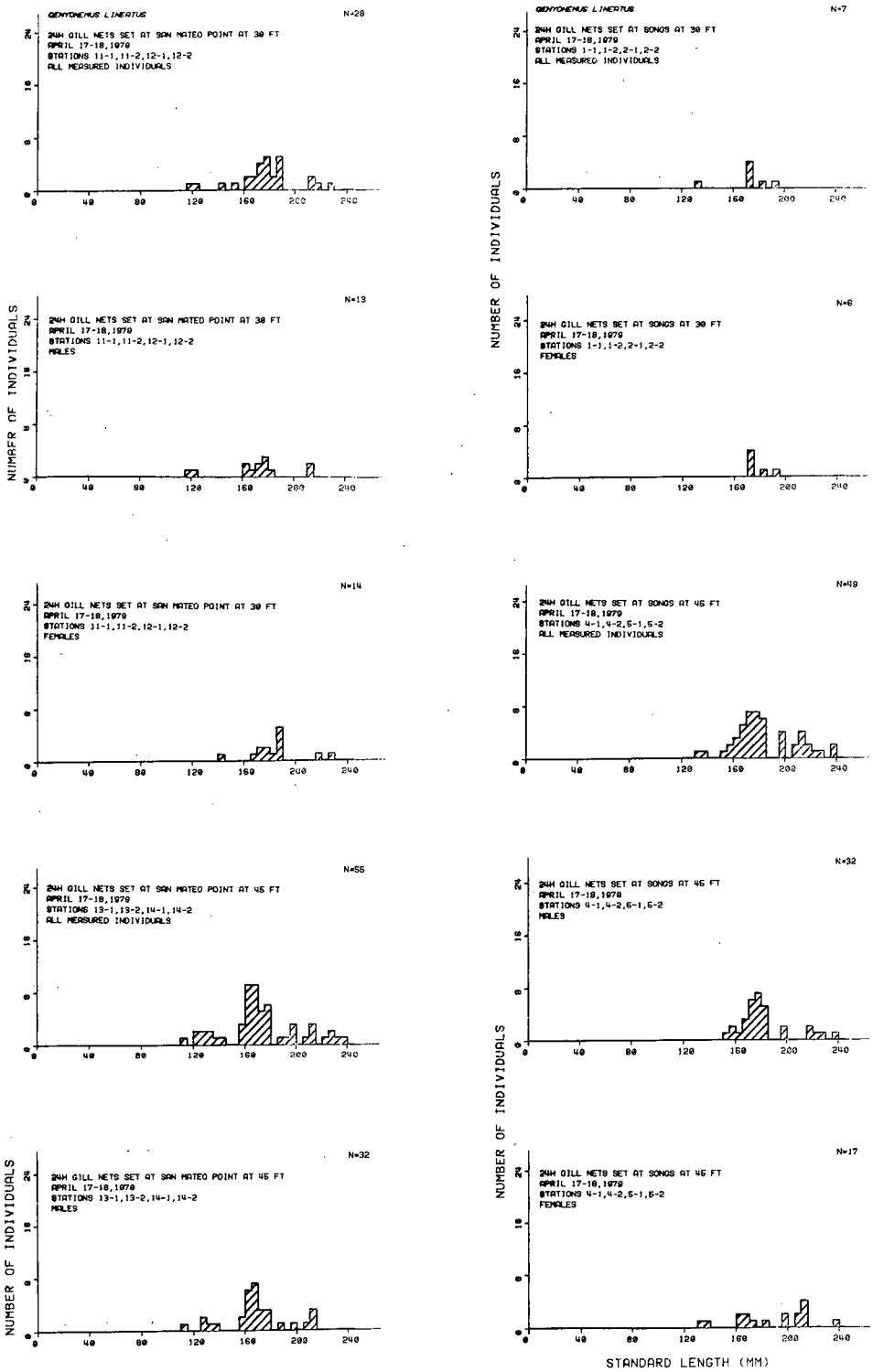
DON LIGHT



No Genyonemus lineatus collected at 60 ft.

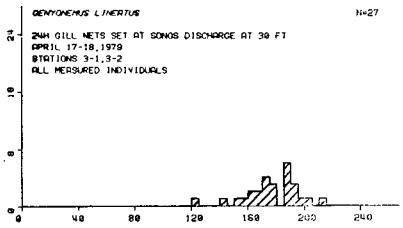
SAN MATEO POINT

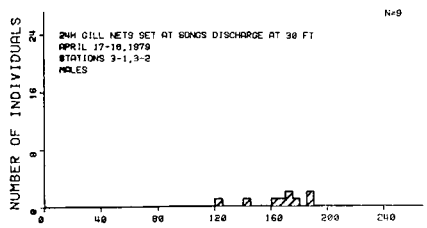
SONGS

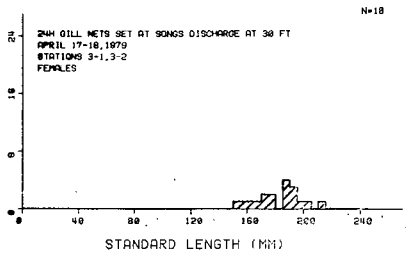


Length frequency histograms of Genyonemus lineatus collected in gill nets conducted at 30 and 45 ft at San Mateo Point and SONGS during survey of April 17-18, 1979.

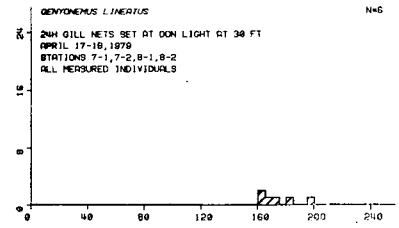
SONGS DISCHARGE

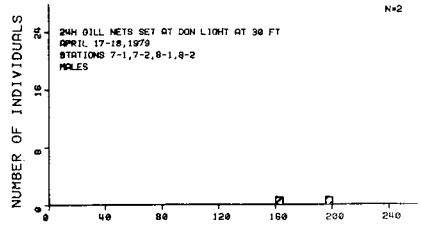


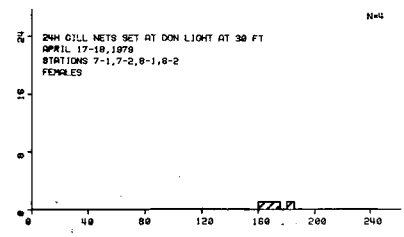


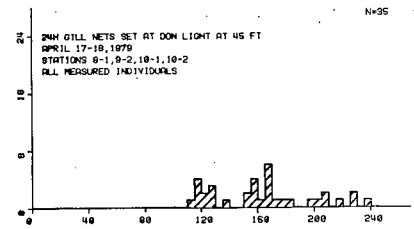


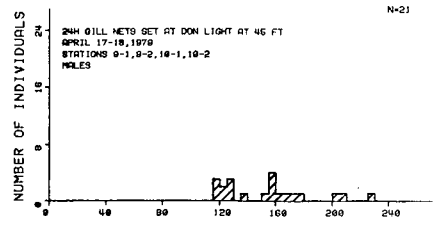
DON LIGHT

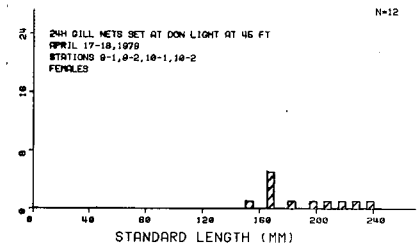










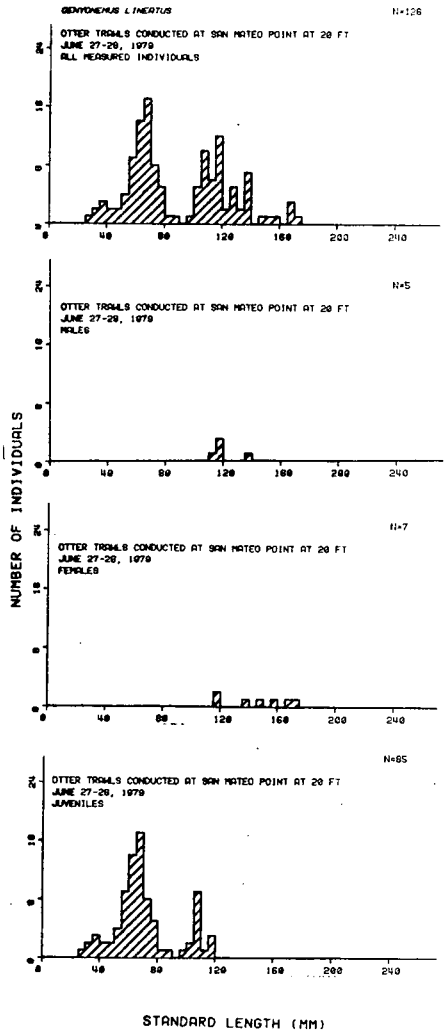


Length frequency histograms of Genyonemus lineatus collected in gill nets conducted at 30 and 45 ft at SONGS Discharge and Don Light during survey of April 17-18, 1979.

Length frequency histograms of Genyonemus lineatus collected in otter trawls conducted at 20, 40, and 60 ft at San Mateo Point, San Onofre, and Don Light during survey of June 27-28, 1979.

Caption applies to histograms on adjoining page(s).

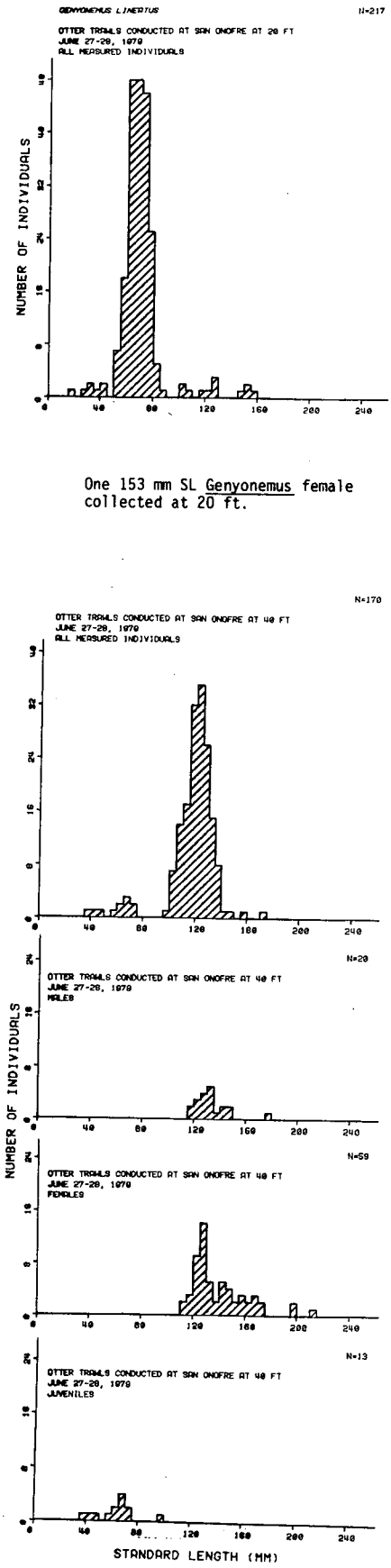
SAN MATEO POINT



No Genyonemus lineatus collected at 40 ft.

No Genyonemus lineatus collected at 60 ft.

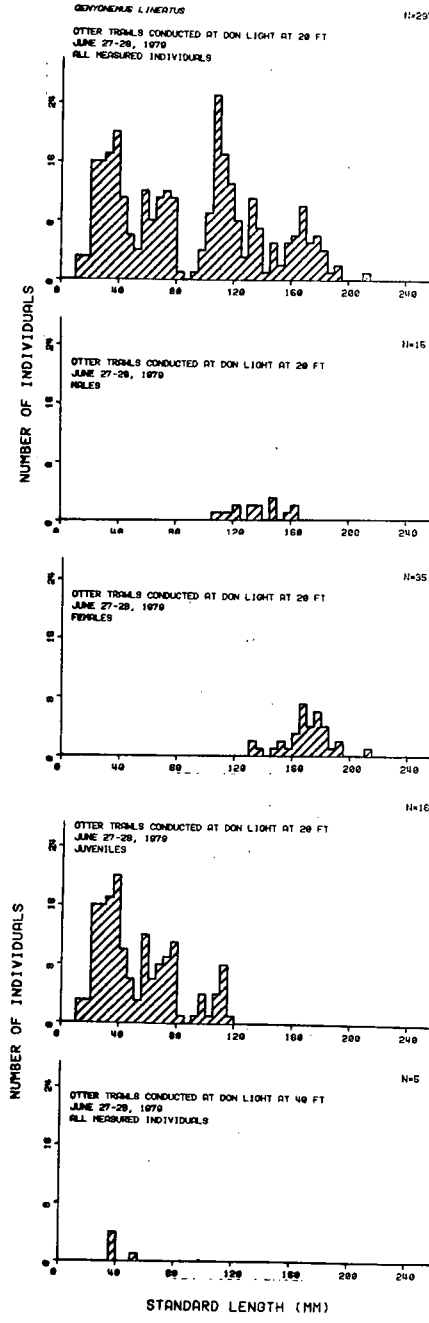
SAN ONOFRE



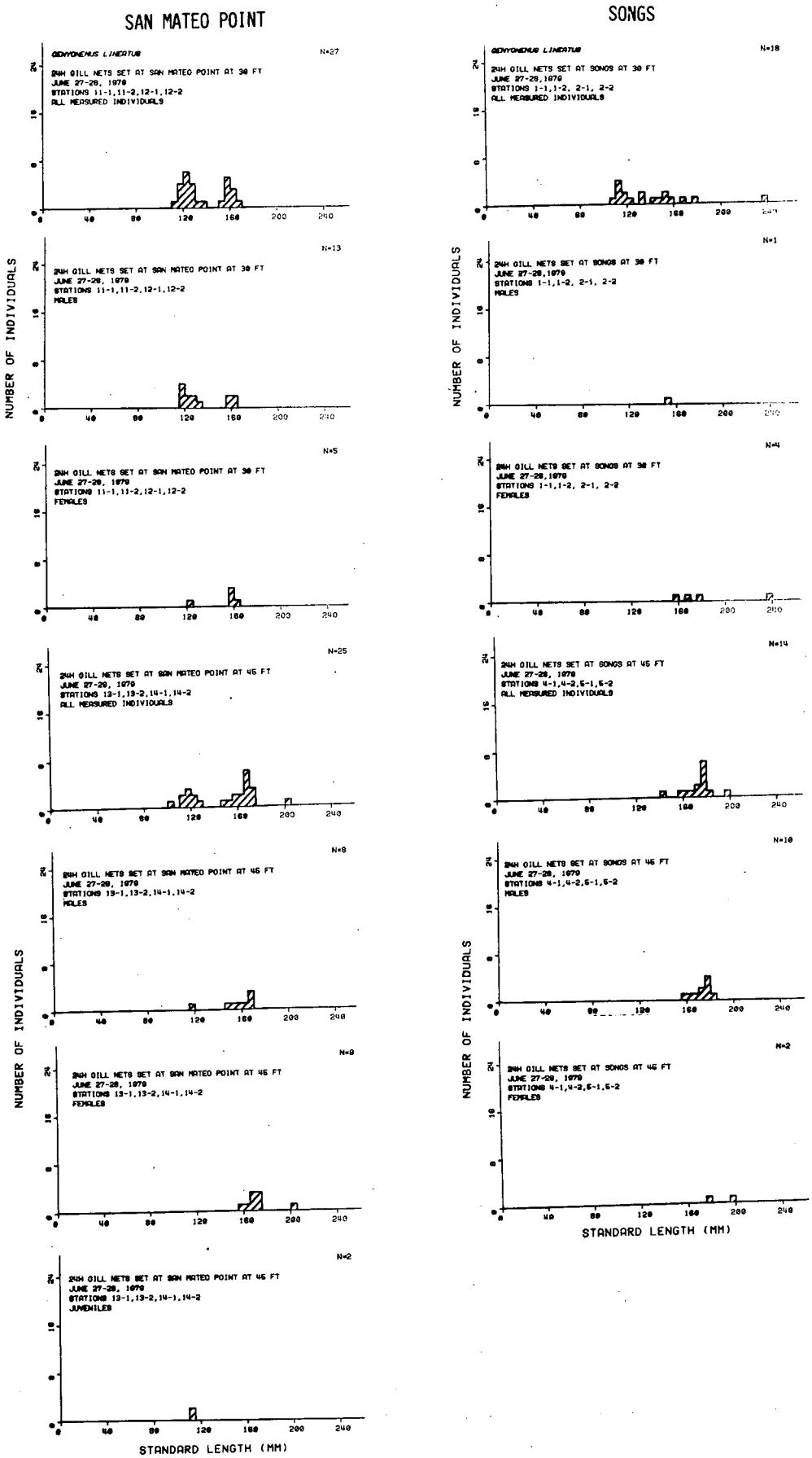
One 153 mm SL Genyonemus female collected at 20 ft.

No Genyonemus lineatus collected at 60 ft.

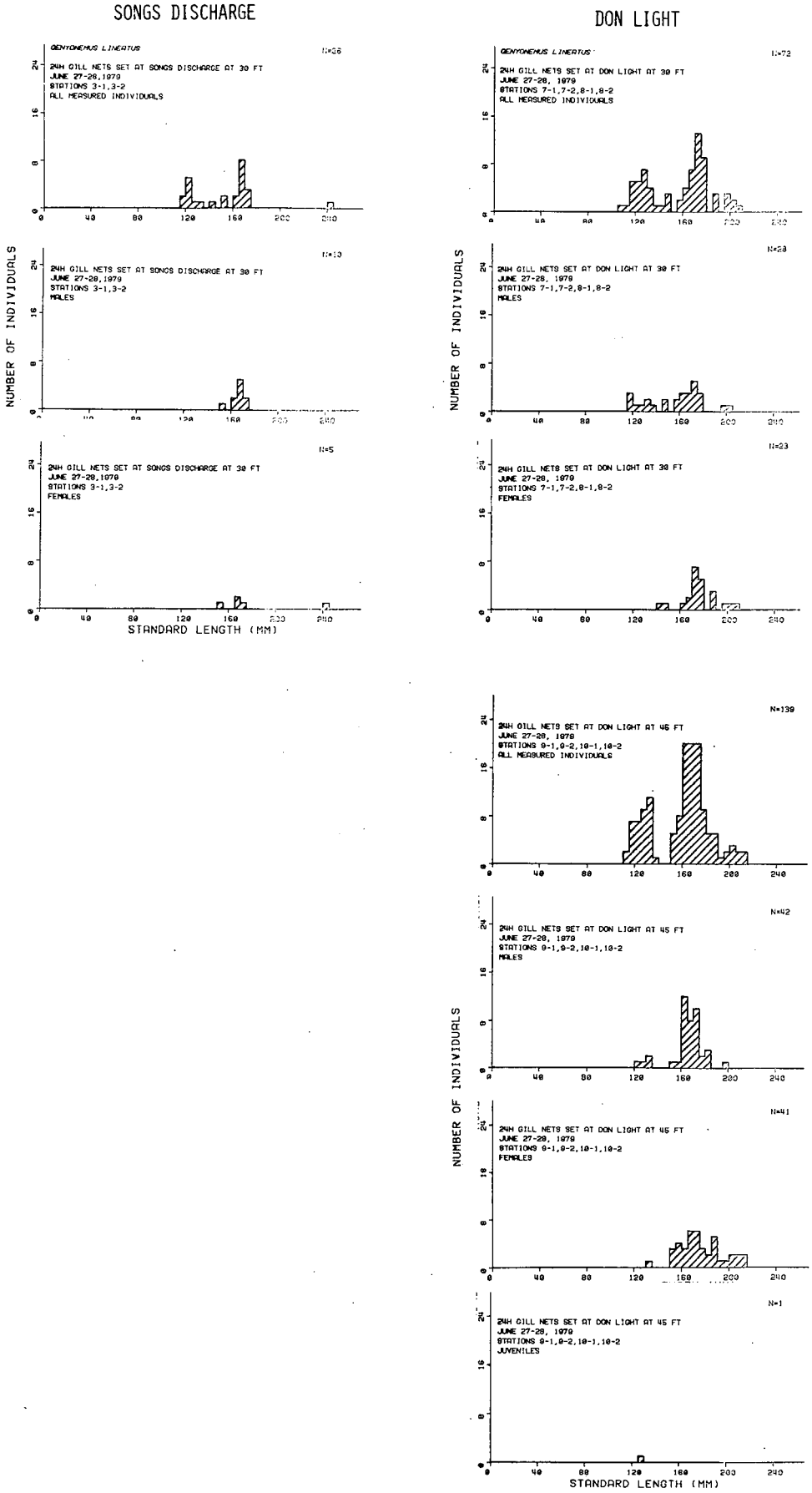
DON LIGHT



No Genyonemus lineatus collected at 60 ft.



Length frequency histograms of Genyonemus lineatus collected in gill nets conducted at 30 and 45 ft at San Mateo Point and SONGS during survey of June 27-28, 1979.



Length frequency histograms of Genyonemus lineatus collected in gill nets conducted at 30 and 45 ft at SONGS Discharge and Don Light during survey of June 27-28, 1979.

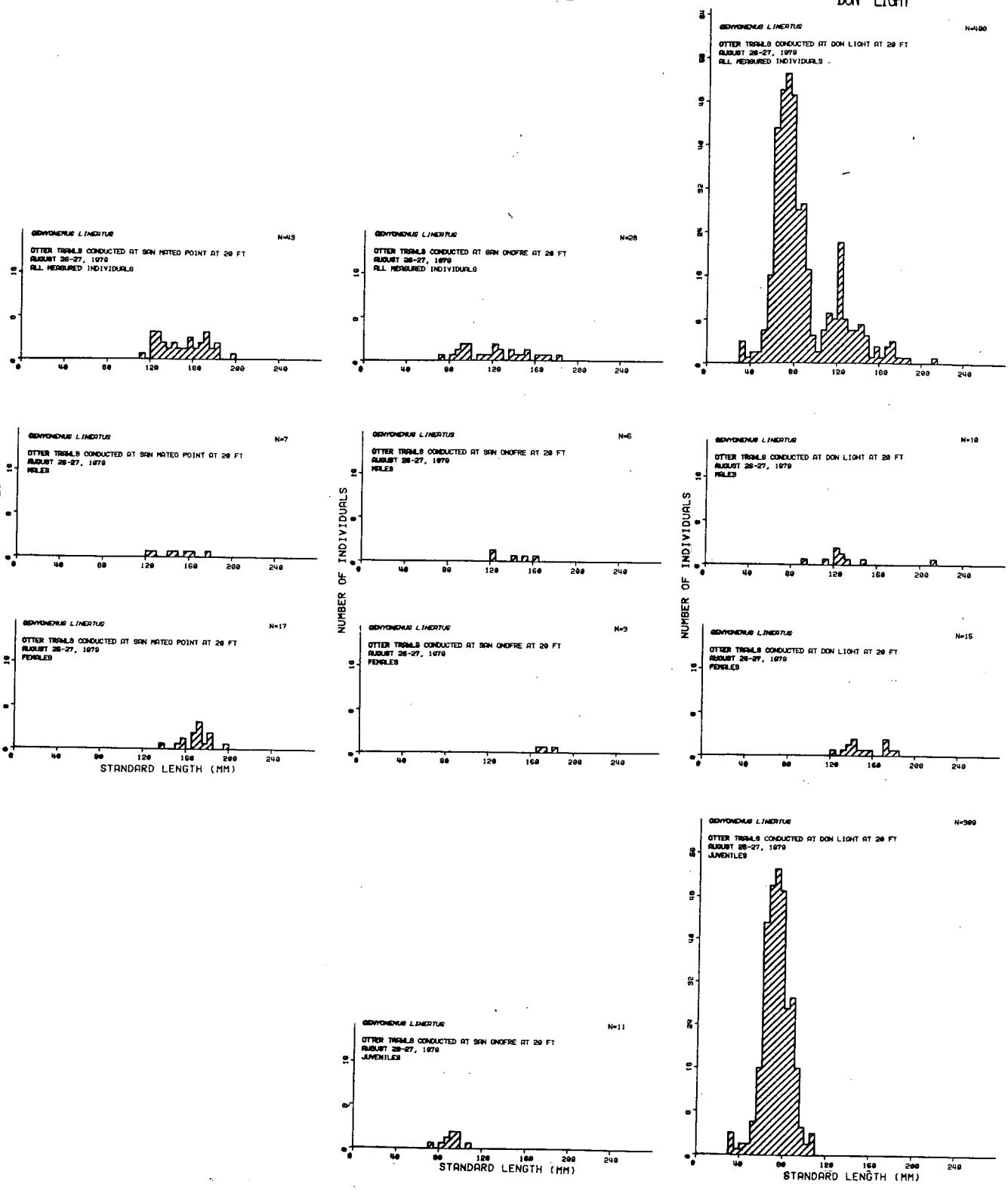
Length frequency histograms of Genyonemus lineatus collected in otter trawls conducted at 20, 40, and 60 ft at San Mateo Point, San Onofre, and Don Light during survey of August 26-27, 1979.

Caption applies to histograms on adjoining page(s).

SAN MATEO POINT

SAN ONOFRE

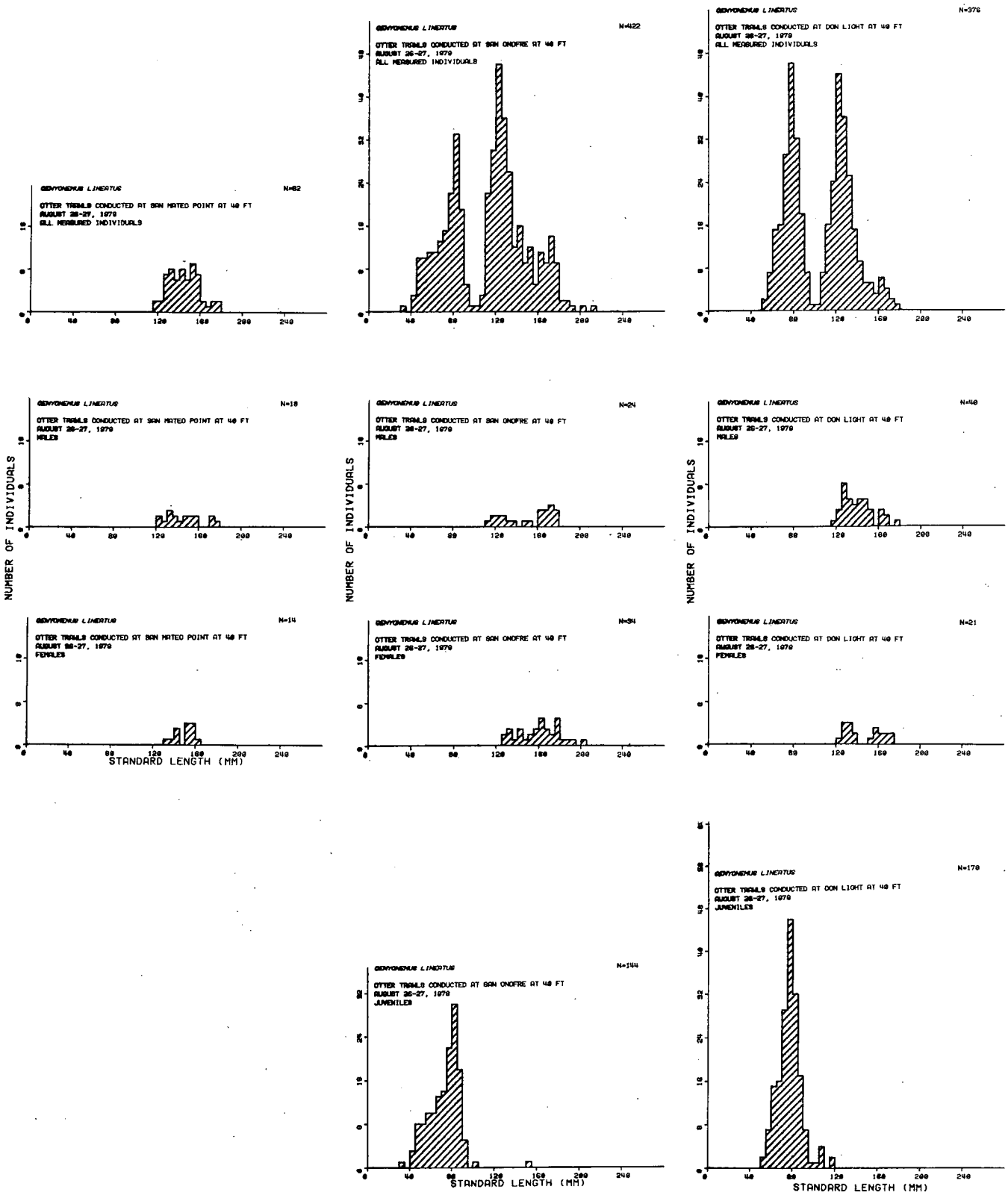
DON LIGHT



SAN MATEO POINT

SAN ONOFRE

DON LIGHT



No Genyonemus lineatus collected at 60 ft.

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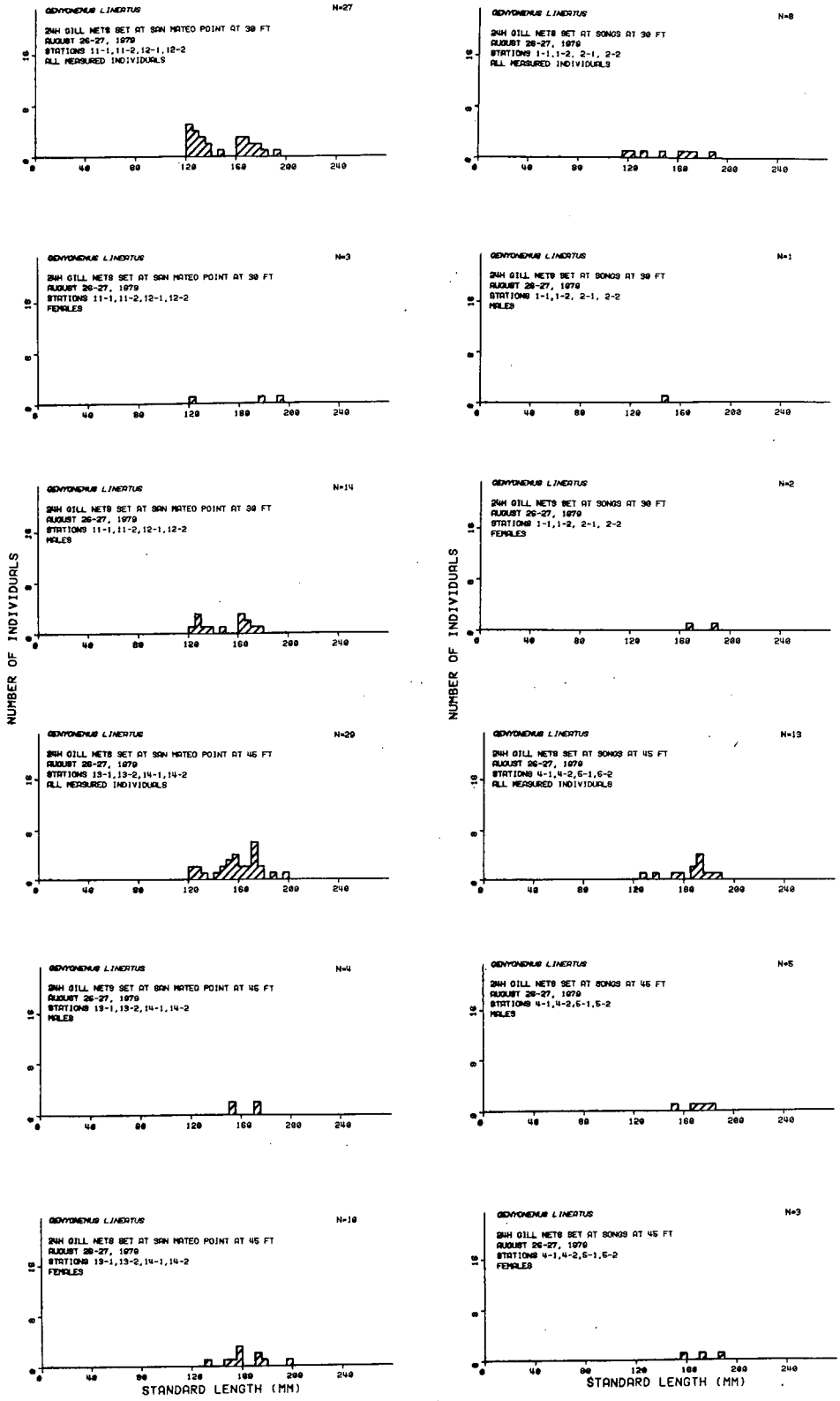
SAN MATEO POINT

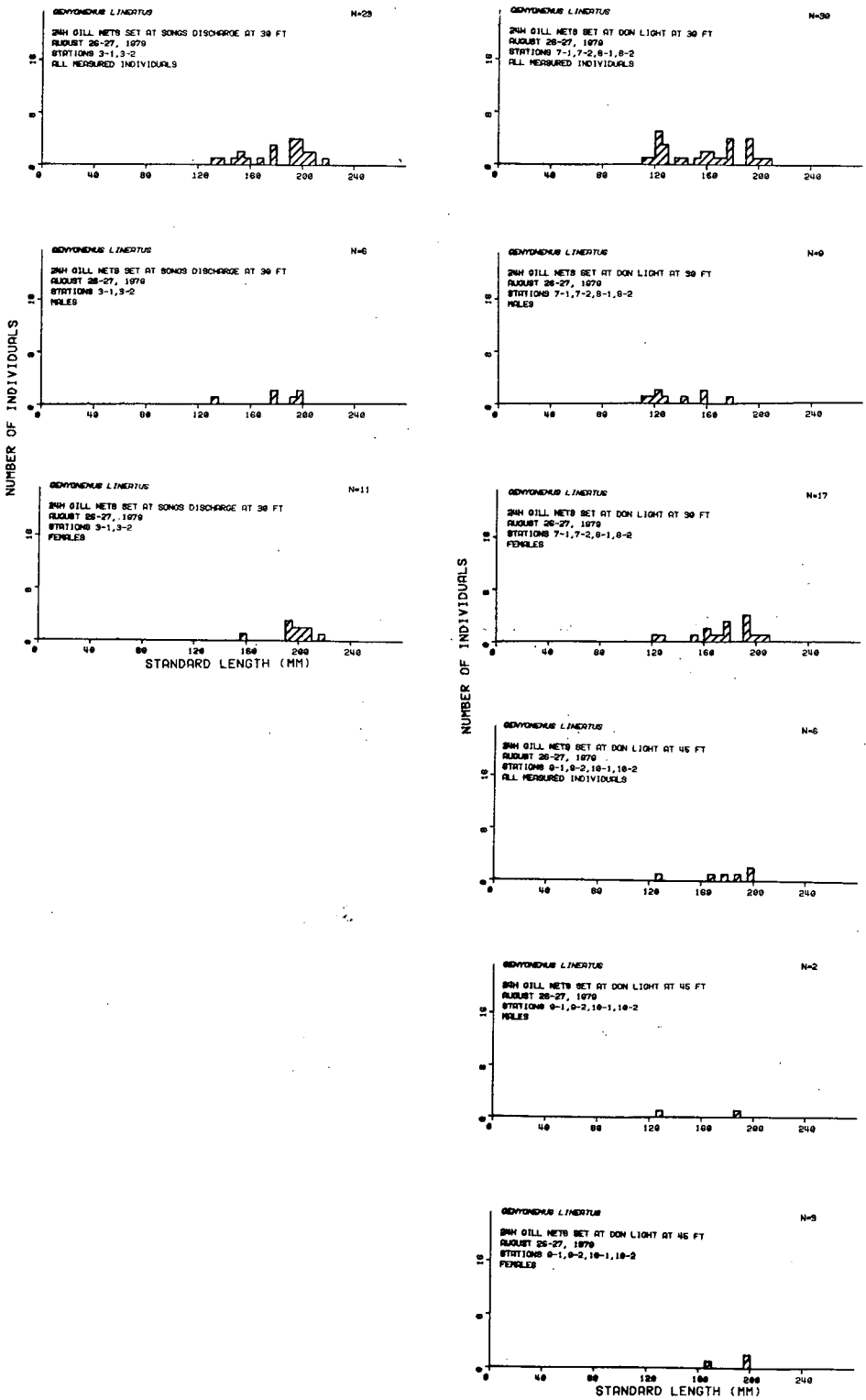
SONGS



Length frequency histograms of Genyonemus lineatus collected in gill nets conducted at 30 and 45 ft at San Mateo Point and SONGS during survey of August 26-27, 1979.

SONGS DISCHARGE

DON LIGHT



Length frequency histograms of Genyonemus lineatus collected in gill nets conducted at 30 and 45 ft at SONGS Discharge and Don Light during survey of August 26-27, 1979.

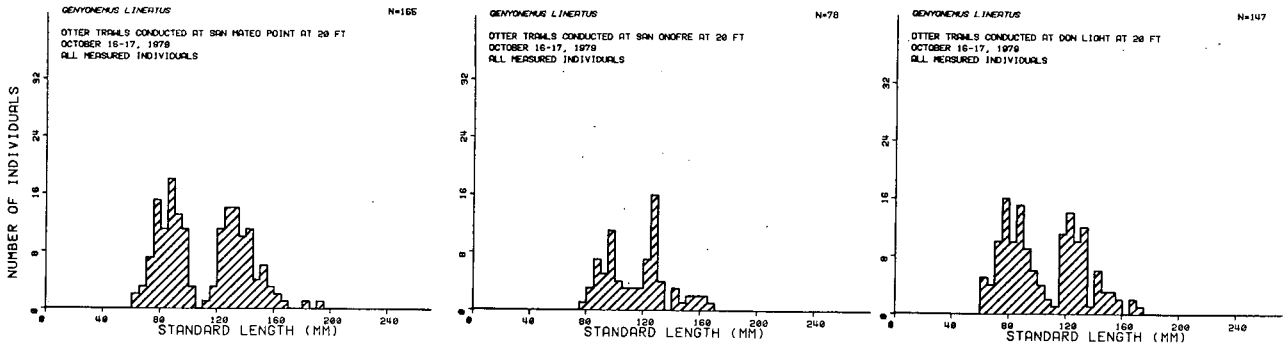
Length frequency histograms of Genyonemus lineatus collected in otter trawls conducted at 20, 40, and 60 ft at San Mateo Point, San Onofre, and Don Light during survey of October 16-17, 1979.

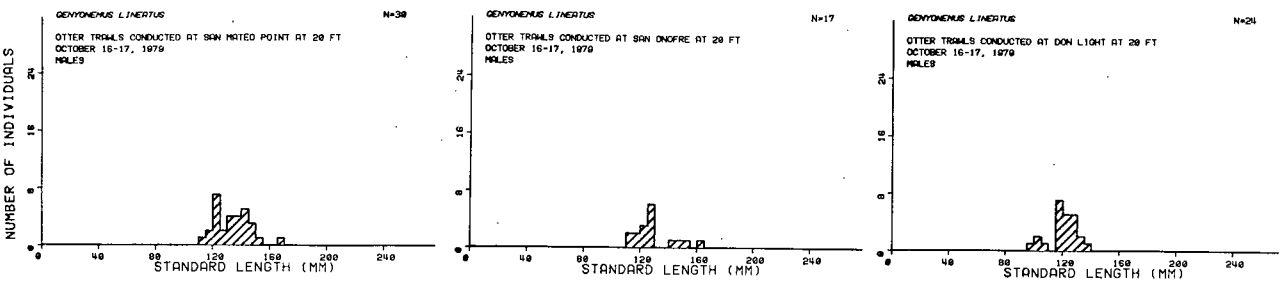
Caption applies to histograms on adjoining page(s).

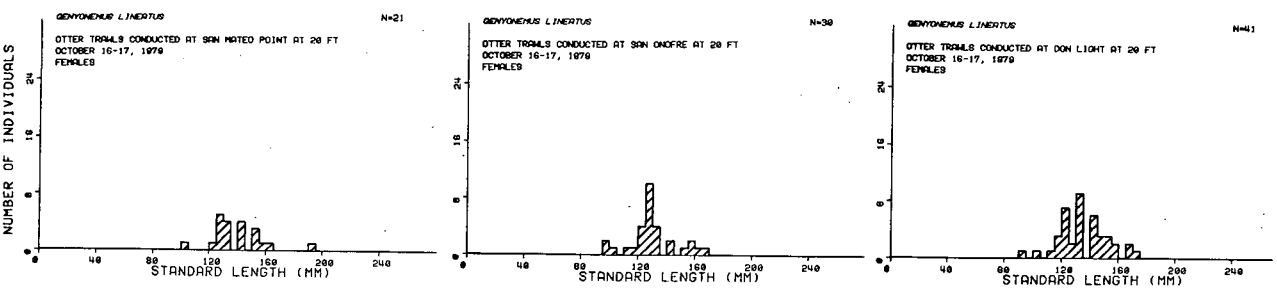
SAN MATEO POINT

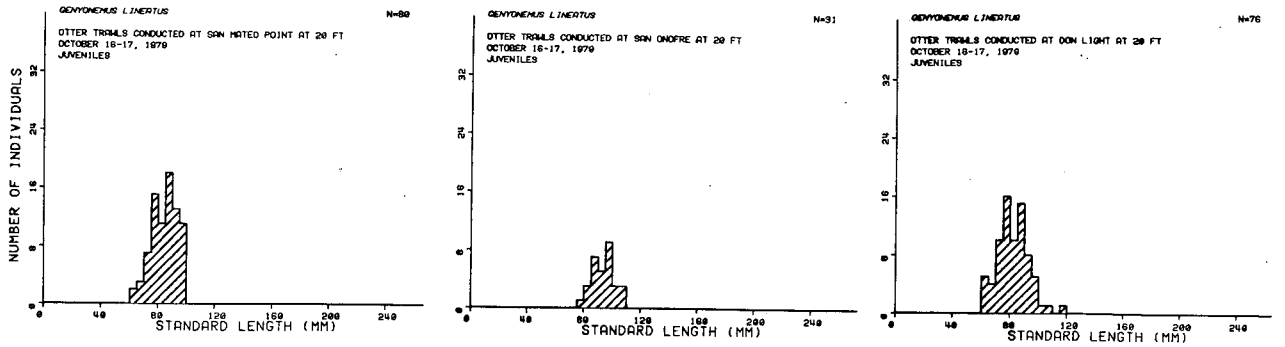
SAN ONOFRE

DON LIGHT







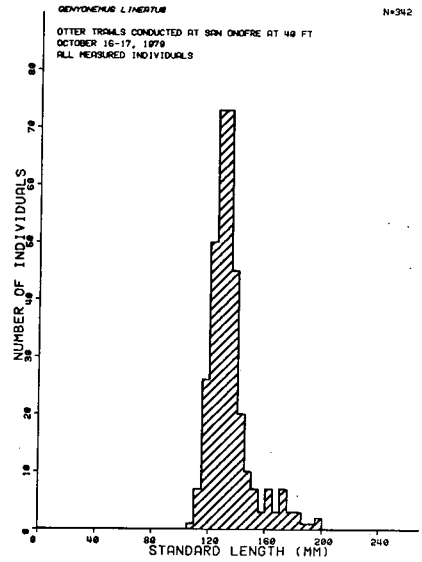


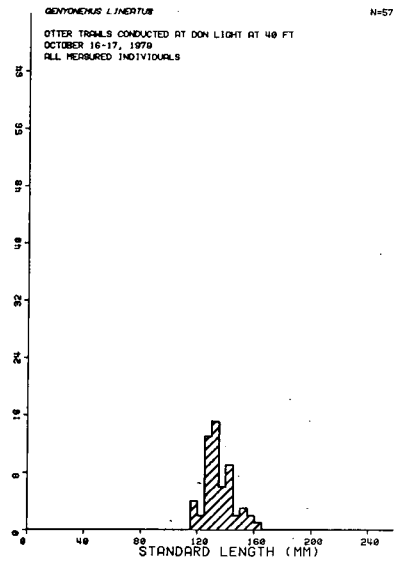
SAN MATEO POINT

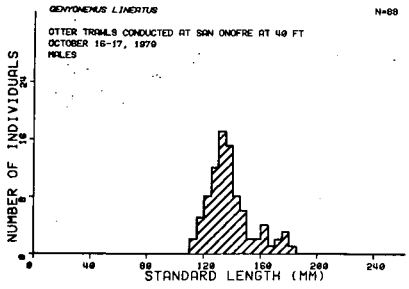
SAN ONOFRE

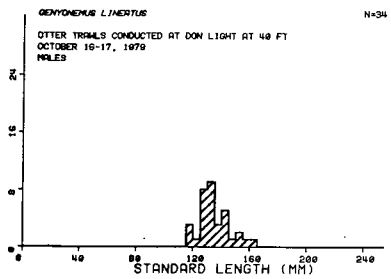
DON LIGHT

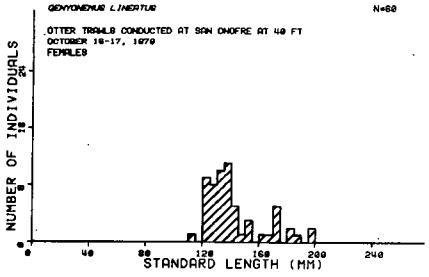
No Genyonemus lineatus collected at 40 ft.

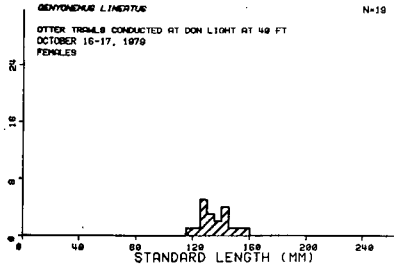


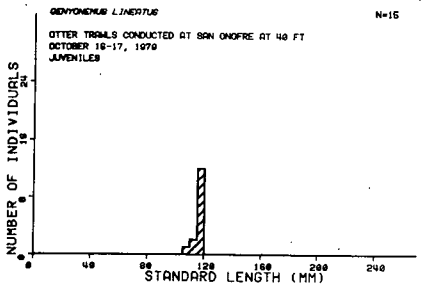












No juveniles caught at 40 ft.

No Genyonemus lineatus collected at 60 ft.

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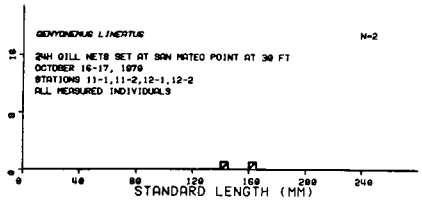
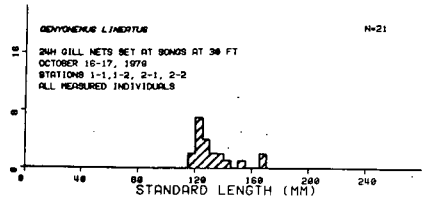
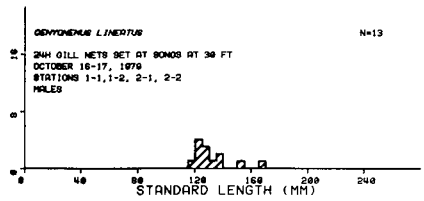
SAN MATEO POINT

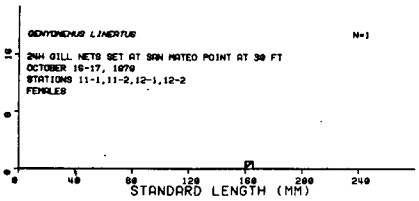
SONGS

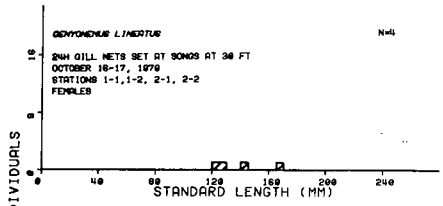


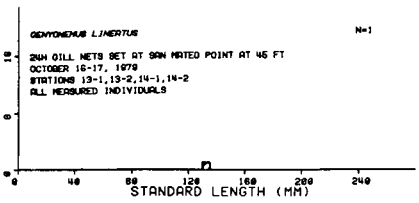


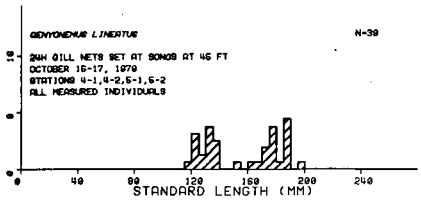
No Genyonemus lineatus males collected.



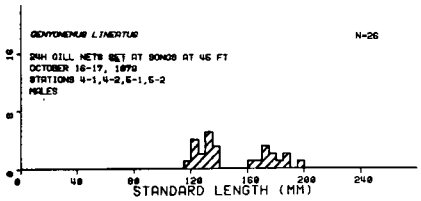


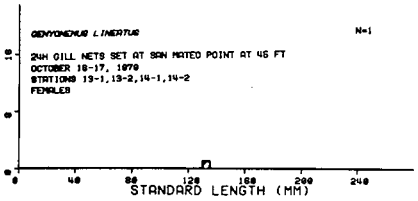


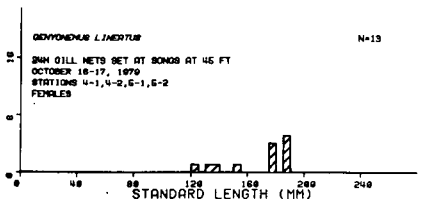




No Genyonemus lineatus males collected.



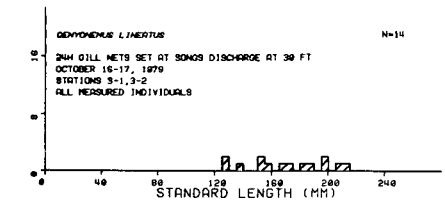


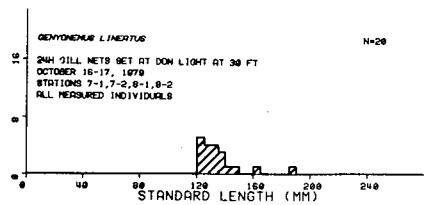


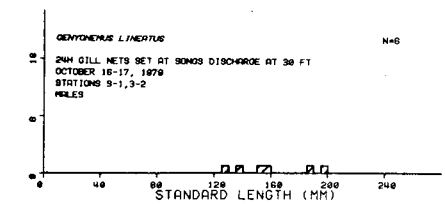
Length frequency histograms of Genyonemus lineatus collected in gill nets conducted at 30 and 45 ft at San Mateo Point and SONGS during survey of October 16-17, 1979.

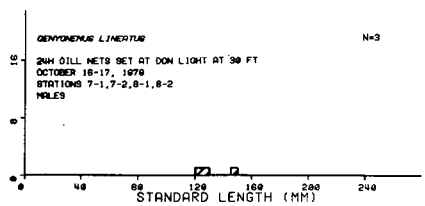
SONGS DISCHARGE

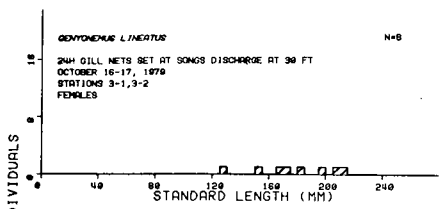
DON LIGHT

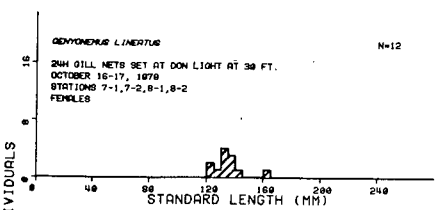






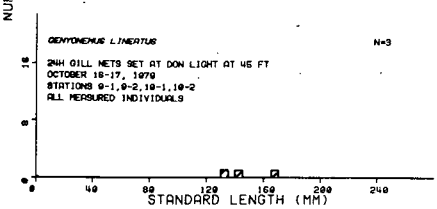


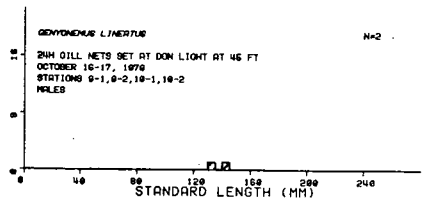


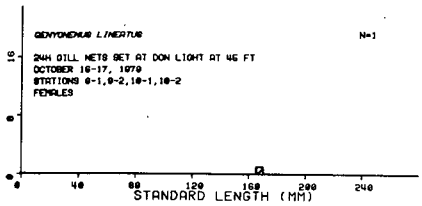


NUMBER OF INDIVIDUALS

NUMBER OF INDIVIDUALS







Length frequency histograms of Genyonemus lineatus collected in gill nets conducted at 30 and 45 ft at SONGS Discharge and Don Light during survey of October 16-17, 1979.

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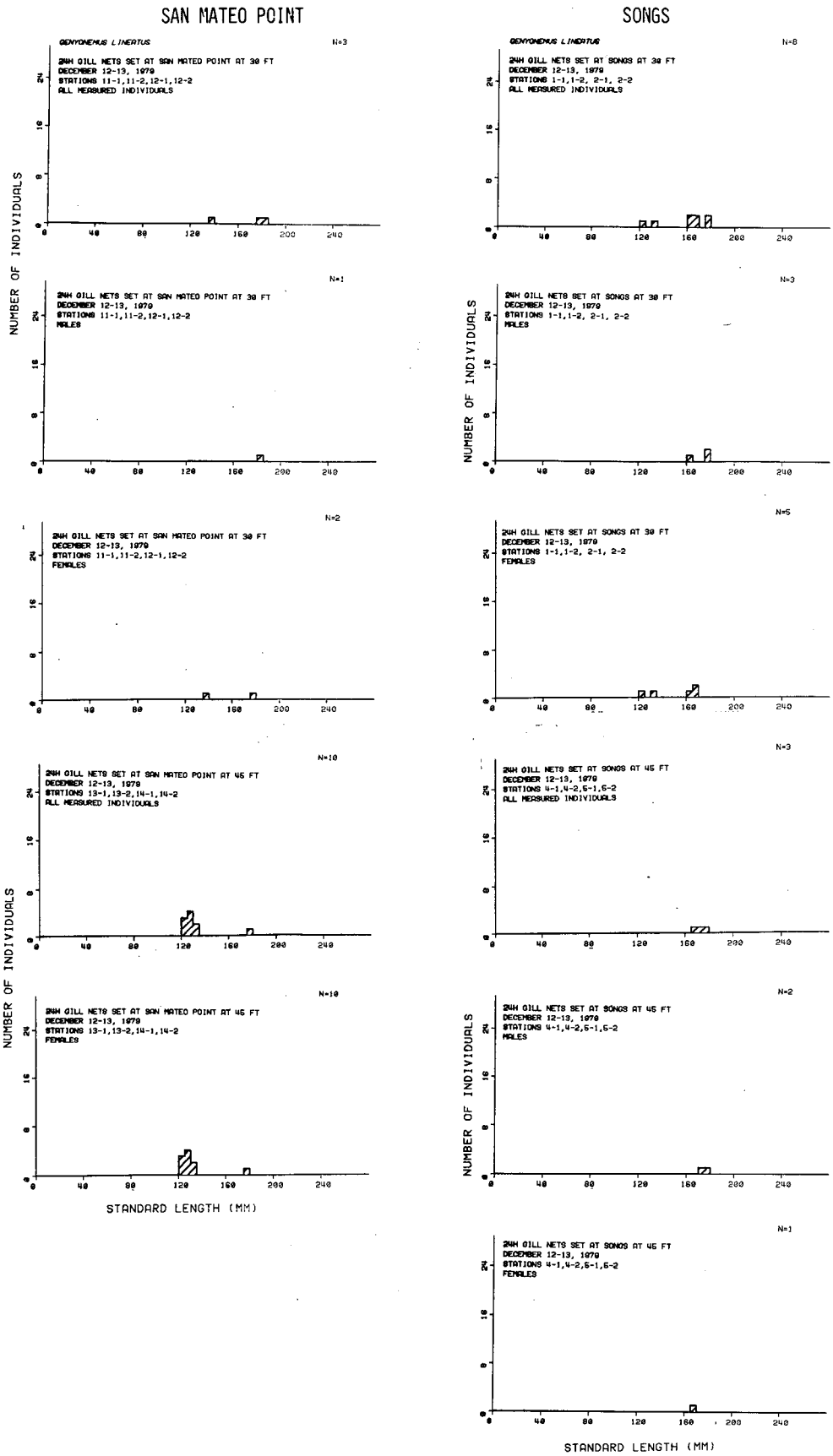
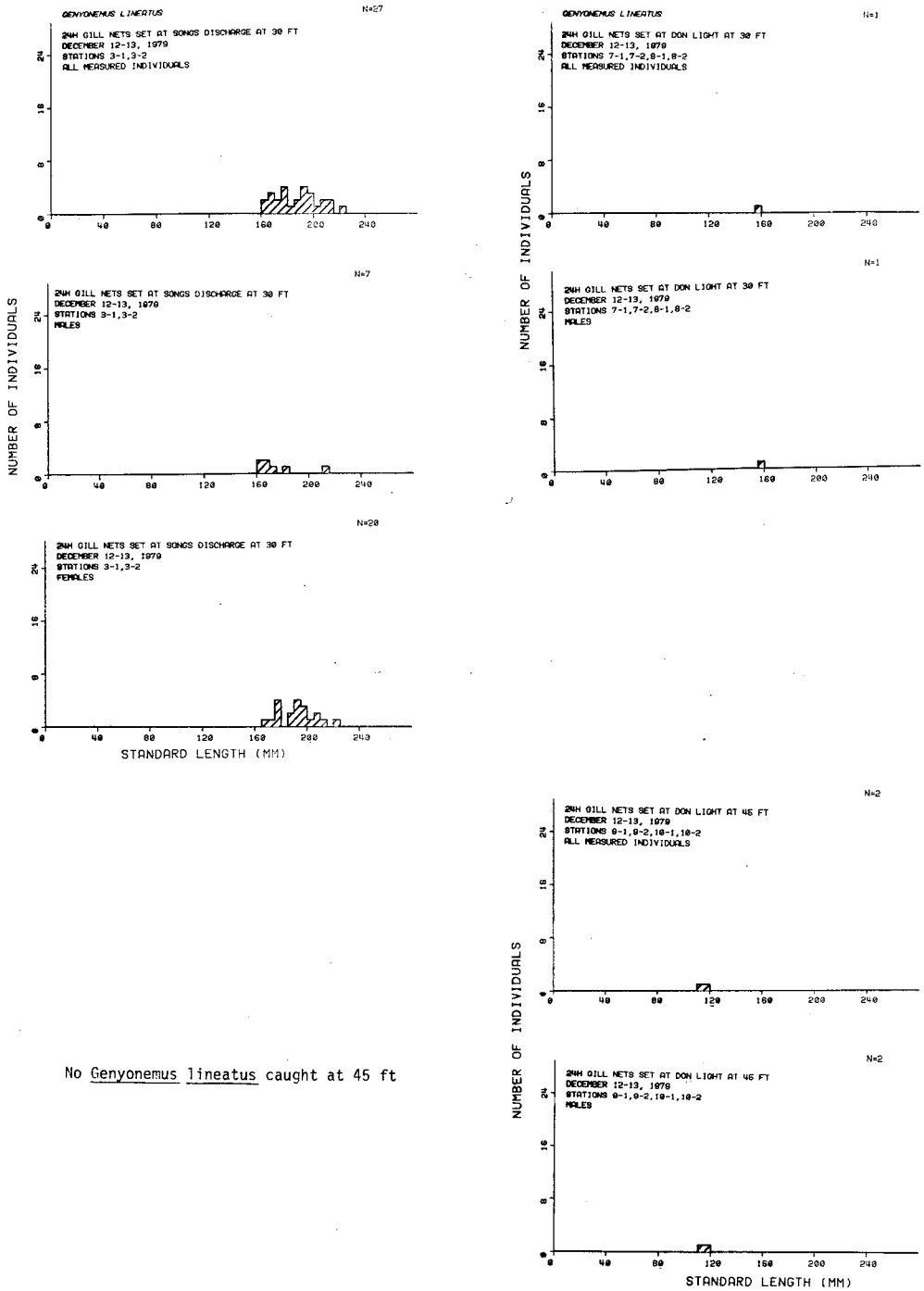


Length frequency histograms of Genyonemus lineatus collected in gill nets conducted at 30 and 45 ft at San Mateo Point and SONGS during survey of December 12-13, 1979.

SONGS DISCHARGE

DON LIGHT



No Genyonemus lineatus caught at 45 ft

Length frequency histograms of Genyonemus lineatus collected in gill nets conducted at 30 and 45 ft at SONGS Discharge and Don Light during survey of December 12-13, 1979.

E. LENGTH-FREQUENCY DATA FOR OTHER SPECIES

Length frequency distributions of select species collected in 24-h gill nets at 30 ft offshore San Mateo Point during Survey of February 15-16, 1979.

TRIAKIS SEMIFASCIATA
FEBRUARY 15-16,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 1
FROM1180 MM TO1199 MM N= 1

SQUALUS ACANTHIAS
FEBRUARY 15-16,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 740 MM TO 759 MM N= 1

ANISOTREMUS DAVIDSONII
FEBRUARY 15-16,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 5
FROM 155 MM TO 159 MM N= 1
FROM 160 MM TO 164 MM N= 1
FROM 195 MM TO 199 MM N= 2
FROM 200 MM TO 204 MM N= 1

CHEILOTREMA SATURNUM
FEBRUARY 15-16,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 185 MM TO 189 MM N= 1

CYNOSCION NOBILIS
FEBRUARY 15-16,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 340 MM TO 349 MM N= 1

GIRELLA NIGRICANS
FEBRUARY 15-16,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 270 MM TO 274 MM N= 1

EMBIOTOCA JACKSONI
FEBRUARY 15-16,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 4
FROM 135 MM TO 139 MM N= 1
FROM 140 MM TO 144 MM N= 1
FROM 165 MM TO 169 MM N= 2

HYPERPROSOPON ARGENTEUM
FEBRUARY 15-16,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 3
FROM 85 MM TO 89 MM N= 1
FROM 90 MM TO 94 MM N= 1
FROM 110 MM TO 114 MM N= 1

RHACOCHILUS TOXOTES
FEBRUARY 15-16,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 280 MM TO 284 MM N= 1

SCORPAENA GUTTATA
FEBRUARY 15-16,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 120 MM TO 124 MM N= 1

TRIAKIS SEMIFASCIATA
FEBRUARY 15-16,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 5
FROM 600 MM TO 619 MM N= 1
FROM 800 MM TO 819 MM N= 1
FROM 820 MM TO 839 MM N= 1
FROM 860 MM TO 879 MM N= 1
FROM 880 MM TO 899 MM N= 1

SQUALUS ACANTHIAS
FEBRUARY 15-16,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 4
FROM 660 MM TO 679 MM N= 1
FROM 680 MM TO 699 MM N= 1
FROM 780 MM TO 799 MM N= 1
FROM 860 MM TO 879 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
FEBRUARY 15-16,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 265 MM TO 269 MM N= 1

CYNOSCION NOBILIS
FEBRUARY 15-16,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 11
FROM 310 MM TO 319 MM N= 1
FROM 350 MM TO 359 MM N= 1
FROM 360 MM TO 369 MM N= 1
FROM 370 MM TO 379 MM N= 1
FROM 390 MM TO 399 MM N= 1
FROM 430 MM TO 439 MM N= 1
FROM 440 MM TO 449 MM N= 1
FROM 500 MM TO 509 MM N= 1
FROM 510 MM TO 519 MM N= 1
FROM 520 MM TO 529 MM N= 1
FROM 530 MM TO 539 MM N= 1

MENTICIRRHUS UNDULATUS
FEBRUARY 15-16,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 460 MM TO 469 MM N= 1

RONCADOR STEARNSII
FEBRUARY 15-16,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 290 MM TO 299 MM N= 1

GIRELLA NIGRICANS
FEBRUARY 15-16,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 330 MM TO 339 MM N= 1

AMPHISTICHUS ARGENTEUS
FEBRUARY 15-16,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 145 MM TO 149 MM N= 1
FROM 205 MM TO 209 MM N= 1

EMBIOTOCA JACKSONI
FEBRUARY 15-16,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 150 MM TO 154 MM N= 1
FROM 175 MM TO 179 MM N= 1

HYPERPROSOPON ARGENTEUM
FEBRUARY 15-16,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 130 MM TO 134 MM N= 1

RHACOCHILUS TOXOTES
FEBRUARY 15-16,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 280 MM TO 284 MM N= 1
FROM 290 MM TO 294 MM N= 1

PARALICHTHYS CALIFORNICUS
FEBRUARY 15-16,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 290 MM TO 299 MM N= 1

SQUALUS ACANTHIAS
FEBRUARY 15-16,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 720 MM TO 739 MM N= 1
FROM 880 MM TO 899 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
FEBRUARY 15-16,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 245 MM TO 249 MM N= 1
FROM 255 MM TO 259 MM N= 1

MENTICIRRHUS UNDULATUS
FEBRUARY 15-16,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 230 MM TO 239 MM N= 1

SQUALUS ACANTHIAS
FEBRUARY 15-16,1979
STATION 12-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 560 MM TO 579 MM N= 1
FROM 780 MM TO 799 MM N= 1
FROM 840 MM TO 859 MM N= 1

MENTICIRRHUS UNDULATUS
FEBRUARY 15-16,1979
STATION 12-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 240 MM TO 249 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 30 ft offshore San Onofre during Survey of February 15-16, 1979.

ATHERINOPSIS CALIFORNIENSIS
FEBRUARY 15-16,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 22
FROM 190 MM TO 194 MM N= 1
FROM 200 MM TO 204 MM N= 1
FROM 215 MM TO 219 MM N= 2
FROM 220 MM TO 224 MM N= 1
FROM 235 MM TO 239 MM N= 2
FROM 240 MM TO 244 MM N= 1
FROM 245 MM TO 249 MM N= 2
FROM 250 MM TO 254 MM N= 5
FROM 255 MM TO 259 MM N= 3
FROM 260 MM TO 264 MM N= 2
FROM 270 MM TO 274 MM N= 1
FROM 275 MM TO 279 MM N= 1

ANISOTREMUS DAVIDSONII
FEBRUARY 15-16,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 135 MM TO 139 MM N= 1

CYNOSCION NOBILIS
FEBRUARY 15-16,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 350 MM TO 359 MM N= 1

MENTICIRRHUS UNDULATUS
FEBRUARY 15-16,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 260 MM TO 269 MM N= 1
FROM 290 MM TO 299 MM N= 1

RONCADOR STEARNSII
FEBRUARY 15-16,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 260 MM TO 269 MM N= 1

HYPERPROSOPON ARGENTEUM
FEBRUARY 15-16,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 145 MM TO 149 MM N= 1

MICROMETRUS MINIMUS
FEBRUARY 15-16,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 75 MM TO 79 MM N= 1

TRIAKIS SEMIFASCIATA
FEBRUARY 15-16,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 980 MM TO 999 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
FEBRUARY 15-16,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 4
FROM 240 MM TO 244 MM N= 1
FROM 245 MM TO 249 MM N= 1
FROM 250 MM TO 254 MM N= 1
FROM 260 MM TO 264 MM N= 1

CYNOSCION NOBILIS
FEBRUARY 15-16,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 330 MM TO 339 MM N= 2

RHACOCHILUS TOXOTES
FEBRUARY 15-16,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 290 MM TO 294 MM N= 1

TRIAKIS SEMIFASCIATA
FEBRUARY 15-16,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 420 MM TO 439 MM N= 1
FROM 500 MM TO 519 MM N= 1

SQUALUS ACANTHIAS
FEBRUARY 15-16,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 600 MM TO 619 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
FEBRUARY 15-16,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 240 MM TO 244 MM N= 1

CYNOSCION NOBILIS
FEBRUARY 15-16,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 3
FROM 330 MM TO 339 MM N= 1
FROM 380 MM TO 389 MM N= 1
FROM 400 MM TO 409 MM N= 1

MENTICIRRHUS UNDULATUS
FEBRUARY 15-16,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 270 MM TO 279 MM N= 1

RHACOCHILUS TOXOTES
FEBRUARY 15-16,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 270 MM TO 274 MM N= 1
FROM 280 MM TO 284 MM N= 1

SARDA CHILIENSIS
FEBRUARY 15-16,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 290 MM TO 294 MM N= 1

PARALICHTHYS CALIFORNICUS
FEBRUARY 15-16,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 420 MM TO 429 MM N= 1

SQUALUS ACANTHIAS
FEBRUARY 15-16,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 740 MM TO 759 MM N= 2

PORICHTHYS MYRIASTER
FEBRUARY 15-16,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 270 MM TO 274 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
FEBRUARY 15-16,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 240 MM TO 244 MM N= 1

MENTICIRRHUS UNDULATUS
FEBRUARY 15-16,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 240 MM TO 249 MM N= 1

PARALABRAX CLATHRATUS
FEBRUARY 15-16,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 180 MM TO 189 MM N= 1

XENISTIUS CALIFORNIENSIS
FEBRUARY 15-16,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 130 MM TO 134 MM N= 1

CYNOSCION NOBILIS
FEBRUARY 15-16,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 250 MM TO 259 MM N= 1
FROM 380 MM TO 389 MM N= 1

MENTICIRRHUS UNDULATUS
FEBRUARY 15-16,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 240 MM TO 249 MM N= 1

RONCADOR STEARNSII
FEBRUARY 15-16,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 5
FROM 230 MM TO 239 MM N= 1
FROM 240 MM TO 249 MM N= 2
FROM 250 MM TO 259 MM N= 2

EMBIOTOCA JACKSONI
FEBRUARY 15-16,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 180 MM TO 184 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
FEBRUARY 15-16,1979
STATION 3-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 170 MM TO 174 MM N= 1

MENTICIRRHUS UNDULATUS
FEBRUARY 15-16,1979
STATION 3-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 280 MM TO 289 MM N= 1

HYPERPROSOPON ARGENTEUM
FEBRUARY 15-16,1979
STATION 3-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 120 MM TO 124 MM N= 1

SQUALUS ACANTHIAS
FEBRUARY 15-16,1979
STATION 3-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 760 MM TO 779 MM N= 1
FROM 780 MM TO 799 MM N= 1

CYNOSCION NOBILIS
FEBRUARY 15-16,1979
STATION 3-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 260 MM TO 269 MM N= 1

MENTICIRRHUS UNDULATUS
FEBRUARY 15-16,1979
STATION 3-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 220 MM TO 229 MM N= 1
FROM 260 MM TO 269 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 30 ft offshore Don Light during Survey of February 15-16, 1979.

MUSTELUS CALIFORNICUS
FEBRUARY 15-16,1979
STATION 6-2

TOTAL NO. OF INDIVIDUALS = 11
FROM 540 MM TO 559 MM N= 1
FROM 600 MM TO 619 MM N= 1
FROM 660 MM TO 679 MM N= 9

SQUALUS ACANTHIAS
FEBRUARY 15-16,1979
STATION 6-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 220 MM TO 239 MM N= 1

PHANERODON FURCATUS
FEBRUARY 15-16,1979
STATION 6-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 130 MM TO 134 MM N= 2

SQUALUS ACANTHIAS
FEBRUARY 15-16,1979
STATION 7-1

TOTAL NO. OF INDIVIDUALS = 6
FROM 760 MM TO 779 MM N= 5
FROM 900 MM TO 919 MM N= 1

MENTICIRRHUS UNDULATUS
FEBRUARY 15-16,1979
STATION 7-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 270 MM TO 279 MM N= 1

HYPSURUS CARYI
FEBRUARY 15-16,1979
STATION 7-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 170 MM TO 174 MM N= 1

PHANERODON FURCATUS
FEBRUARY 15-16,1979
STATION 7-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 160 MM TO 164 MM N= 1

SQUALUS ACANTHIAS
FEBRUARY 15-16,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 640 MM TO 659 MM N= 1

PARALABRAX MACULATOFASCIATUS
FEBRUARY 15-16,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 210 MM TO 219 MM N= 1
FROM 220 MM TO 229 MM N= 1

PARALABRAX NEBULIFER
FEBRUARY 15-16,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 240 MM TO 249 MM N= 1

ANISOTREMUS DAVIDSONII
FEBRUARY 15-16,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 145 MM TO 149 MM N= 1
FROM 185 MM TO 189 MM N= 1

MENTICIRRHUS UNDULATUS
FEBRUARY 15-16,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 230 MM TO 239 MM N= 1
FROM 240 MM TO 249 MM N= 1
FROM 310 MM TO 319 MM N= 1

RONCADOR STEARNSII
FEBRUARY 15-16,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 140 MM TO 149 MM N= 1
FROM 210 MM TO 219 MM N= 1

HYPERPROSOPON ARGENTEUM
FEBRUARY 15-16,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 130 MM TO 134 MM N= 1

PHANERODON FURCATUS
FEBRUARY 15-16,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 4
FROM 125 MM TO 129 MM N= 1
FROM 145 MM TO 149 MM N= 1
FROM 150 MM TO 154 MM N= 1
FROM 170 MM TO 174 MM N= 1

SQUALUS ACANTHIAS
FEBRUARY 15-16,1979
STATION 8-1

TOTAL NO. OF INDIVIDUALS = 3
FROM 680 MM TO 699 MM N= 1
FROM 800 MM TO 819 MM N= 2

PARALABRAX NEBULIFER
FEBRUARY 15-16,1979
STATION 8-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 280 MM TO 289 MM N= 1

MENTICIRRHUS UNDULATUS
FEBRUARY 15-16,1979
STATION 8-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 250 MM TO 259 MM N= 1

HYPERPROSOPON ARGENTEUM
FEBRUARY 15-16,1979
STATION 8-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 135 MM TO 139 MM N= 1
FROM 145 MM TO 149 MM N= 1

PHANERODON FURCATUS
FEBRUARY 15-16,1979
STATION 8-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 160 MM TO 164 MM N= 1
FROM 165 MM TO 169 MM N= 1

RHACOCHILUS TOXOTES
FEBRUARY 15-16,1979
STATION 8-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 300 MM TO 309 MM N= 1

SQUALUS ACANTHIAS
FEBRUARY 15-16,1979
STATION 8-2

TOTAL NO. OF INDIVIDUALS = 5
FROM 480 MM TO 499 MM N= 1
FROM 560 MM TO 579 MM N= 1
FROM 600 MM TO 619 MM N= 1
FROM 620 MM TO 639 MM N= 2

MENTICIRRHUS UNDULATUS
FEBRUARY 15-16,1979
STATION 8-2

TOTAL NO. OF INDIVIDUALS = 10
FROM 160 MM TO 169 MM N= 1
FROM 180 MM TO 189 MM N= 2
FROM 190 MM TO 199 MM N= 1
FROM 210 MM TO 219 MM N= 2
FROM 230 MM TO 239 MM N= 1
FROM 240 MM TO 249 MM N= 2
FROM 330 MM TO 339 MM N= 1

RONCADOR STEARNSII
FEBRUARY 15-16,1979
STATION 8-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 240 MM TO 249 MM N= 1

PHANERODON FURCATUS
FEBRUARY 15-16,1979
STATION 8-2

TOTAL NO. OF INDIVIDUALS = 4
FROM 115 MM TO 119 MM N= 1
FROM 155 MM TO 159 MM N= 2
FROM 160 MM TO 164 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 45 ft offshore San Mateo Point during Survey of February 15-16, 1979.

CYNOSCION NOBILIS
FEBRUARY 15-16,1979
STATION 13-1

TOTAL NO. OF INDIVIDUALS = 3
FROM 330 MM TO 339 MM N= 1
FROM 350 MM TO 359 MM N= 2

RONCADOR STEARNSII
FEBRUARY 15-16,1979
STATION 13-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 280 MM TO 289 MM N= 1

PARALABRAX NEBULIFER
FEBRUARY 15-16,1979
STATION 13-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 420 MM TO 429 MM N= 1

CYNOSCION NOBILIS
FEBRUARY 15-16,1979
STATION 13-2

TOTAL NO. OF INDIVIDUALS = 17
FROM 200 MM TO 209 MM N= 1
FROM 270 MM TO 279 MM N= 1
FROM 280 MM TO 289 MM N= 1
FROM 320 MM TO 329 MM N= 1
FROM 330 MM TO 339 MM N= 1
FROM 350 MM TO 359 MM N= 2
FROM 360 MM TO 369 MM N= 3
FROM 370 MM TO 379 MM N= 1
FROM 380 MM TO 389 MM N= 3
FROM 390 MM TO 399 MM N= 2
FROM 410 MM TO 419 MM N= 1

PHANERODON FURCATUS
FEBRUARY 15-16,1979
STATION 13-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 50 MM TO 54 MM N= 1

PARALICHTHYS CALIFORNICUS
FEBRUARY 15-16,1979
STATION 13-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 290 MM TO 299 MM N= 2

PARALABRAX NEBULIFER
FEBRUARY 15-16,1979
STATION 14-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 230 MM TO 239 MM N= 1
FROM 260 MM TO 269 MM N= 1

CYNOSCION NOBILIS
FEBRUARY 15-16,1979
STATION 14-1

TOTAL NO. OF INDIVIDUALS = 3
FROM 320 MM TO 329 MM N= 1
FROM 420 MM TO 429 MM N= 1
FROM 530 MM TO 539 MM N= 1

HYPERPROSOPON ARGENTEUM
FEBRUARY 15-16,1979
STATION 14-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 110 MM TO 114 MM N= 1

PHANERODON FURCATUS
FEBRUARY 15-16,1979
STATION 14-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 160 MM TO 164 MM N= 1

PARALICHTHYS CALIFORNICUS
FEBRUARY 15-16,1979
STATION 14-1

TOTAL NO. OF INDIVIDUALS = 3
FROM 300 MM TO 309 MM N= 1
FROM 350 MM TO 359 MM N= 1
FROM 390 MM TO 399 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 45 ft offshore San Onofre during Survey of February 15-16, 1979.

PARALICHTHYS CALIFORNICUS
FEBRUARY 15-16,1979
STATION 4-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 300 MM TO 309 MM N= 1

PARALABRAX NEBULIFER
FEBRUARY 15-16,1979
STATION 4-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 220 MM TO 229 MM N= 1

CYNOSCION NOBILIS
FEBRUARY 15-16,1979
STATION 4-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 240 MM TO 249 MM N= 1
FROM 250 MM TO 259 MM N= 1
FROM 400 MM TO 409 MM N= 1

PHANERODON FURCATUS
FEBRUARY 15-16,1979
STATION 4-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 175 MM TO 179 MM N= 1
FROM 190 MM TO 194 MM N= 1

PARALABRAX NEBULIFER
FEBRUARY 15-16,1979
STATION 5-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 230 MM TO 239 MM N= 2

HYPERPROSOPON ARGENTEUM
FEBRUARY 15-16,1979
STATION 5-1

TOTAL NO. OF INDIVIDUALS = 3
FROM 90 MM TO 94 MM N= 1
FROM 115 MM TO 119 MM N= 1
FROM 135 MM TO 139 MM N= 1

PHANERODON FURCATUS
FEBRUARY 15-16,1979
STATION 5-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 120 MM TO 124 MM N= 1

PARALICHTHYS CALIFORNICUS
FEBRUARY 15-16,1979
STATION 5-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 320 MM TO 329 MM N= 1
FROM 380 MM TO 389 MM N= 1

PARALABRAX CLATHRATUS
FEBRUARY 15-16,1979
STATION 5-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 160 MM TO 169 MM N= 1

CYNOSCION NOBILIS
FEBRUARY 15-16,1979
STATION 5-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 390 MM TO 399 MM N= 2

HYPERPROSOPON ARGENTEUM
FEBRUARY 15-16,1979
STATION 5-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 115 MM TO 119 MM N= 1

PHANERODON FURCATUS
FEBRUARY 15-16,1979
STATION 5-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 120 MM TO 124 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 45 ft offshore Don Light during Survey of February 15-16, 1979.

PARALABRAX NEBULIFER
FEBRUARY 15-16,1979
STATION 9-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 25Ø MM TO 259 MM N= 1

PHANERODON FURCATUS
FEBRUARY 15-16,1979
STATION 9-1

TOTAL NO. OF INDIVIDUALS = 7
FROM 11Ø MM TO 114 MM N= 1
FROM 12Ø MM TO 124 MM N= 1
FROM 125 MM TO 129 MM N= 1
FROM 13Ø MM TO 134 MM N= 1
FROM 145 MM TO 149 MM N= 1
FROM 155 MM TO 159 MM N= 1
FROM 17Ø MM TO 174 MM N= 1

PARALABRAX NEBULIFER
FEBRUARY 15-16,1979
STATION 9-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 23Ø MM TO 239 MM N= 1

PHANERODON FURCATUS
FEBRUARY 15-16,1979
STATION 9-2

TOTAL NO. OF INDIVIDUALS = 4
FROM 155 MM TO 159 MM N= 3
FROM 17Ø MM TO 174 MM N= 1

PARALICHTHYS CALIFORNICUS
FEBRUARY 15-16,1979
STATION 9-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 32Ø MM TO 329 MM N= 1
FROM 37Ø MM TO 379 MM N= 1

RONCADOR STEARNSII
FEBRUARY 15-16,1979
STATION 1Ø-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 22Ø MM TO 229 MM N= 1

PHANERODON FURCATUS
FEBRUARY 15-16,1979
STATION 1Ø-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 13Ø MM TO 134 MM N= 1

PARALICHTHYS CALIFORNICUS
FEBRUARY 15-16,1979
STATION 1Ø-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 28Ø MM TO 289 MM N= 1

PARALABRAX CLATHRATUS
FEBRUARY 15-16,1979
STATION 1Ø-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 24Ø MM TO 249 MM N= 1

PARALABRAX NEBULIFER
FEBRUARY 15-16,1979
STATION 1Ø-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 32Ø MM TO 329 MM N= 1

CYNOSCION NOBILIS
FEBRUARY 15-16,1979
STATION 1Ø-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 22Ø MM TO 229 MM N= 1

RONCADOR STEARNSII
FEBRUARY 15-16,1979
STATION 1Ø-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 23Ø MM TO 239 MM N= 1

PHANERODON FURCATUS
FEBRUARY 15-16,1979
STATION 1Ø-2

TOTAL NO. OF INDIVIDUALS = 5
FROM 15Ø MM TO 154 MM N= 1
FROM 155 MM TO 159 MM N= 2
FROM 17Ø MM TO 174 MM N= 1
FROM 18Ø MM TO 184 MM N= 1

PARALICHTHYS CALIFORNICUS
FEBRUARY 15-16,1979
STATION 1Ø-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 29Ø MM TO 299 MM N= 1

Length frequency distributions of select species collected in 5-min otter trawls at 20, 40, and 60 ft offshore at San Mateo Point, San Onofre, and Don Light during survey of February 15-16, 1979.

SAN MATEO

CYNOSCION NOBILIS
FEBRUARY 15,1979
STATION SM-1-40

TOTAL NO. OF INDIVIDUALS - 4
FROM 110 MM TO 119 MM N- 1
FROM 130 MM TO 139 MM N- 1
FROM 150 MM TO 159 MM N- 1
FROM 180 MM TO 189 MM N- 1

CYNOSCION NOBILIS
FEBRUARY 15,1979
STATION SM-2-40

TOTAL NO. OF INDIVIDUALS - 1
FROM 200 MM TO 209 MM N- 1

PHANERODON FURCATUS
FEBRUARY 15,1979
STATION SM-2-40

TOTAL NO. OF INDIVIDUALS - 3
FROM 120 MM TO 124 MM N- 1
FROM 130 MM TO 134 MM N- 2

PHANERODON FURCATUS
FEBRUARY 16,1979
STATION SM-3-40

TOTAL NO. OF INDIVIDUALS - 1
FROM 175 MM TO 179 MM N- 1

PHANERODON FURCATUS
FEBRUARY 15,1979
STATION SM-1-60

TOTAL NO. OF INDIVIDUALS - 1
FROM 120 MM TO 124 MM N- 1

PHANERODON FURCATUS
FEBRUARY 15,1979
STATION SM-2-60

TOTAL NO. OF INDIVIDUALS - 3
FROM 160 MM TO 164 MM N- 1
FROM 165 MM TO 169 MM N- 1
FROM 185 MM TO 189 MM N- 1

PARALICHTHYS CALIFORNICUS
FEBRUARY 15,1979
STATION SM-2-60

TOTAL NO. OF INDIVIDUALS - 1
FROM 450 MM TO 459 MM N- 1

PARALICHTHYS CALIFORNICUS
FEBRUARY 16,1979
STATION SM-4-60

TOTAL NO. OF INDIVIDUALS - 1
FROM 290 MM TO 299 MM N- 1

SAN ONOFRE

HYPERPROSOPON ARGENTEUM
FEBRUARY 15,1979
STATION SO-1-20

TOTAL NO. OF INDIVIDUALS - 2
FROM 85 MM TO 89 MM N- 1
FROM 115 MM TO 119 MM N- 1

PARALICHTHYS CALIFORNICUS
FEBRUARY 15,1979
STATION SO-1-60

TOTAL NO. OF INDIVIDUALS - 1
FROM 280 MM TO 289 MM N- 1

DON LIGHT

HYPERPROSOPON ARGENTEUM
FEBRUARY 16,1979
STATION DL-3-20

TOTAL NO. OF INDIVIDUALS - 2
FROM 85 MM TO 89 MM N- 1
FROM 90 MM TO 94 MM N- 1

PARALICHTHYS CALIFORNICUS
FEBRUARY 15,1979
STATION DL-3-20

TOTAL NO. OF INDIVIDUALS - 1
FROM 230 MM TO 239 MM N- 1

PHANERODON FURCATUS
FEBRUARY 15,1979
STATION DL-1-40

TOTAL NO. OF INDIVIDUALS - 2
FROM 85 MM TO 89 MM N- 2

PARALICHTHYS CALIFORNICUS
FEBRUARY 15,1979
STATION DL-1-40

TOTAL NO. OF INDIVIDUALS - 1

PHANERODON FURCATUS
FEBRUARY 16,1979
STATION DL-2-40

TOTAL NO. OF INDIVIDUALS - 3
FROM 75 MM TO 79 MM N- 1
FROM 80 MM TO 84 MM N- 1
FROM 115 MM TO 119 MM N- 1

PHANERODON FURCATUS
FEBRUARY 16,1979
STATION DL-4-40

TOTAL NO. OF INDIVIDUALS - 3
FROM 80 MM TO 84 MM N- 1
FROM 120 MM TO 124 MM N- 1
FROM 130 MM TO 134 MM N- 1

Length frequency distributions of select species collected in 24-h gill nets at 30 ft offshore San Mateo Point during Survey of April 17-18, 1979.

PARALABRAX NEBULIFER
APRIL 17-18,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 390 MM TO 399 MM N= 1
FROM 410 MM TO 419 MM N= 1

HYPERPROSOPON ARGENTEUM
APRIL 17-18,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 100 MM TO 104 MM N= 1
FROM 125 MM TO 129 MM N= 1

PHANERODON FURCATUS
APRIL 17-18,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 90 MM TO 94 MM N= 1

RHACOCHILUS TOXOTES
APRIL 17-18,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 130 MM TO 134 MM N= 1

PARALICHTHYS CALIFORNICUS
APRIL 17-18,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 300 MM TO 309 MM N= 1

PARALABRAX NEBULIFER
APRIL 17-18,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 300 MM TO 309 MM N= 1

ANISOTREMUS DAVIDSONII
APRIL 17-18,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 170 MM TO 174 MM N= 1

XENISTIUS CALIFORNIENSIS
APRIL 17-18,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 165 MM TO 169 MM N= 1

CHEILOTREMA SATURNUM
APRIL 17-18,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 215 MM TO 219 MM N= 1

CYNOSCION NOBILIS
APRIL 17-18,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 380 MM TO 389 MM N= 1

EMBIOTOCA JACKSONI
APRIL 17-18,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 135 MM TO 139 MM N= 1
FROM 150 MM TO 154 MM N= 1
FROM 175 MM TO 179 MM N= 1

HYPERPROSOPON ARGENTEUM
APRIL 17-18,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 120 MM TO 124 MM N= 1
FROM 135 MM TO 139 MM N= 1
FROM 145 MM TO 149 MM N= 1

MUSTELUS CALIFORNICUS
APRIL 17-18,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 740 MM TO 759 MM N= 1

PARALABRAX NEBULIFER
APRIL 17-18,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 3
FROM 250 MM TO 259 MM N= 1
FROM 290 MM TO 299 MM N= 1
FROM 440 MM TO 449 MM N= 1

GIRELLA NIGRICANS
APRIL 17-18,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 310 MM TO 319 MM N= 1

RHACOCHILUS TOXOTES
APRIL 17-18,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 280 MM TO 284 MM N= 1

PIMELOMETOPON PULCHRUM
APRIL 17-18,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 180 MM TO 189 MM N= 1

CYNOSCION NOBILIS
APRIL 17-18,1979
STATION 12-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 400 MM TO 409 MM N= 1
FROM 420 MM TO 429 MM N= 1

MEDIALUNA CALIFORNIENSIS
APRIL 17-18,1979
STATION 12-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 215 MM TO 219 MM N= 1
FROM 250 MM TO 254 MM N= 1

PHANERODON FURCATUS
APRIL 17-18,1979
STATION 12-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 120 MM TO 124 MM N= 1

PIMELOMETOPON PULCHRUM
APRIL 17-18,1979
STATION 12-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 380 MM TO 389 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 30 ft offshore San Onofre during Survey of April 17-18, 1979.

TRIAKIS SEMIFASCIATA
APRIL 17-18,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 460 MM TO 479 MM N= 1
FROM 500 MM TO 519 MM N= 1

SQUALUS ACANTHIAS
APRIL 17-18,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 760 MM TO 779 MM N= 1
FROM 860 MM TO 879 MM N= 1

ANISOTREMUS DAVIDSONII
APRIL 17-18,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 160 MM TO 164 MM N= 1

CHEILOTREMA SATURNUM
APRIL 17-18,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 4
FROM 180 MM TO 184 MM N= 1
FROM 190 MM TO 194 MM N= 1
FROM 220 MM TO 224 MM N= 1
FROM 230 MM TO 234 MM N= 1

CYNOSCION NOBILIS
APRIL 17-18,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 5
FROM 270 MM TO 279 MM N= 1
FROM 280 MM TO 289 MM N= 1
FROM 370 MM TO 379 MM N= 1
FROM 380 MM TO 389 MM N= 1
FROM 400 MM TO 409 MM N= 1

GIRELLA NIGRICANS
APRIL 17-18,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 270 MM TO 274 MM N= 1

MICROMETRUS MINIMUS
APRIL 17-18,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 70 MM TO 74 MM N= 1

TRIAKIS SEMIFASCIATA
APRIL 17-18,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 760 MM TO 779 MM N= 1

SQUALUS ACANTHIAS
APRIL 17-18,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 820 MM TO 839 MM N= 1

CHEILOTREMA SATURNUM
APRIL 17-18,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 190 MM TO 194 MM N= 1

CYNOSCION NOBILIS
APRIL 17-18,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1

MENTICIRRHUS UNDULATUS
APRIL 17-18,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 250 MM TO 259 MM N= 1

RONCADOR STEARNSII
APRIL 17-18,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 270 MM TO 279 MM N= 1
FROM 360 MM TO 369 MM N= 1

DAMALICHTHYS VACCA
APRIL 17-18,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 265 MM TO 269 MM N= 1

EMBIOTOCA JACKSONI
APRIL 17-18,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 165 MM TO 169 MM N= 1

HYPERPROSOPON ARGENTEUM
APRIL 17-18,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 120 MM TO 124 MM N= 1

RHACOCHILUS TOXOTES
APRIL 17-18,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 270 MM TO 274 MM N= 1

SQUALUS ACANTHIAS
APRIL 17-18,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 780 MM TO 799 MM N= 1

PARALABRAX NEBULIFER
APRIL 17-18,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 260 MM TO 269 MM N= 1

CYNOSCION NOBILIS
APRIL 17-18,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 8
FROM 190 MM TO 199 MM N= 1
FROM 360 MM TO 369 MM N= 2
FROM 370 MM TO 379 MM N= 3
FROM 400 MM TO 409 MM N= 1
FROM 420 MM TO 429 MM N= 1

RONCADOR STEARNSII
APRIL 17-18,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 8
FROM 240 MM TO 249 MM N= 1
FROM 270 MM TO 279 MM N= 1
FROM 290 MM TO 299 MM N= 2
FROM 300 MM TO 309 MM N= 1
FROM 330 MM TO 339 MM N= 1
FROM 350 MM TO 359 MM N= 1
FROM 360 MM TO 369 MM N= 1

DAMALICHTHYS VACCA
APRIL 17-18,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 130 MM TO 134 MM N= 1

RHACOCHILUS TOXOTES
APRIL 17-18,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 265 MM TO 269 MM N= 1
FROM 270 MM TO 274 MM N= 1

MUSTELUS CALIFORNICUS
APRIL 17-18,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 440 MM TO 449 MM N= 1

SQUALUS ACANTHIAS
APRIL 17-18,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 880 MM TO 899 MM N= 1

RHINOBATOS PRODUCTUS
APRIL 17-18,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 520 MM TO 539 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
APRIL 17-18,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 285 MM TO 289 MM N= 1

MENTICIRRHUS UNDULATUS
APRIL 17-18,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 330 MM TO 339 MM N= 1

RONCADOR STEARNSII
APRIL 17-18,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 8
FROM 230 MM TO 239 MM N= 1
FROM 240 MM TO 249 MM N= 1
FROM 250 MM TO 259 MM N= 4
FROM 260 MM TO 269 MM N= 1
FROM 270 MM TO 279 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
APRIL 17-18,1979
STATION 3-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 255 MM TO 259 MM N= 1

CYNOSCION NOBILIS
APRIL 17-18,1979
STATION 3-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 200 MM TO 209 MM N= 1

MENTICIRRHUS UNDULATUS
APRIL 17-18,1979
STATION 3-1

TOTAL NO. OF INDIVIDUALS = 5
FROM 200 MM TO 209 MM N= 1
FROM 260 MM TO 269 MM N= 1
FROM 270 MM TO 279 MM N= 2
FROM 300 MM TO 309 MM N= 1

HYPERPROSOPON ARGENTEUM
APRIL 17-18,1979
STATION 3-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 120 MM TO 124 MM N= 1
FROM 150 MM TO 154 MM N= 1

SQUALUS ACANTHIAS
APRIL 17-18,1979
STATION 3-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 800 MM TO 819 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
APRIL 17-18,1979
STATION 3-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 245 MM TO 249 MM N= 1

MENTICIRRHUS UNDULATUS
APRIL 17-18,1979
STATION 3-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 230 MM TO 239 MM N= 1
FROM 250 MM TO 259 MM N= 1

HYPERPROSOPON ARGENTEUM
APRIL 17-18,1979
STATION 3-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 125 MM TO 129 MM N= 1
FROM 135 MM TO 139 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 30 ft offshore Don Light during Survey of April 17-18, 1979.

SQUALUS ACANTHIAS
APRIL 17-18,1979
STATION 6-1

TOTAL NO. OF INDIVIDUALS = 5
FROM 640 MM TO 649 MM N= 1
FROM 730 MM TO 739 MM N= 1
FROM 760 MM TO 769 MM N= 2
FROM 980 MM TO 989 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
APRIL 17-18,1979
STATION 6-1

TOTAL NO. OF INDIVIDUALS = 10
FROM 205 MM TO 209 MM N= 1
FROM 210 MM TO 214 MM N= 1
FROM 235 MM TO 239 MM N= 1
FROM 240 MM TO 244 MM N= 1
FROM 245 MM TO 249 MM N= 1
FROM 250 MM TO 254 MM N= 3
FROM 255 MM TO 259 MM N= 1
FROM 285 MM TO 289 MM N= 1

AMPHISTICHUS ARGENTEUS
APRIL 17-18,1979
STATION 6-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 115 MM TO 119 MM N= 1

SCORPAENA GUTTATA
APRIL 17-18,1979
STATION 6-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 245 MM TO 249 MM N= 1

SQUALUS ACANTHIAS
APRIL 17-18,1979
STATION 6-2

TOTAL NO. OF INDIVIDUALS = 5
FROM 700 MM TO 719 MM N= 1
FROM 720 MM TO 739 MM N= 2
FROM 740 MM TO 759 MM N= 1
FROM 760 MM TO 779 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
APRIL 17-18,1979
STATION 6-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 240 MM TO 244 MM N= 3

MENTICIRRHUS UNDULATUS
APRIL 17-18,1979
STATION 6-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 230 MM TO 239 MM N= 1
FROM 280 MM TO 289 MM N= 1

PHANERODON FURCATUS
APRIL 17-18,1979
STATION 6-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 155 MM TO 159 MM N= 1

SQUALUS ACANTHIAS
APRIL 17-18,1979
STATION 7-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 780 MM TO 799 MM N= 1
FROM 800 MM TO 819 MM N= 1

SYNODUS LUCIOCEPS
APRIL 17-18,1979
STATION 7-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 285 MM TO 289 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
APRIL 17-18,1979
STATION 7-1

TOTAL NO. OF INDIVIDUALS = 11
FROM 230 MM TO 234 MM N= 4
FROM 235 MM TO 239 MM N= 1
FROM 240 MM TO 244 MM N= 2
FROM 245 MM TO 249 MM N= 1
FROM 250 MM TO 254 MM N= 3

MENTICIRRHUS UNDULATUS
APRIL 17-18,1979
STATION 7-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 280 MM TO 289 MM N= 1

PARALABRAX NEBULIFER
APRIL 17-18,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 310 MM TO 319 MM N= 1

MENTICIRRHUS UNDULATUS
APRIL 17-18,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 230 MM TO 239 MM N= 1

HYPERPROSOPON ARGENTEUM
APRIL 17-18,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 110 MM TO 114 MM N= 1

PHANERODON FURCATUS
APRIL 17-18,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 140 MM TO 144 MM N= 1

SQUALUS ACANTHIAS
APRIL 17-18,1979
STATION 8-1

TOTAL NO. OF INDIVIDUALS = 6
FROM 720 MM TO 739 MM N= 1
FROM 740 MM TO 759 MM N= 2
FROM 800 MM TO 819 MM N= 2
FROM 820 MM TO 839 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
APRIL 17-18,1979
STATION 8-1

TOTAL NO. OF INDIVIDUALS = 8
FROM 215 MM TO 219 MM N= 1
FROM 220 MM TO 224 MM N= 1
FROM 225 MM TO 229 MM N= 1
FROM 230 MM TO 234 MM N= 1
FROM 240 MM TO 244 MM N= 1
FROM 245 MM TO 249 MM N= 2
FROM 250 MM TO 254 MM N= 1

MENTICIRRHUS UNDULATUS
APRIL 17-18,1979
STATION 8-1

TOTAL NO. OF INDIVIDUALS = 5
FROM 240 MM TO 249 MM N= 1
FROM 250 MM TO 259 MM N= 2
FROM 300 MM TO 309 MM N= 2

SCORPAENA GUTTATA
APRIL 17-18,1979
STATION 8-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 220 MM TO 224 MM N= 1

PARALABRAX NEBULIFER
APRIL 17-18,1979
STATION 8-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 180 MM TO 189 MM N= 1

CYNOSCION NOBILIS
APRIL 17-18,1979
STATION 8-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 150 MM TO 159 MM N= 1
FROM 260 MM TO 269 MM N= 1

MENTICIRRHUS UNDULATUS
APRIL 17-18,1979
STATION 8-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 320 MM TO 329 MM N= 1

DAMALICHTHYS VACCA
APRIL 17-18,1979
STATION 8-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 180 MM TO 184 MM N= 1
FROM 210 MM TO 214 MM N= 1

EMBIOTOCA JACKSONI
APRIL 17-18,1979
STATION 8-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 160 MM TO 164 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 45 ft offshore San Mateo Point during Survey of April 17-18, 1979.

HYPERPROSOPON ARGENTEUM
APRIL 17-18,1979
STATION 13-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 130 MM TO 134 MM N= 1
FROM 150 MM TO 154 MM N= 1

PARALICHTHYS CALIFORNICUS
APRIL 17-18,1979
STATION 13-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 300 MM TO 309 MM N= 1
FROM 310 MM TO 319 MM N= 1

PHANERODON FURCATUS
APRIL 17-18,1979
STATION 13-1

TOTAL NO. OF INDIVIDUALS = 12
FROM 155 MM TO 159 MM N= 3
FROM 160 MM TO 164 MM N= 6
FROM 165 MM TO 169 MM N= 2
FROM 170 MM TO 174 MM N= 1

PARALABRAX NEBULIFER
APRIL 17-18,1979
STATION 13-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 290 MM TO 299 MM N= 1
FROM 310 MM TO 319 MM N= 1

CYNOSCION NOBILIS
APRIL 17-18,1979
STATION 13-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 410 MM TO 419 MM N= 1

PHANERODON FURCATUS
APRIL 17-18,1979
STATION 13-2

TOTAL NO. OF INDIVIDUALS = 6
FROM 130 MM TO 134 MM N= 1
FROM 135 MM TO 139 MM N= 1
FROM 140 MM TO 144 MM N= 2
FROM 145 MM TO 149 MM N= 1
FROM 160 MM TO 164 MM N= 1

PARALABRAX NEBULIFER
APRIL 17-18,1979
STATION 14-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 210 MM TO 219 MM N= 1
FROM 250 MM TO 259 MM N= 1

CYNOSCION NOBILIS
APRIL 17-18,1979
STATION 14-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 400 MM TO 409 MM N= 1

HYPERPROSOPON ARGENTEUM
APRIL 17-18,1979
STATION 14-2

TOTAL NO. OF INDIVIDUALS = 6
FROM 120 MM TO 124 MM N= 1
FROM 125 MM TO 129 MM N= 2
FROM 130 MM TO 134 MM N= 2
FROM 135 MM TO 139 MM N= 1

PHANERODON FURCATUS
APRIL 17-18,1979
STATION 14-2

TOTAL NO. OF INDIVIDUALS = 4
FROM 130 MM TO 134 MM N= 1
FROM 160 MM TO 164 MM N= 1
FROM 180 MM TO 184 MM N= 1
FROM 190 MM TO 194 MM N= 1

PARALICHTHYS CALIFORNICUS
APRIL 17-18,1979
STATION 14-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 410 MM TO 419 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 45 ft offshore San Onofre during Survey of April 17-18, 1979.

PARALABRAX CLATHRATUS
APRIL 17-18,1979
STATION 4-1

TOTAL NO. OF INDIVIDUALS = 8
FROM 160 MM TO 169 MM N= 1
FROM 170 MM TO 179 MM N= 5
FROM 180 MM TO 189 MM N= 2

PARALABRAX NEBULIFER
APRIL 17-18,1979
STATION 4-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 200 MM TO 209 MM N= 1

PHANERODON FURCATUS
APRIL 17-18,1979
STATION 4-1

TOTAL NO. OF INDIVIDUALS = 7
FROM 95 MM TO 99 MM N= 1
FROM 130 MM TO 134 MM N= 1
FROM 135 MM TO 139 MM N= 1
FROM 140 MM TO 144 MM N= 1
FROM 155 MM TO 159 MM N= 1
FROM 165 MM TO 169 MM N= 1
FROM 175 MM TO 179 MM N= 1

PARALABRAX MACULATOFASCIATUS
APRIL 17-18,1979
STATION 4-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 310 MM TO 319 MM N= 1

PARALICHTHYS CALIFORNICUS
APRIL 17-18,1979
STATION 4-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 330 MM TO 339 MM N= 1

PARALABRAX CLATHRATUS
APRIL 17-18,1979
STATION 5-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 120 MM TO 129 MM N= 1

CYNOSCION NOBILIS
APRIL 17-18,1979
STATION 5-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 250 MM TO 259 MM N= 1
FROM 370 MM TO 379 MM N= 1

HYPERPROSOPON ARGENTEUM
APRIL 17-18,1979
STATION 5-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 105 MM TO 109 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 45 ft offshore Don Light during Survey of April 17-18, 1979.

PARALABRAX NEBULIFER
APRIL 17-18,1979
STATION 9-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 18Ø MM TO 189 MM N= 1

HYPERPROSOPON ARGENTEUM
APRIL 17-18,1979
STATION 9-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 12Ø MM TO 124 MM N= 1
FROM 15Ø MM TO 154 MM N= 1

PHANERODON FURCATUS
APRIL 17-18,1979
STATION 9-1

TOTAL NO. OF INDIVIDUALS = 4
FROM 145 MM TO 149 MM N= 1
FROM 15Ø MM TO 154 MM N= 2
FROM 18Ø MM TO 184 MM N= 1

PHANERODON FURCATUS
APRIL 17-18,1979
STATION 9-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 17Ø MM TO 174 MM N= 1

PARALICHTHYS CALIFORNICUS
APRIL 17-18,1979
STATION 9-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 23Ø MM TO 239 MM N= 1

PARALABRAX NEBULIFER
APRIL 17-18,1979
STATION 1Ø-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 23Ø MM TO 239 MM N= 1

PARALABRAX NEBULIFER
APRIL 17-18,1979
STATION 1Ø-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 34Ø MM TO 349 MM N= 1

Length frequency distributions of select species collected in 5-min otter trawls at 20, 40, and 60 ft offshore at San Mateo Point, San Onofre, and Don Light during survey of April 17-18, 1979.

SAN MATEO POINT

HYPERPROSOPON ARGENTEUM
APRIL 17, 1979
STATION SM-2-2Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 9Ø MM TO 94 MM N= 1
FROM 95 MM TO 99 MM N= 1

PHANERODON FURCATUS
APRIL 17, 1979
STATION SM-2-2Ø

TOTAL NO. OF INDIVIDUALS = 4
FROM 8Ø MM TO 84 MM N= 1
FROM 9Ø MM TO 94 MM N= 2
FROM 95 MM TO 99 MM N= 1

HYPERPROSOPON ARGENTEUM
APRIL 17, 1979
STATION SM-1-4Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 95 MM TO 99 MM N= 2

PARALICHTHYS CALIFORNICUS
APRIL 17, 1979
STATION SM-1-4Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 32Ø MM TO 329 MM N= 1

HYPERPROSOPON ARGENTEUM
APRIL 17, 1979
STATION SM-2-4Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 95 MM TO 99 MM N= 1
FROM 1ØØ MM TO 1Ø4 MM N= 1

HYPERPROSOPON ARGENTEUM
APRIL 18, 1979
STATION SM-3-6Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 1Ø5 MM TO 1Ø9 MM N= 1

PARALICHTHYS CALIFORNICUS
APRIL 18, 1979
STATION SM-3-6Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 33Ø MM TO 339 MM N= 1

HYPERPROSOPON ARGENTEUM
APRIL 18, 1979
STATION SM-4-6Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 95 MM TO 99 MM N= 1
FROM 11Ø MM TO 114 MM N= 1

PHANERODON FURCATUS
APRIL 18, 1979
STATION SM-4-6Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 9Ø MM TO 94 MM N= 2

SAN ONOFRE

HYPERPROSOPON ARGENTEUM
APRIL 18, 1979
STATION SO-4-4Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 14Ø MM TO 144 MM N= 1

PHANERODON FURCATUS
APRIL 18, 1979
STATION SO-3-6Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 14Ø MM TO 144 MM N= 1
FROM 18Ø MM TO 184 MM N= 1

DON LIGHT

HYPERPROSOPON ARGENTEUM
APRIL 17, 1979
STATION DL-1-2Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 1ØØ MM TO 1Ø4 MM N= 1

PHANERODON FURCATUS
APRIL 18, 1979
STATION DL-3-4Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 95 MM TO 99 MM N= 1
FROM 16Ø MM TO 164 MM N= 1

PHANERODON FURCATUS
APRIL 18, 1979
STATION DL-4-4Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 95 MM TO 99 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 30 ft offshore San Mateo Point during Survey of June 27-28, 1979.

TRIAKIS SEMIFASCIATA
JUNE 27-28,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 400 MM TO 419 MM N= 1

PARALABRAX NEBULIFER
JUNE 27-28,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 220 MM TO 229 MM N= 1

CHEILOTREMA SATURNUM
JUNE 27-28,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 190 MM TO 194 MM N= 1

CYNOSCION NOBILIS
JUNE 27-28,1979.
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 360 MM TO 369 MM N= 1
FROM 390 MM TO 399 MM N= 1

MEDIALUNA CALIFORNIENSIS
JUNE 27-28,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 195 MM TO 199 MM N= 1
FROM 200 MM TO 204 MM N= 1

DAMALICHTHYS VACCA
JUNE 27-28,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 200 MM TO 204 MM N= 1

EMBIOTOCA JACKSONI
JUNE 27-28,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 4
FROM 140 MM TO 144 MM N= 1
FROM 155 MM TO 159 MM N= 1
FROM 160 MM TO 164 MM N= 1
FROM 165 MM TO 169 MM N= 1

PHANERODON FURCATUS
JUNE 27-28,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 160 MM TO 164 MM N= 1

RHACOCHILUS TOXOTES
JUNE 27-28,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 275 MM TO 279 MM N= 1

HALICHOERES SEMICINCTUS
JUNE 27-28,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 3
FROM 160 MM TO 164 MM N= 1
FROM 180 MM TO 184 MM N= 1
FROM 200 MM TO 204 MM N= 1

PIMELOMETOPON PULCHRUM
JUNE 27-28,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 155 MM TO 159 MM N= 1
FROM 220 MM TO 224 MM N= 1

HETEROSTICHUS ROSTRATUS
JUNE 27-28,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 220 MM TO 224 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
JUNE 27-28,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 295 MM TO 299 MM N= 1

PARALABRAX CLATHRATUS
JUNE 27-28,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 200 MM TO 209 MM N= 1

PARALABRAX NEBULIFER
JUNE 27-28,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 180 MM TO 189 MM N= 1
FROM 270 MM TO 279 MM N= 1

CYNOSCION NOBILIS
JUNE 27-28,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 410 MM TO 419 MM N= 1

MENTICIRRHUS UNDULATUS
JUNE 27-28,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 280 MM TO 289 MM N= 1

DAMALICHTHYS VACCA
JUNE 27-28,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 140 MM TO 144 MM N= 1

EMBIOTOCA JACKSONI
JUNE 27-28,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 170 MM TO 174 MM N= 1

HYPERPROSOPON ARGENTEUM
JUNE 27-28,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 6
FROM 100 MM TO 104 MM N= 1
FROM 105 MM TO 109 MM N= 2
FROM 130 MM TO 134 MM N= 2
FROM 135 MM TO 139 MM N= 1

PHANERODON FURCATUS
JUNE 27-28,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 160 MM TO 164 MM N= 1

RHACOCHILUS TOXOTES
JUNE 27-28,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 150 MM TO 154 MM N= 1

HYPSYPOPS RUBICUNDUS
JUNE 27-28,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 205 MM TO 209 MM N= 1

PIMELOMETOPON PULCHRUM
JUNE 27-28,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 265 MM TO 269 MM N= 1

SPHYRAENA ARGENTEA
JUNE 27-28,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 360 MM TO 369 MM N= 1
FROM 480 MM TO 489 MM N= 1

CYNOSCION NOBILIS
JUNE 27-28,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 3
FROM 260 MM TO 269 MM N= 2
FROM 290 MM TO 299 MM N= 1

MENTICIRRHUS UNDULATUS
JUNE 27-28,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 220 MM TO 229 MM N= 1
FROM 260 MM TO 269 MM N= 1

SPHYRAENA ARGENTEA
JUNE 27-28,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 360 MM TO 369 MM N= 1

SARDA CHILIENSIS
JUNE 27-28,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 450 MM TO 459 MM N= 1

SCOMBER JAPONICUS
JUNE 27-28,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 270 MM TO 279 MM N= 1
FROM 310 MM TO 319 MM N= 1

PARALICHTHYS CALIFORNICUS
JUNE 27-28,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 110 MM TO 119 MM N= 1
FROM 310 MM TO 319 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 30 ft offshore San Onofre during Survey of June 27-28, 1979.

JUNE 27-28,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 520 MM TO 539 MM N= 1

MUSTELUS CALIFORNICUS
JUNE 27-28,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 680 MM TO 699 MM N= 1

DAMALICHTHYS VACCA
JUNE 27-28,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 155 MM TO 159 MM N= 1

EMBIOTOCA JACKSONI
JUNE 27-28,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 165 MM TO 169 MM N= 1

HYPERPROSOPON ARGENTEUM
JUNE 27-28,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 105 MM TO 109 MM N= 1
FROM 135 MM TO 139 MM N= 1

SPHYRAENA ARGENTEA
JUNE 27-28,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 1

PEPRILUS SIMILLIMUS
JUNE 27-28,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 100 MM TO 104 MM N= 1
FROM 105 MM TO 109 MM N= 1

MUSTELUS CALIFORNICUS
JUNE 27-28,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 660 MM TO 679 MM N= 1

PARALABRAX NEBULIFER
JUNE 27-28,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 170 MM TO 179 MM N= 1

CYNOSCION NOBILIS
JUNE 27-28,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 4
FROM 260 MM TO 269 MM N= 2
FROM 430 MM TO 439 MM N= 1
FROM 440 MM TO 449 MM N= 1

GIRELLA NIGRICANS
JUNE 27-28,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 175 MM TO 179 MM N= 1

MEDIALUNA CALIFORNIENSIS
JUNE 27-28,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 170 MM TO 174 MM N= 1

DAMALICHTHYS VACCA
JUNE 27-28,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 195 MM TO 199 MM N= 1

RHACOCHILUS TOXOTES
JUNE 27-28,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1

MUSTELUS CALIFORNICUS
JUNE 27-28,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 740 MM TO 759 MM N= 1

CYNOSCION NOBILIS
JUNE 27-28,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 250 MM TO 259 MM N= 1
FROM 420 MM TO 429 MM N= 1

MENTICIRRHUS UNDULATUS
JUNE 27-28,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 240 MM TO 249 MM N= 1
FROM 310 MM TO 319 MM N= 1

RONCADOR STEARNSII
JUNE 27-28,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 330 MM TO 339 MM N= 1
FROM 400 MM TO 409 MM N= 1

GIRELLA NIGRICANS
JUNE 27-28,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 5
FROM 290 MM TO 299 MM N= 1
FROM 300 MM TO 309 MM N= 3
FROM 330 MM TO 339 MM N= 1

DAMALICHTHYS VACCA
JUNE 27-28,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 170 MM TO 174 MM N= 1
FROM 275 MM TO 279 MM N= 1

PHANERODON FURCATUS
JUNE 27-28,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 160 MM TO 164 MM N= 1

MENTICIRRHUS UNDULATUS
JUNE 27-28,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 290 MM TO 299 MM N= 1

SPHYRAENA ARGENTEA
JUNE 27-28,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 245 MM TO 249 MM N= 1
FROM 250 MM TO 254 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
JUNE 27-28,1979
STATION 3-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 220 MM TO 224 MM N= 1

MENTICIRRHUS UNDULATUS
JUNE 27-28,1979
STATION 3-1

TOTAL NO. OF INDIVIDUALS = 3
FROM 250 MM TO 259 MM N= 1
FROM 260 MM TO 269 MM N= 1
FROM 310 MM TO 319 MM N= 1

MENTICIRRHUS UNDULATUS
JUNE 27-28,1979
STATION 3-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 200 MM TO 209 MM N= 1
FROM 260 MM TO 269 MM N= 1
FROM 290 MM TO 299 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 30 ft offshore Don Light during Survey of June 27-28, 1979.

MENTICIRRHUS UNDULATUS
JUNE 27-28,1979
STATION 6-1

TOTAL NO. OF INDIVIDUALS = 3
FROM 240 MM TO 249 MM N= 1
FROM 270 MM TO 279 MM N= 1
FROM 280 MM TO 289 MM N= 1

ENGRAULIS MORDAX
JUNE 27-28,1979
STATION 6-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 100 MM TO 104 MM N= 1

MENTICIRRHUS UNDULATUS
JUNE 27-28,1979
STATION 6-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 270 MM TO 279 MM N= 1

AMPHISTICHUS ARGENTEUS
JUNE 27-28,1979
STATION 6-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 160 MM TO 164 MM N= 1

CYMATOGASTER AGGREGATA
JUNE 27-28,1979
STATION 6-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 95 MM TO 99 MM N= 1

PHANERODON FURCATUS
JUNE 27-28,1979
STATION 6-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 115 MM TO 119 MM N= 1
FROM 145 MM TO 149 MM N= 1

PEPRILUS SIMILLIMUS
JUNE 27-28,1979
STATION 6-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 110 MM TO 114 MM N= 1

SQUALUS ACANTHIAS
JUNE 27-28,1979
STATION 7-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 780 MM TO 799 MM N= 1

PORICHTHYS NOTATUS
JUNE 27-28,1979
STATION 7-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 295 MM TO 299 MM N= 1

MENTICIRRHUS UNDULATUS
JUNE 27-28,1979
STATION 7-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 240 MM TO 249 MM N= 1
FROM 250 MM TO 259 MM N= 1

SPHYRAENA ARGENTEA
JUNE 27-28,1979
STATION 7-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 430 MM TO 439 MM N= 1
FROM 500 MM TO 509 MM N= 1

HYPERPROSOPON ARGENTEUM
JUNE 27-28,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 110 MM TO 114 MM N= 1
FROM 120 MM TO 124 MM N= 1
FROM 130 MM TO 134 MM N= 1

PHANERODON FURCATUS
JUNE 27-28,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 4
FROM 110 MM TO 114 MM N= 1
FROM 150 MM TO 154 MM N= 1
FROM 155 MM TO 159 MM N= 1
FROM 165 MM TO 169 MM N= 1

SPHYRAENA ARGENTEA
JUNE 27-28,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 480 MM TO 489 MM N= 1
FROM 490 MM TO 499 MM N= 1

SCOMBER JAPONICUS
JUNE 27-28,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 270 MM TO 274 MM N= 1

PARALICHTHYS CALIFORNICUS
JUNE 27-28,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 220 MM TO 229 MM N= 1

HYPERPROSOPON ARGENTEUM
JUNE 27-28,1979
STATION 8-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 125 MM TO 129 MM N= 1

PHANERODON FURCATUS
JUNE 27-28,1979
STATION 8-1

TOTAL NO. OF INDIVIDUALS = 3
FROM 135 MM TO 139 MM N= 1
FROM 145 MM TO 149 MM N= 1
FROM 160 MM TO 164 MM N= 1

SCOMBER JAPONICUS
JUNE 27-28,1979
STATION 8-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 295 MM TO 299 MM N= 1

PEPRILUS SIMILLIMUS
JUNE 27-28,1979
STATION 8-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 105 MM TO 109 MM N= 1

PORICHTHYS NOTATUS
JUNE 27-28,1979
STATION 8-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 130 MM TO 134 MM N= 1

EMBIOTOCA JACKSONI
JUNE 27-28,1979
STATION 8-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 170 MM TO 174 MM N= 1

HYPERPROSOPON ARGENTEUM
JUNE 27-28,1979
STATION 8-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 165 MM TO 169 MM N= 1

PHANERODON FURCATUS
JUNE 27-28,1979
STATION 8-2

TOTAL NO. OF INDIVIDUALS = 10
FROM 105 MM TO 109 MM N= 1
FROM 120 MM TO 124 MM N= 1
FROM 135 MM TO 139 MM N= 1
FROM 155 MM TO 159 MM N= 1
FROM 160 MM TO 164 MM N= 3
FROM 165 MM TO 169 MM N= 2
FROM 170 MM TO 174 MM N= 1

SPHYRAENA ARGENTEA
JUNE 27-28,1979
STATION 8-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 530 MM TO 539 MM N= 1

SCORPAENA GUTTATA
JUNE 27-28,1979
STATION 8-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 120 MM TO 124 MM N= 1
FROM 125 MM TO 129 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 45 ft offshore San Mateo Point during Survey of June 27-28, 1979.

PARALABRAX NEBULIFER
JUNE 27-28,1979
STATION 13-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 210 MM TO 219 MM N= 1

HYPERPROSOPON ARGENTEUM
JUNE 27-28,1979
STATION 13-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 130 MM TO 139 MM N= 1

PARALABRAX CLATHRATUS
JUNE 27-28,1979
STATION 14-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 380 MM TO 389 MM N= 1

PARALABRAX NEBULIFER
JUNE 27-28,1979
STATION 14-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 250 MM TO 259 MM N= 1
FROM 280 MM TO 289 MM N= 1

HYPERPROSOPON ARGENTEUM
JUNE 27-28,1979
STATION 14-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 120 MM TO 124 MM N= 1
FROM 130 MM TO 134 MM N= 1

PARALABRAX NEBULIFER
JUNE 27-28,1979
STATION 14-2

TOTAL NO. OF INDIVIDUALS = 10
FROM 140 MM TO 149 MM N= 1
FROM 160 MM TO 169 MM N= 1
FROM 170 MM TO 179 MM N= 1
FROM 190 MM TO 199 MM N= 3
FROM 200 MM TO 209 MM N= 1
FROM 210 MM TO 219 MM N= 1
FROM 230 MM TO 239 MM N= 1
FROM 260 MM TO 269 MM N= 1

HYPERPROSOPON ARGENTEUM
JUNE 27-28,1979
STATION 14-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 145 MM TO 149 MM N= 1

PARALICHTHYS CALIFORNICUS
JUNE 27-28,1979
STATION 14-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 380 MM TO 389 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 45 ft offshore San Onofre during Survey of June 27-28, 1979.

PARALABRAX NEBULIFER
JUNE 27-28,1979
STATION 4-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 190 MM TO 199 MM N= 1
FROM 230 MM TO 239 MM N= 1

HYPERPROSOPON ARGENTEUM
JUNE 27-28,1979
STATION 4-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 135 MM TO 139 MM N= 1

PHANERODON FURCATUS
JUNE 27-28,1979
STATION 4-1

TOTAL NO. OF INDIVIDUALS = 46
FROM 110 MM TO 114 MM N= 2
FROM 115 MM TO 119 MM N= 2
FROM 130 MM TO 134 MM N= 1
FROM 135 MM TO 139 MM N= 6
FROM 140 MM TO 144 MM N= 4
FROM 145 MM TO 149 MM N= 5
FROM 150 MM TO 154 MM N= 5
FROM 155 MM TO 159 MM N= 1
FROM 160 MM TO 164 MM N= 2
FROM 170 MM TO 174 MM N= 2
FROM 175 MM TO 179 MM N= 6
FROM 180 MM TO 184 MM N= 5
FROM 185 MM TO 189 MM N= 3
FROM 190 MM TO 194 MM N= 1
FROM 200 MM TO 204 MM N= 1

PARALABRAX NEBULIFER
JUNE 27-28,1979
STATION 4-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 180 MM TO 189 MM N= 1
FROM 190 MM TO 199 MM N= 1
FROM 210 MM TO 219 MM N= 1

HYPERPROSOPON ARGENTEUM
JUNE 27-28,1979
STATION 4-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 115 MM TO 119 MM N= 1
FROM 125 MM TO 129 MM N= 1
FROM 135 MM TO 139 MM N= 1

PHANERODON FURCATUS
JUNE 27-28,1979
STATION 4-2

TOTAL NO. OF INDIVIDUALS = 5
FROM 115 MM TO 119 MM N= 2
FROM 170 MM TO 174 MM N= 2
FROM 180 MM TO 184 MM N= 1

HYPERPROSOPON ARGENTEUM
JUNE 27-28,1979
STATION 5-1

TOTAL NO. OF INDIVIDUALS = 6
FROM 105 MM TO 109 MM N= 1
FROM 125 MM TO 129 MM N= 2
FROM 130 MM TO 134 MM N= 3

PHANERODON FURCATUS
JUNE 27-28,1979
STATION 5-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 140 MM TO 144 MM N= 1
FROM 175 MM TO 179 MM N= 1

PARALABRAX NEBULIFER
JUNE 27-28,1979
STATION 5-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 280 MM TO 289 MM N= 1

PHANERODON FURCATUS
JUNE 27-28,1979
STATION 5-2

TOTAL NO. OF INDIVIDUALS = 11
FROM 120 MM TO 124 MM N= 1
FROM 150 MM TO 154 MM N= 1
FROM 165 MM TO 169 MM N= 1
FROM 170 MM TO 174 MM N= 1
FROM 175 MM TO 179 MM N= 1
FROM 180 MM TO 184 MM N= 2
FROM 185 MM TO 189 MM N= 1
FROM 190 MM TO 194 MM N= 2
FROM 195 MM TO 199 MM N= 1

PARALICHTHYS CALIFORNICUS
JUNE 27-28,1979
STATION 5-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 340 MM TO 349 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 45 ft offshore Don Light during Survey of June 27-28, 1979.

PARALABRAX NEBULIFER
JUNE 27-28,1979
STATION 9-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 250 MM TO 259 MM N= 1

PHANERODON FURCATUS
JUNE 27-28,1979
STATION 9-1

TOTAL NO. OF INDIVIDUALS = 3
FROM 135 MM TO 139 MM N= 1
FROM 140 MM TO 144 MM N= 1
FROM 170 MM TO 174 MM N= 1

PARALICHTHYS CALIFORNICUS
JUNE 27-28,1979
STATION 9-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 270 MM TO 279 MM N= 1
FROM 330 MM TO 339 MM N= 1

HYPERPROSOPON ARGENTEUM
JUNE 27-28,1979
STATION 10-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 120 MM TO 124 MM N= 1

PARALICHTHYS CALIFORNICUS
JUNE 27-28,1979
STATION 10-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 450 MM TO 459 MM N= 1

PARALABRAX CLATHRATUS
JUNE 27-28,1979
STATION 10-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 180 MM TO 189 MM N= 1
FROM 190 MM TO 199 MM N= 1
FROM 220 MM TO 229 MM N= 1

PARALABRAX MACULATOFASCIATUS
JUNE 27-28,1979
STATION 10-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 220 MM TO 229 MM N= 1
FROM 230 MM TO 239 MM N= 1
FROM 310 MM TO 319 MM N= 1

PARALABRAX NEBULIFER
JUNE 27-28,1979
STATION 10-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 480 MM TO 489 MM N= 1

HYPERPROSOPON ARGENTEUM
JUNE 27-28,1979
STATION 10-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 125 MM TO 129 MM N= 1
FROM 135 MM TO 139 MM N= 1
FROM 140 MM TO 144 MM N= 1

PHANERODON FURCATUS
JUNE 27-28,1979
STATION 10-2

TOTAL NO. OF INDIVIDUALS = 11
FROM 155 MM TO 159 MM N= 2
FROM 160 MM TO 164 MM N= 1
FROM 165 MM TO 169 MM N= 1
FROM 175 MM TO 179 MM N= 2
FROM 180 MM TO 184 MM N= 3
FROM 185 MM TO 189 MM N= 1
FROM 190 MM TO 194 MM N= 1

Length frequency distributions of select species collected in 5-min otter trawls at 20, 40, and 60 ft offshore at San Mateo Point, San Onofre, and Don Light during survey of June 27-28, 1979.

SAN MATEO POINT

HYPERPROSOPON ARGENTEUM
JUNE 27,1979
STATION SM-1-2Ø

TOTAL NO. OF INDIVIDUALS - 1
FROM 45 MM TO 49 MM N- 1

HYPERPROSOPON ARGENTEUM
JUNE 27,1979
STATION SM-2-2Ø

TOTAL NO. OF INDIVIDUALS - 2
FROM 5Ø MM TO 54 MM N- 1
FROM 55 MM TO 59 MM N- 1

PARALICHTHYS CALIFORNICUS
JUNE 27,1979
STATION SM-2-2Ø

TOTAL NO. OF INDIVIDUALS - 2
FROM 21Ø MM TO 219 MM N- 1
FROM 24Ø MM TO 249 MM N- 1

HYPERPROSOPON ARGENTEUM
JUNE 28,1979
STATION SM-3-2Ø

TOTAL NO. OF INDIVIDUALS - 11
FROM 45 MM TO 49 MM N- 4
FROM 5Ø MM TO 54 MM N- 2
FROM 55 MM TO 59 MM N- 1
FROM 6Ø MM TO 64 MM N- 4

PHANERODON FURCATUS
JUNE 28,1979
STATION SM-3-2Ø

TOTAL NO. OF INDIVIDUALS - 5
FROM 55 MM TO 59 MM N- 1
FROM 1Ø5 MM TO 1Ø9 MM N- 1
FROM 11Ø MM TO 114 MM N- 2
FROM 12Ø MM TO 124 MM N- 1

PARALABRAX NEBULIFER
JUNE 28,1979
STATION SM-4-2Ø

TOTAL NO. OF INDIVIDUALS - 1
FROM 14Ø MM TO 149 MM N- 1

HYPERPROSOPON ARGENTEUM
JUNE 28,1979
STATION SM-4-2Ø

TOTAL NO. OF INDIVIDUALS - 38
FROM 35 MM TO 39 MM N- 1
FROM 4Ø MM TO 44 MM N- 8
FROM 45 MM TO 49 MM N- 12
FROM 5Ø MM TO 54 MM N- 12
FROM 55 MM TO 59 MM N- 5

PHANERODON FURCATUS
JUNE 28,1979
STATION SM-4-2Ø

TOTAL NO. OF INDIVIDUALS - 3
FROM 1Ø5 MM TO 1Ø9 MM N- 1
FROM 115 MM TO 119 MM N- 1
FROM 125 MM TO 129 MM N- 1

PARALICHTHYS CALIFORNICUS
JUNE 28,1979
STATION SM-4-2Ø

TOTAL NO. OF INDIVIDUALS - 1
FROM 25Ø MM TO 259 MM N- 1

SAN MATEO POINT

PARALICHTHYS CALIFORNICUS
JUNE 28,1979
STATION SM-3-4Ø

TOTAL NO. OF INDIVIDUALS - 1
FROM 17Ø MM TO 179 MM N- 1

PARALICHTHYS CALIFORNICUS
JUNE 28,1979
STATION SM-4-4Ø

TOTAL NO. OF INDIVIDUALS - 3
FROM 35Ø MM TO 359 MM N- 1
FROM 37Ø MM TO 379 MM N- 1
FROM 39Ø MM TO 399 MM N- 1

PARALABRAX NEBULIFER
JUNE 27,1979
STATION SM-2-6Ø

TOTAL NO. OF INDIVIDUALS - 1
FROM 18Ø MM TO 189 MM N- 1

PARALABRAX NEBULIFER
JUNE 28,1979
STATION SM-4-6Ø

TOTAL NO. OF INDIVIDUALS - 1
FROM 16Ø MM TO 169 MM N- 1

PARALICHTHYS CALIFORNICUS
JUNE 28,1979
STATION SM-4-6Ø

TOTAL NO. OF INDIVIDUALS - 1
FROM 21Ø MM TO 219 MM N- 1

SAN ONOFRE

HYPERPROSOPON ARGENTEUM
JUNE 27,1979
STATION SO-2-2Ø

TOTAL NO. OF INDIVIDUALS - 1
FROM 5Ø MM TO 54 MM N- 1

PHANERODON FURCATUS
JUNE 27,1979
STATION SO-1-4Ø

TOTAL NO. OF INDIVIDUALS - 1
FROM 17Ø MM TO 174 MM N- 1

PARALICHTHYS CALIFORNICUS
JUNE 27,1979
STATION SO-1-4Ø

TOTAL NO. OF INDIVIDUALS - 2
FROM 37Ø MM TO 379 MM N- 1
FROM 41Ø MM TO 419 MM N- 1

PHANERODON FURCATUS
JUNE 27,1979
STATION SO-2-4Ø

TOTAL NO. OF INDIVIDUALS - 6
FROM 115 MM TO 119 MM N- 1
FROM 13Ø MM TO 134 MM N- 1
FROM 15Ø MM TO 154 MM N- 1
FROM 165 MM TO 169 MM N- 1
FROM 17Ø MM TO 174 MM N- 1
FROM 19Ø MM TO 194 MM N- 1

PARALICHTHYS CALIFORNICUS
JUNE 27. 1979
STATION SO-2-4Ø

TOTAL NO. OF INDIVIDUALS - 3
FROM 11Ø MM TO 119 MM N- 1
FROM 22Ø MM TO 229 MM N- 1
FROM 27Ø MM TO 279 MM N- 1

PHANERODON FURCATUS
JUNE 28,1979
STATION SO-3-4Ø

TOTAL NO. OF INDIVIDUALS - 4
FROM 6Ø MM TO 64 MM N- 2
FROM 1Ø5 MM TO 1Ø9 MM N- 1
FROM 155 MM TO 159 MM N- 1

PARALICHTHYS CALIFORNICUS
JUNE 28,1979
STATION SO-3-4Ø

TOTAL NO. OF INDIVIDUALS - 1
FROM 24Ø MM TO 249 MM N- 1

PARALICHTHYS CALIFORNICUS
JUNE 28,1979
STATION SO-4-4Ø

TOTAL NO. OF INDIVIDUALS - 3
FROM 27Ø MM TO 279 MM N- 1
FROM 31Ø MM TO 319 MM N- 1
FROM 4ØØ MM TO 4Ø9 MM N- 1

PARALICHTHYS CALIFORNICUS
JUNE 27,1979
STATION SO-2-6Ø

TOTAL NO. OF INDIVIDUALS - 1
FROM 38Ø MM TO 389 MM N- 1

PARALICHTHYS CALIFORNICUS
JUNE 28,1979
STATION SO-3-6Ø

TOTAL NO. OF INDIVIDUALS - 1
FROM 11Ø MM TO 119 MM N- 1

HYPERPROSOPON ARGENTEUM
JUNE 27,1979
STATION DL-1-2Ø

TOTAL NO. OF INDIVIDUALS = 6
FROM 55 MM TO 59 MM N= 6

PHANERODON FURCATUS
JUNE 27,1979
STATION DL-1-2Ø

TOTAL NO. OF INDIVIDUALS = 18
FROM 45 MM TO 49 MM N= 1
FROM 5Ø MM TO 54 MM N= 4
FROM 55 MM TO 59 MM N= 12
FROM 6Ø MM TO 64 MM N= 1

PARALICHTHYS CALIFORNICUS
JUNE 27,1979
STATION DL-1-2Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 22Ø MM TO 229 MM N= 1

PARALABRAX NEBULIFER
JUNE 27,1979
STATION DL-2-2Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 14Ø MM TO 149 MM N= 1

HYPERPROSOPON ARGENTEUM
JUNE 27,1979
STATION DL-2-2Ø

TOTAL NO. OF INDIVIDUALS = 38
FROM 4Ø MM TO 44 MM N= 3
FROM 45 MM TO 49 MM N= 4
FROM 5Ø MM TO 54 MM N= 7
FROM 55 MM TO 59 MM N= 1Ø
FROM 6Ø MM TO 64 MM N= 7
FROM 65 MM TO 69 MM N= 6
FROM 7Ø MM TO 74 MM N= 1

PHANERODON FURCATUS
JUNE 27,1979
STATION DL-2-2Ø

TOTAL NO. OF INDIVIDUALS = 19
FROM 5Ø MM TO 54 MM N= 5
FROM 55 MM TO 59 MM N= 1Ø
FROM 6Ø MM TO 64 MM N= 3
FROM 65 MM TO 69 MM N= 1

DON LIGHT

PARALICHTHYS CALIFORNICUS
JUNE 27,1979
STATION DL-2-2Ø

TOTAL NO. OF INDIVIDUALS = 7
FROM 21Ø MM TO 219 MM N= 1
FROM 22Ø MM TO 229 MM N= 1
FROM 23Ø MM TO 239 MM N= 1
FROM 24Ø MM TO 249 MM N= 2
FROM 26Ø MM TO 269 MM N= 1
FROM 28Ø MM TO 289 MM N= 1

HYPERPROSOPON ARGENTEUM
JUNE 28,1979
STATION DL-4-2Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 45 MM TO 49 MM N= 1
FROM 55 MM TO 59 MM N= 1

PHANERODON FURCATUS
JUNE 28,1979
STATION DL-4-2Ø

TOTAL NO. OF INDIVIDUALS = 4
FROM 5Ø MM TO 54 MM N= 1
FROM 55 MM TO 59 MM N= 2
FROM 6Ø MM TO 64 MM N= 1

HYPERPROSOPON ARGENTEUM
JUNE 27,1979
STATION DL-1-4Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 6Ø MM TO 64 MM N= 1

PARALICHTHYS CALIFORNICUS
JUNE 27,1979
STATION DL-1-6Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 39Ø MM TO 399 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 30 ft offshore San Mateo Point during Survey of August 26-27, 1979.

TRIAKIS SEMIFASCIATA
AUGUST 26-27,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 560 MM TO 579 MM N= 1
FROM1100 MM TO1119 MM N= 1

UMBRINA RONCADOR
AUGUST 26-27,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 69
FROM 230 MM TO 239 MM N= 1
FROM 240 MM TO 249 MM N= 3
FROM 250 MM TO 259 MM N= 4
FROM 260 MM TO 269 MM N= 7
FROM 270 MM TO 279 MM N= 7
FROM 280 MM TO 289 MM N= 15
FROM 290 MM TO 299 MM N= 9
FROM 300 MM TO 309 MM N= 5
FROM 310 MM TO 319 MM N= 12
FROM 320 MM TO 329 MM N= 2
FROM 330 MM TO 339 MM N= 3
FROM 340 MM TO 349 MM N= 1

RONCADOR STEARNSII
AUGUST 26-27,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 9
FROM 240 MM TO 249 MM N= 1
FROM 310 MM TO 319 MM N= 1
FROM 320 MM TO 329 MM N= 1
FROM 330 MM TO 339 MM N= 1
FROM 340 MM TO 349 MM N= 3
FROM 350 MM TO 359 MM N= 1
FROM 420 MM TO 429 MM N= 1

MENTICIRRHUS UNDULATUS
AUGUST 26-27,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 5
FROM 240 MM TO 249 MM N= 1
FROM 260 MM TO 269 MM N= 1
FROM 270 MM TO 279 MM N= 1
FROM 300 MM TO 309 MM N= 1
FROM 340 MM TO 349 MM N= 1

SEBASTES RASTRELLIGER
AUGUST 26-27,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 195 MM TO 199 MM N= 1

PARALABRAX CLATHRATUS
AUGUST 26-27,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 190 MM TO 199 MM N= 1
FROM 200 MM TO 209 MM N= 1

PARALABRAX NEBULIFER
AUGUST 26-27,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 260 MM TO 269 MM N= 1

HALICHOERES SEMICINCTUS
AUGUST 26-27,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 6
FROM 170 MM TO 174 MM N= 1
FROM 175 MM TO 179 MM N= 1
FROM 190 MM TO 194 MM N= 1
FROM 205 MM TO 209 MM N= 3

PIMELOMETOPON PULCHRUM
AUGUST 26-27,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 180 MM TO 189 MM N= 1

GIRELLA NIGRICANS
AUGUST 26-27,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 180 MM TO 184 MM N= 1
FROM 190 MM TO 194 MM N= 1

EMBIOTOCA JACKSONI
AUGUST 26-27,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 70 MM TO 74 MM N= 1
FROM 135 MM TO 139 MM N= 1

RHACOCHILUS TOXOTES
AUGUST 26-27,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 90 MM TO 94 MM N= 1

ANISOTREMUS DAVIDSONII
AUGUST 26-27,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 165 MM TO 169 MM N= 1

HYPERPROSOPON ARGENTEUM
AUGUST 26-27,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 120 MM TO 124 MM N= 1
FROM 135 MM TO 139 MM N= 1

CHEILOTREMA SATURNUM
AUGUST 26-27,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 10
FROM 160 MM TO 164 MM N= 1
FROM 165 MM TO 169 MM N= 1
FROM 170 MM TO 174 MM N= 2
FROM 175 MM TO 179 MM N= 2
FROM 180 MM TO 184 MM N= 1
FROM 190 MM TO 194 MM N= 2
FROM 195 MM TO 199 MM N= 1

SCORPAENA GUTTATA
AUGUST 26-27,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 130 MM TO 134 MM N= 1
FROM 140 MM TO 144 MM N= 1
FROM 170 MM TO 174 MM N= 1

UMBRINA RONCADOR
AUGUST 26-27,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 75
FROM 170 MM TO 179 MM N= 1
FROM 240 MM TO 249 MM N= 1
FROM 250 MM TO 259 MM N= 7
FROM 260 MM TO 269 MM N= 6
FROM 270 MM TO 279 MM N= 16
FROM 280 MM TO 289 MM N= 16
FROM 290 MM TO 299 MM N= 9
FROM 300 MM TO 309 MM N= 8
FROM 310 MM TO 319 MM N= 3
FROM 320 MM TO 329 MM N= 6
FROM 330 MM TO 339 MM N= 1
FROM 350 MM TO 359 MM N= 1

PARALABRAX CLATHRATUS
AUGUST 26-27,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 280 MM TO 289 MM N= 1

MENTICIRRHUS UNDULATUS
AUGUST 26-27,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 280 MM TO 289 MM N= 1

PARALABRAX NEBULIFER
AUGUST 26-27,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 190 MM TO 199 MM N= 1
FROM 210 MM TO 219 MM N= 1

HALICHOERES SEMICINCTUS
AUGUST 26-27,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 5
FROM 175 MM TO 179 MM N= 1
FROM 190 MM TO 194 MM N= 3
FROM 220 MM TO 224 MM N= 1

PIMELOMETOPON PULCHRUM
AUGUST 26-27,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 230 MM TO 239 MM N= 1

ANISOTREMUS DAVIDSONII
AUGUST 26-27,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 185 MM TO 189 MM N= 1

CHEILOTREMA SATURNUM
AUGUST 26-27,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 155 MM TO 159 MM N= 2
FROM 165 MM TO 169 MM N= 1

CYNOSCION NOBILIS
AUGUST 26-27,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 250 MM TO 259 MM N= 1
FROM 310 MM TO 319 MM N= 1

MENTICIRRHUS UNDULATUS
AUGUST 26-27,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 280 MM TO 289 MM N= 2

ATHERINOPSIS CALIFORNIENSIS
AUGUST 26-27,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 270 MM TO 274 MM N= 1

UMBRINA RONCADOR
AUGUST 26-27,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 3
FROM 235 MM TO 239 MM N= 1
FROM 280 MM TO 284 MM N= 1

RONCADOR STEARNSII
AUGUST 26-27,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 350 MM TO 359 MM N= 1

SCORPAENA GUTTATA
AUGUST 26-27,1979
STATION 12-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 185 MM TO 189 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
AUGUST 26-27,1979
STATION 12-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 265 MM TO 269 MM N= 1

MUSTELUS CALIFORNICUS
AUGUST 26-27,1979
STATION 12-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 640 MM TO 659 MM N= 1

UMBRINA RONCADOR
AUGUST 26-27,1979
STATION 12-2

TOTAL NO. OF INDIVIDUALS = 17
FROM 200 MM TO 204 MM N= 1
FROM 240 MM TO 244 MM N= 1
FROM 245 MM TO 249 MM N= 1
FROM 250 MM TO 254 MM N= 1
FROM 255 MM TO 259 MM N= 3
FROM 265 MM TO 269 MM N= 2
FROM 270 MM TO 274 MM N= 3
FROM 275 MM TO 279 MM N= 1
FROM 290 MM TO 294 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 30 ft offshore San Onofre during Survey of August 26-27, 1979.

SARDA CHILIENSIS
AUGUST 26-27,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 320 MM TO 329 MM N= 2

GIRELLA NIGRICANS
AUGUST 26-27,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 275 MM TO 279 MM N= 1

PARALABRAX CLATHRATUS
AUGUST 26-27,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 260 MM TO 269 MM N= 1

RHACOCHILUS TOXOTES
AUGUST 26-27,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 280 MM TO 284 MM N= 1

SCORPAENA GUTTATA
AUGUST 26-27,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 125 MM TO 129 MM N= 1
FROM 130 MM TO 134 MM N= 1

EMBIOTOCA JACKSONI
AUGUST 26-27,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 80 MM TO 84 MM N= 1
FROM 140 MM TO 144 MM N= 1

HYPERPROSOPON ARGENTEUM
AUGUST 26-27,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 125 MM TO 129 MM N= 1

MENTICIRRHUS UNDULATUS
AUGUST 26-27,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 120 MM TO 129 MM N= 1

MEDIALUNA CALIFORNIENSIS
AUGUST 26-27,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 180 MM TO 184 MM N= 1

TRIAKIS SEMIFASCIATA
AUGUST 26-27,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 440 MM TO 459 MM N= 1

HETERODONTUS FRANCISCI
AUGUST 26-27,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 4
FROM 460 MM TO 479 MM N= 1
FROM 520 MM TO 539 MM N= 1
FROM 540 MM TO 559 MM N= 1
FROM 640 MM TO 659 MM N= 1

RONCADOR STEARNSII
AUGUST 26-27,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 430 MM TO 439 MM N= 1

TRIAKIS SEMIFASCIATA
AUGUST 26-27,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 740 MM TO 759 MM N= 1

RHACOCHILUS TOXOTES
AUGUST 26-27,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 85 MM TO 89 MM N= 2
FROM 280 MM TO 284 MM N= 1

SARDA CHILIENSIS
AUGUST 26-27,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 320 MM TO 329 MM N= 1

UMBRINA RONCADOR
AUGUST 26-27,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 310 MM TO 319 MM N= 1

PARALABRAX CLATHRATUS
AUGUST 26-27,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 220 MM TO 229 MM N= 1

HALICHOERES SEMICINCTUS
AUGUST 26-27,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 225 MM TO 229 MM N= 1

MUSTELUS CALIFORNICUS
AUGUST 26-27,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 9
FROM 480 MM TO 499 MM N= 1
FROM 500 MM TO 519 MM N= 1
FROM 540 MM TO 559 MM N= 1
FROM 560 MM TO 579 MM N= 1
FROM 580 MM TO 599 MM N= 1
FROM 600 MM TO 619 MM N= 1
FROM 620 MM TO 639 MM N= 1
FROM 680 MM TO 699 MM N= 1
FROM 700 MM TO 719 MM N= 1

SCORPAENA GUTTATA
AUGUST 26-27,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 150 MM TO 154 MM N= 1
FROM 175 MM TO 179 MM N= 1

HYPERPROSOPON ARGENTEUM
AUGUST 26-27,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 12
FROM 130 MM TO 134 MM N= 4
FROM 135 MM TO 139 MM N= 2
FROM 140 MM TO 144 MM N= 3
FROM 145 MM TO 149 MM N= 2
FROM 150 MM TO 154 MM N= 1

EMBIOTOCA JACKSONI
AUGUST 26-27,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 75 MM TO 79 MM N= 1
FROM 130 MM TO 134 MM N= 1

HYPERPROSOPON ARGENTEUM
AUGUST 26-27,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 12
FROM 130 MM TO 134 MM N= 4
FROM 135 MM TO 139 MM N= 2
FROM 140 MM TO 144 MM N= 3
FROM 145 MM TO 149 MM N= 2
FROM 150 MM TO 154 MM N= 1

RHACOCHILUS TOXOTES
AUGUST 26-27,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 85 MM TO 89 MM N= 2
FROM 280 MM TO 284 MM N= 1

PARALABRAX NEBULIFER
AUGUST 26-27,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 180 MM TO 189 MM N= 1

CHEILOTREMA SATURNUM
AUGUST 26-27,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 7
FROM 150 MM TO 154 MM N= 1
FROM 165 MM TO 169 MM N= 1
FROM 170 MM TO 174 MM N= 1
FROM 180 MM TO 184 MM N= 2
FROM 190 MM TO 194 MM N= 1
FROM 200 MM TO 204 MM N= 1

PARALICHTHYS CALIFORNICUS
AUGUST 26-27,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 3
FROM 290 MM TO 299 MM N= 1
FROM 310 MM TO 319 MM N= 1
FROM 330 MM TO 339 MM N= 1

PARALABRAX CLATHRATUS
AUGUST 26-27,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 400 MM TO 409 MM N= 1

CYNOSCION NOBILIS
AUGUST 26-27,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 310 MM TO 319 MM N= 1
FROM 460 MM TO 469 MM N= 1

RONCADOR STEARNSII
AUGUST 26-27,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 260 MM TO 264 MM N= 1

HERMOSILLA AZUREA
AUGUST 26-27,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 255 MM TO 259 MM N= 1

SPHYRAENA ARGENTEA
AUGUST 26-27,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 1

PARALABRAX NEBULIFER
AUGUST 26-27,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 170 MM TO 179 MM N= 1

PHANERODON FURCATUS
AUGUST 26-27,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 125 MM TO 129 MM N= 1

SEBASTES RASTRELLIGER
AUGUST 26-27,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 170 MM TO 174 MM N= 1

SCORPAENA GUTTATA
AUGUST 26-27,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 115 MM TO 119 MM N= 2
FROM 125 MM TO 129 MM N= 1

PARALABRAX CLATHRATUS
AUGUST 26-27,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 210 MM TO 219 MM N= 1

DAMALICHTHYS VACCA
AUGUST 26-27,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 185 MM TO 189 MM N= 1

PARALICHTHYS CALIFORNICUS
AUGUST 26-27,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 180 MM TO 189 MM N= 1

MENTICIRRHUS UNDULATUS
AUGUST 26-27,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 230 MM TO 239 MM N= 1
FROM 260 MM TO 269 MM N= 2

PHANERODON FURCATUS
AUGUST 26-27,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 135 MM TO 139 MM N= 1
FROM 155 MM TO 159 MM N= 1
FROM 160 MM TO 164 MM N= 1

HYPERPROSOPON ARGENTEUM
AUGUST 26-27,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 130 MM TO 134 MM N= 1

CYNOSCION NOBILIS
AUGUST 26-27,1979
STATION 3-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 310 MM TO 319 MM N= 1

SPHYRAENA ARGENTEA
AUGUST 26-27,1979
STATION 3-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 360 MM TO 379 MM N= 1

UMBRINA RONCADOR
AUGUST 26-27,1979
STATION 3-1

TOTAL NO. OF INDIVIDUALS = 6
FROM 195 MM TO 199 MM N= 3
FROM 225 MM TO 229 MM N= 1
FROM 230 MM TO 234 MM N= 1
FROM 235 MM TO 239 MM N= 1

MUSTELUS CALIFORNICUS
AUGUST 26-27,1979
STATION 3-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 600 MM TO 619 MM N= 1

MENTICIRRHUS UNDULATUS
AUGUST 26-27,1979
STATION 3-1

TOTAL NO. OF INDIVIDUALS = 5
FROM 230 MM TO 239 MM N= 1
FROM 240 MM TO 249 MM N= 2
FROM 250 MM TO 259 MM N= 1
FROM 290 MM TO 299 MM N= 1

CHEILOTREMA SATURNUM
AUGUST 26-27,1979
STATION 3-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 150 MM TO 154 MM N= 1

SARDA CHILIENSIS
AUGUST 26-27,1979
STATION 3-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 300 MM TO 309 MM N= 1

PHANERODON FURCATUS
AUGUST 26-27,1979
STATION 3-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 135 MM TO 139 MM N= 1

HYPERPROSOPON ARGENTEUM
AUGUST 26-27,1979
STATION 3-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 115 MM TO 119 MM N= 1
FROM 120 MM TO 124 MM N= 1

SARDA CHILIENSIS
AUGUST 26-27,1979
STATION 3-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 310 MM TO 319 MM N= 1
FROM 320 MM TO 329 MM N= 1

SCOMBER JAPONICUS
AUGUST 26-27,1979
STATION 3-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 290 MM TO 294 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
AUGUST 26-27,1979
STATION 3-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 220 MM TO 224 MM N= 1

UMBRINA RONCADOR
AUGUST 26-27,1979
STATION 3-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 225 MM TO 229 MM N= 1
FROM 260 MM TO 264 MM N= 1

MENTICIRRHUS UNDULATUS
AUGUST 26-27,1979
STATION 3-2

TOTAL NO. OF INDIVIDUALS = 8
FROM 210 MM TO 219 MM N= 1
FROM 220 MM TO 229 MM N= 1
FROM 230 MM TO 239 MM N= 2
FROM 240 MM TO 249 MM N= 1
FROM 250 MM TO 259 MM N= 1
FROM 300 MM TO 309 MM N= 1
FROM 310 MM TO 319 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 30 ft offshore Don Light during Survey of August 26-27, 1979.

MENTICIRRHUS UNDULATUS
AUGUST 26-27,1979
STATION 6-1

TOTAL NO. OF INDIVIDUALS - 3
FROM 240 MM TO 249 MM N- 1
FROM 250 MM TO 259 MM N- 1
FROM 260 MM TO 269 MM N- 1

HYPERPROSOPON ARGENTEUM
AUGUST 26-27,1979
STATION 6-1

TOTAL NO. OF INDIVIDUALS - 1
FROM 80 MM TO 84 MM N- 1

SARDA CHILIENSIS
AUGUST 26-27,1979
STATION 6-1

TOTAL NO. OF INDIVIDUALS - 2
FROM 320 MM TO 329 MM N- 2

ATHERINOPS AFFINIS
AUGUST 26-27,1979
STATION 6-1

TOTAL NO. OF INDIVIDUALS - 1
FROM 250 MM TO 254 MM N- 1

AMPHISTICHUS ARGENTEUS
AUGUST 26-27,1979
STATION 6-1

TOTAL NO. OF INDIVIDUALS - 2
FROM 125 MM TO 129 MM N- 1
FROM 135 MM TO 139 MM N- 1

MENTICIRRHUS UNDULATUS
AUGUST 26-27,1979
STATION 6-2

TOTAL NO. OF INDIVIDUALS - 6
FROM 210 MM TO 219 MM N- 1
FROM 250 MM TO 259 MM N- 1
FROM 270 MM TO 279 MM N- 3
FROM 280 MM TO 289 MM N- 1

HYPERPROSOPON ARGENTEUM
AUGUST 26-27,1979
STATION 6-2

TOTAL NO. OF INDIVIDUALS - 1
FROM 75 MM TO 79 MM N- 1

PHANERODON FURCATUS
AUGUST 26-27,1979
STATION 6-2

TOTAL NO. OF INDIVIDUALS - 1
FROM 165 MM TO 169 MM N- 1

SARDA CHILIENSIS
AUGUST 26-27,1979
STATION 6-2

TOTAL NO. OF INDIVIDUALS - 7
FROM 290 MM TO 299 MM N- 1
FROM 300 MM TO 309 MM N- 3
FROM 310 MM TO 319 MM N- 2
FROM 320 MM TO 329 MM N- 1

EMBIOTOCA JACKSONI
AUGUST 26-27,1979
STATION 7-1

TOTAL NO. OF INDIVIDUALS - 1
FROM 165 MM TO 169 MM N- 1

AMPHISTICHUS ARGENTEUS
AUGUST 26-27,1979
STATION 7-1

TOTAL NO. OF INDIVIDUALS - 1
FROM 180 MM TO 184 MM N- 1

DAMALICHTHYS VACCA
AUGUST 26-27,1979
STATION 7-1

TOTAL NO. OF INDIVIDUALS - 1
FROM 200 MM TO 204 MM N- 1

ATHERINOPS AFFINIS
AUGUST 26-27,1979
STATION 7-1

TOTAL NO. OF INDIVIDUALS - 3
FROM 230 MM TO 234 MM N- 1
FROM 245 MM TO 249 MM N- 1
FROM 250 MM TO 254 MM N- 1

SCOMBER JAPONICUS
AUGUST 26-27,1979
STATION 7-1

TOTAL NO. OF INDIVIDUALS - 1
FROM 265 MM TO 269 MM N- 1

SARDA CHILIENSIS
AUGUST 26-27,1979
STATION 7-1

TOTAL NO. OF INDIVIDUALS - 2
FROM 300 MM TO 309 MM N- 1
FROM 320 MM TO 329 MM N- 1

MENTICIRRHUS UNDULATUS
AUGUST 26-27,1979
STATION 7-1

TOTAL NO. OF INDIVIDUALS - 4
FROM 210 MM TO 219 MM N- 1
FROM 220 MM TO 229 MM N- 1
FROM 280 MM TO 289 MM N- 1
FROM 300 MM TO 309 MM N- 1

XENISTIUS CALIFORNIENSIS
AUGUST 26-27,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS - 1
FROM 140 MM TO 144 MM N- 1

AMPHISTICHUS ARGENTEUS
AUGUST 26-27,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS - 1
FROM 135 MM TO 139 MM N- 1

DAMALICHTHYS VACCA
AUGUST 26-27,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS - 1
FROM 200 MM TO 204 MM N- 1

MENTICIRRHUS UNDULATUS
AUGUST 26-27,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS - 4
FROM 220 MM TO 229 MM N- 2
FROM 270 MM TO 279 MM N- 1
FROM 280 MM TO 289 MM N- 1

SARDA CHILIENSIS
AUGUST 26-27,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS - 4
FROM 300 MM TO 309 MM N- 3
FROM 310 MM TO 319 MM N- 1

SCOMBER JAPONICUS
AUGUST 26-27,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS - 1

MUSTELUS CALIFORNICUS
AUGUST 26-27,1979
STATION 8-1

TOTAL NO. OF INDIVIDUALS - 1
FROM 520 MM TO 539 MM N- 1

SARDA CHILIENSIS
AUGUST 26-27,1979
STATION 8-1

TOTAL NO. OF INDIVIDUALS - 8
FROM 310 MM TO 319 MM N- 4
FROM 320 MM TO 329 MM N- 4

AMPHISTICHUS ARGENTEUS
AUGUST 26-27,1979
STATION 8-1

TOTAL NO. OF INDIVIDUALS - 4
FROM 140 MM TO 144 MM N- 1
FROM 145 MM TO 149 MM N- 1
FROM 150 MM TO 154 MM N- 1
FROM 185 MM TO 189 MM N- 1

XENISTIUS CALIFORNIENSIS
AUGUST 26-27,1979
STATION 8-1

TOTAL NO. OF INDIVIDUALS - 1
FROM 140 MM TO 144 MM N- 1

MENTICIRRHUS UNDULATUS
AUGUST 26-27,1979
STATION 8-1

TOTAL NO. OF INDIVIDUALS - 2
FROM 200 MM TO 209 MM N- 2

PARALICHTHYS CALIFORNICUS
AUGUST 26-27,1979
STATION 8-2

TOTAL NO. OF INDIVIDUALS - 1
FROM 380 MM TO 389 MM N- 1

PHANERODON FURCATUS
AUGUST 26-27,1979
STATION 8-2

TOTAL NO. OF INDIVIDUALS - 2
FROM 160 MM TO 164 MM N- 1
FROM 180 MM TO 184 MM N- 1

HYPERPROSOPON ARGENTEUM
AUGUST 26-27,1979
STATION 8-2

TOTAL NO. OF INDIVIDUALS - 1
FROM 135 MM TO 139 MM N- 1

SARDA CHILIENSIS
AUGUST 26-27,1979
STATION 8-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 310 MM TO 319 MM N= 1
FROM 340 MM TO 349 MM N= 2

PARALABRAX NEBULIFER
AUGUST 26-27,1979
STATION 8-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 290 MM TO 299 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 45 ft offshore San Mateo Point during Survey of August 26-27, 1979.

PHANERODON FURCATUS
AUGUST 26-27,1979
STATION 13-1

TOTAL NO. OF INDIVIDUALS - 12
FROM 100 MM TO 104 MM N- 1
FROM 115 MM TO 119 MM N- 2
FROM 120 MM TO 124 MM N- 3
FROM 125 MM TO 129 MM N- 1
FROM 145 MM TO 149 MM N- 1
FROM 150 MM TO 154 MM N- 1
FROM 155 MM TO 159 MM N- 1
FROM 175 MM TO 179 MM N- 2

HYPERPROSOPON ARGENTEUM
AUGUST 26-27,1979
STATION 13-1

TOTAL NO. OF INDIVIDUALS - 1
FROM 110 MM TO 114 MM N- 1

PARALABRAX CLATHRATUS
AUGUST 26-27,1979
STATION 13-1

TOTAL NO. OF INDIVIDUALS - 1
FROM 150 MM TO 159 MM N- 1

PHANERODON FURCATUS
AUGUST 26-27,1979
STATION 13-2

TOTAL NO. OF INDIVIDUALS - 17
FROM 110 MM TO 114 MM N- 1
FROM 115 MM TO 119 MM N- 1
FROM 145 MM TO 149 MM N- 2
FROM 160 MM TO 164 MM N- 2
FROM 170 MM TO 174 MM N- 4
FROM 175 MM TO 179 MM N- 1
FROM 180 MM TO 184 MM N- 5
FROM 185 MM TO 189 MM N- 1

HYPERPROSOPON ARGENTEUM
AUGUST 26-27,1979
STATION 13-2

TOTAL NO. OF INDIVIDUALS - 1
FROM 130 MM TO 134 MM N- 1

PARALICHTHYS CALIFORNICUS
AUGUST 26-27,1979
STATION 14-1

TOTAL NO. OF INDIVIDUALS - 1
FROM 320 MM TO 329 MM N- 1

PARALABRAX NEBULIFER
AUGUST 26-27,1979
STATION 14-1

TOTAL NO. OF INDIVIDUALS - 4
FROM 190 MM TO 199 MM N- 2
FROM 260 MM TO 269 MM N- 1
FROM 270 MM TO 279 MM N- 1

PARALABRAX CLATHRATUS
AUGUST 26-27,1979
STATION 14-1

TOTAL NO. OF INDIVIDUALS - 5
FROM 190 MM TO 199 MM N- 1
FROM 210 MM TO 219 MM N- 2
FROM 250 MM TO 259 MM N- 1
FROM 280 MM TO 289 MM N- 1

PHANERODON FURCATUS
AUGUST 26-27,1979
STATION 14-1

TOTAL NO. OF INDIVIDUALS - 4
FROM 165 MM TO 169 MM N- 1
FROM 170 MM TO 174 MM N- 1
FROM 175 MM TO 179 MM N- 1
FROM 180 MM TO 184 MM N- 1

HYPERPROSOPON ARGENTEUM
AUGUST 26-27,1979
STATION 14-1

TOTAL NO. OF INDIVIDUALS - 3
FROM 115 MM TO 119 MM N- 1
FROM 140 MM TO 144 MM N- 1
FROM 150 MM TO 154 MM N- 1

PARALABRAX NEBULIFER
AUGUST 26-27,1979
STATION 14-2

TOTAL NO. OF INDIVIDUALS - 2
FROM 130 MM TO 134 MM N- 1
FROM 180 MM TO 184 MM N- 1

PHANERODON FURCATUS
AUGUST 26-27,1979
STATION 14-2

TOTAL NO. OF INDIVIDUALS - 3
FROM 110 MM TO 119 MM N- 1
FROM 120 MM TO 129 MM N- 1
FROM 170 MM TO 179 MM N- 1

Length frequency distributions of select species collected in 24-h gill nets at 45 ft offshore San Onofre during Survey of August 26-27, 1979.

HYPERPROSOPON ARGENTEUM
AUGUST 26-27,1979
STATION 4-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 115 MM TO 119 MM N= 1
FROM 150 MM TO 154 MM N= 1

PARALABRAX NEBULIFER
AUGUST 26-27,1979
STATION 4-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 200 MM TO 209 MM N= 1
FROM 230 MM TO 239 MM N= 1

PARALABRAX CLATHRATUS
AUGUST 26-27,1979
STATION 4-1

TOTAL NO. OF INDIVIDUALS = 4
FROM 160 MM TO 169 MM N= 1
FROM 170 MM TO 179 MM N= 2
FROM 190 MM TO 199 MM N= 1

PHANERODON FURCATUS
AUGUST 26-27,1979
STATION 4-1

TOTAL NO. OF INDIVIDUALS = 22
FROM 85 MM TO 89 MM N= 3
FROM 120 MM TO 124 MM N= 4
FROM 125 MM TO 129 MM N= 6
FROM 130 MM TO 134 MM N= 4
FROM 135 MM TO 139 MM N= 2
FROM 155 MM TO 159 MM N= 1
FROM 165 MM TO 169 MM N= 1
FROM 180 MM TO 184 MM N= 1

PARALABRAX NEBULIFER
AUGUST 26-27,1979
STATION 4-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 250 MM TO 259 MM N= 1

PHANERODON FURCATUS
AUGUST 26-27,1979
STATION 4-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 115 MM TO 119 MM N= 2
FROM 165 MM TO 169 MM N= 1

HYPERPROSOPON ARGENTEUM
AUGUST 26-27,1979
STATION 4-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 110 MM TO 114 MM N= 1
FROM 140 MM TO 144 MM N= 1
FROM 150 MM TO 154 MM N= 1

PARALABRAX CLATHRATUS
AUGUST 26-27,1979
STATION 4-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 180 MM TO 189 MM N= 1

PARALABRAX CLATHRATUS
AUGUST 26-27,1979
STATION 5-1

TOTAL NO. OF INDIVIDUALS = 3
FROM 170 MM TO 179 MM N= 1
FROM 190 MM TO 199 MM N= 1
FROM 280 MM TO 289 MM N= 1

HYPERPROSOPON ARGENTEUM
AUGUST 26-27,1979
STATION 5-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 130 MM TO 134 MM N= 1

PHANERODON FURCATUS
AUGUST 26-27,1979
STATION 5-1

TOTAL NO. OF INDIVIDUALS = 3
FROM 130 MM TO 134 MM N= 1
FROM 160 MM TO 164 MM N= 1
FROM 185 MM TO 189 MM N= 1

HYPERPROSOPON ARGENTEUM
AUGUST 26-27,1979
STATION 5-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 140 MM TO 144 MM N= 1
FROM 150 MM TO 154 MM N= 1

PHANERODON FURCATUS
AUGUST 26-27,1979
STATION 5-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 115 MM TO 119 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 45 ft offshore Don Light during Survey of August 26-27, 1979.

PHANERODON FURCATUS
AUGUST 26-27,1979
STATION 9-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 190 MM TO 194 MM N= 1

PARALABRAX NEBULIFER
AUGUST 26-27,1979
STATION 9-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 390 MM TO 399 MM N= 1

PARALABRAX NEBULIFER
AUGUST 26-27,1979
STATION 9-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 440 MM TO 449 MM N= 1

PARALABRAX NEBULIFER
AUGUST 26-27,1979
STATION 10-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 290 MM TO 299 MM N= 1
FROM 380 MM TO 389 MM N= 1

PARALABRAX CLATHRATUS
AUGUST 26-27,1979
STATION 10-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 170 MM TO 179 MM N= 1
FROM 180 MM TO 189 MM N= 1

PARALABRAX NEBULIFER
AUGUST 26-27,1979
STATION 10-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 240 MM TO 249 MM N= 1
FROM 250 MM TO 259 MM N= 1
FROM 270 MM TO 279 MM N= 1

Length frequency distributions of select species collected in 5-min otter trawls at 20, 40, and 60 ft offshore at San Mateo Point, San Onofre, and Don Light during survey of August 26-27, 1979.

SAN MATEO POINT

PARALICHTHYS CALIFORNICUS
AUGUST 26,1979
STATION SM-1-20

TOTAL NO. OF INDIVIDUALS =		3
FROM 160 MM TO 169 MM	N=	1
FROM 200 MM TO 209 MM	N=	1
FROM 210 MM TO 219 MM	N=	1

PARALICHTHYS CALIFORNICUS
AUGUST 26,1979
STATION SM-2-20

TOTAL NO. OF INDIVIDUALS =		1
FROM 210 MM TO 219 MM	N=	1

CYNOSCION NOBILIS
AUGUST 26,1979
STATION SM-2-20

TOTAL NO. OF INDIVIDUALS =		1
FROM 50 MM TO 59 MM	N=	1

PHANERODON FURCATUS
AUGUST 26,1979
TATION SM-2-20

TOTAL NO. OF INDIVIDUALS =		4
FROM 110 MM TO 114 MM	N=	1
FROM 115 MM TO 119 MM	N=	1
FROM 120 MM TO 124 MM	N=	1
FROM 145 MM TO 149 MM	N=	1

PARALICHTHYS CALIFORNICUS
AUGUST 27,1979
STATION SM-3-20

TOTAL NO. OF INDIVIDUALS =		11
FROM 190 MM TO 199 MM	N=	1
FROM 200 MM TO 209 MM	N=	2
FROM 210 MM TO 219 MM	N=	1
FROM 220 MM TO 229 MM	N=	1
FROM 230 MM TO 239 MM	N=	1
FROM 240 MM TO 249 MM	N=	1
FROM 270 MM TO 279 MM	N=	1
FROM 290 MM TO 299 MM	N=	2
FROM 310 MM TO 319 MM	N=	1

PARALABRAX NEBULIFER
AUGUST 27,1979
STATION SM-3-20

TOTAL NO. OF INDIVIDUALS =		1
FROM 150 MM TO 159 MM	N=	1

PHANERODON FURCATUS
AUGUST 27,1979
STATION SM-3-20

TOTAL NO. OF INDIVIDUALS =		1
FROM 115 MM TO 119 MM	N=	1

HYPERPROSOPON ARGENTEUM
AUGUST 27,1979
STATION SM-3-20

TOTAL NO. OF INDIVIDUALS =		14
FROM 65 MM TO 69 MM	N=	5
FROM 70 MM TO 74 MM	N=	5
FROM 75 MM TO 79 MM	N=	3
FROM 80 MM TO 84 MM	N=	1

PARALICHTHYS CALIFORNICUS
AUGUST 27,1979
STATION SM-4-20

TOTAL NO. OF INDIVIDUALS =		4
FROM 250 MM TO 259 MM	N=	1
FROM 270 MM TO 279 MM	N=	1
FROM 310 MM TO 319 MM	N=	1
FROM 330 MM TO 339 MM	N=	1

SAN MATEO POINT

CYNOSCION NOBILIS
AUGUST 27,1979
STATION SM-4-20

TOTAL NO. OF INDIVIDUALS =		2
FROM 40 MM TO 49 MM	N=	1
FROM 60 MM TO 69 MM	N=	1

HYPERPROSOPON ARGENTEUM
AUGUST 27,1979
STATION SM-4-20

TOTAL NO. OF INDIVIDUALS =		2
FROM 65 MM TO 69 MM	N=	2

PHANERODON FURCATUS
AUGUST 27,1979
STATION SM-4-20

TOTAL NO. OF INDIVIDUALS =		2
FROM 55 MM TO 59 MM	N=	1
FROM 175 MM TO 179 MM	N=	1

PARALICHTHYS CALIFORNICUS
AUGUST 26,1979
STATION SM-1-40

TOTAL NO. OF INDIVIDUALS =		2
FROM 260 MM TO 269 MM	N=	1
FROM 380 MM TO 389 MM	N=	1

PHANERODON FURCATUS
AUGUST 26,1979
STATION SM-1-40

TOTAL NO. OF INDIVIDUALS =		2
FROM 175 MM TO 179 MM	N=	1
FROM 180 MM TO 184 MM	N=	1

PARALICHTHYS CALIFORNICUS
AUGUST 26,1979
STATION SM-2-40

TOTAL NO. OF INDIVIDUALS =		1
FROM 450 MM TO 459 MM	N=	1

RONCADOR STEARNSII
AUGUST 27,1979
STATION SM-3-40

TOTAL NO. OF INDIVIDUALS =		1
FROM 340 MM TO 349 MM	N=	1

PARALICHTHYS CALIFORNICUS
AUGUST 27,1979
STATION SM-3-40

TOTAL NO. OF INDIVIDUALS =		7
FROM 250 MM TO 259 MM	N=	1
FROM 270 MM TO 279 MM	N=	1
FROM 290 MM TO 299 MM	N=	1
FROM 310 MM TO 319 MM	N=	2
FROM 320 MM TO 329 MM	N=	1
FROM 340 MM TO 349 MM	N=	1

PHANERODON FURCATUS
AUGUST 27,1979
STATION SM-3-40

TOTAL NO. OF INDIVIDUALS =		19
FROM 70 MM TO 74 MM	N=	2
FROM 75 MM TO 79 MM	N=	1
FROM 100 MM TO 104 MM	N=	1
FROM 110 MM TO 114 MM	N=	1
FROM 115 MM TO 119 MM	N=	2
FROM 120 MM TO 124 MM	N=	7
FROM 125 MM TO 129 MM	N=	4
FROM 145 MM TO 149 MM	N=	1

SAN MATEO POINT

HYPERPROSOPON ARGENTEUM
AUGUST 27,1979
STATION SM-3-40

TOTAL NO. OF INDIVIDUALS =		4
FROM 105 MM TO 109 MM	N=	2
FROM 115 MM TO 119 MM	N=	1
FROM 125 MM TO 129 MM	N=	1

PARALICHTHYS CALIFORNICUS
AUGUST 27,1979
STATION SM-4-40

TOTAL NO. OF INDIVIDUALS =		5
FROM 280 MM TO 289 MM	N=	1
FROM 290 MM TO 299 MM	N=	1
FROM 300 MM TO 309 MM	N=	2
FROM 390 MM TO 399 MM	N=	1

PHANERODON FURCATUS
AUGUST 27,1979
STATION SM-4-40

TOTAL NO. OF INDIVIDUALS =		25
FROM 100 MM TO 104 MM	N=	1
FROM 105 MM TO 109 MM	N=	1
FROM 110 MM TO 114 MM	N=	2
FROM 115 MM TO 119 MM	N=	6
FROM 120 MM TO 124 MM	N=	6
FROM 125 MM TO 129 MM	N=	5
FROM 145 MM TO 149 MM	N=	1
FROM 155 MM TO 159 MM	N=	1
FROM 165 MM TO 169 MM	N=	1
FROM 180 MM TO 184 MM	N=	1

HYPERPROSOPON ARGENTEUM
AUGUST 27,1979
STATION SM-4-40

TOTAL NO. OF INDIVIDUALS =		9
FROM 110 MM TO 114 MM	N=	2
FROM 115 MM TO 119 MM	N=	6
FROM 130 MM TO 134 MM	N=	1

PARALICHTHYS CALIFORNICUS
AUGUST 26,1979
STATION SM-2-60

TOTAL NO. OF INDIVIDUALS =		1
FROM 400 MM TO 409 MM	N=	1

PARALICHTHYS CALIFORNICUS
AUGUST 27,1979
STATION SM-4-60

TOTAL NO. OF INDIVIDUALS =		1
FROM 390 MM TO 399 MM	N=	1

CYNOSCION NOBILIS
AUGUST 26,1979
STATION SO-1-2Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 1ØØ MM TO 1Ø9 MM N= 1

HYPERPROSOPON ARGENTEUM
AUGUST 26,1979
STATION SO-1-2Ø

TOTAL NO. OF INDIVIDUALS = 35
FROM 55 MM TO 59 MM N= 2
FROM 6Ø MM TO 64 MM N= 2
FROM 65 MM TO 69 MM N= 11
FROM 7Ø MM TO 74 MM N= 6
FROM 75 MM TO 79 MM N= 3
FROM 8Ø MM TO 84 MM N= 1
FROM 11Ø MM TO 114 MM N= 2
FROM 115 MM TO 119 MM N= 1
FROM 12Ø MM TO 124 MM N= 4
FROM 135 MM TO 139 MM N= 1
FROM 14Ø MM TO 144 MM N= 1
FROM 155 MM TO 159 MM N= 1

PARALICHTHYS CALIFORNICUS
AUGUST 26,1979
STATION SO-2-2Ø

TOTAL NO. OF INDIVIDUALS = 4
FROM 21Ø MM TO 219 MM N= 1
FROM 25Ø MM TO 259 MM N= 1
FROM 26Ø MM TO 269 MM N= 1
FROM 31Ø MM TO 319 MM N= 1

CYNOSCION NOBILIS
AUGUST 26,1979
STATION SO-2-2Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 12Ø MM TO 129 MM N= 1

HYPERPROSOPON ARGENTEUM
AUGUST 26,1979
STATION SO-2-2Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 65 MM TO 69 MM N= 1

HYPERPROSOPON ARGENTEUM
AUGUST 27,1979
STATION SO-3-2Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 85 MM TO 89 MM N= 1

PARALICHTHYS CALIFORNICUS
AUGUST 27,1979
STATION SO-4-2Ø

TOTAL NO. OF INDIVIDUALS = 3
FROM 17Ø MM TO 179 MM N= 2
FROM 21Ø MM TO 219 MM N= 1

HYPERPROSOPON ARGENTEUM
AUGUST 27,1979
STATION SO-4-2Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 7Ø MM TO 74 MM N= 1

HYPERPROSOPON ARGENTEUM
AUGUST 26,1979
STATION SO-1-4Ø

TOTAL NO. OF INDIVIDUALS = 5
FROM 6Ø MM TO 64 MM N= 1
FROM 75 MM TO 79 MM N= 4

RONCADOR STEARNSII
AUGUST 26,1979
STATION SO-2-4Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 26Ø MM TO 264 MM N= 1

PARALICHTHYS CALIFORNICUS
AUGUST 26,1979
STATION SO-2-4Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 2ØØ MM TO 2Ø9 MM N= 1
FROM 27Ø MM TO 279 MM N= 1

HYPERPROSOPON ARGENTEUM
AUGUST 26,1979
STATION SO-2-4Ø

TOTAL NO. OF INDIVIDUALS = 28
FROM 65 MM TO 69 MM N= 6
FROM 7Ø MM TO 74 MM N= 8
FROM 75 MM TO 79 MM N= 1Ø
FROM 8Ø MM TO 84 MM N= 3
FROM 12Ø MM TO 124 MM N= 1

PHANERODON FURCATUS
AUGUST 26,1979
STATION SO-2-4Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 65 MM TO 69 MM N= 1

PARALICHTHYS CALIFORNICUS
AUGUST 27,1979
STATION SO-3-4Ø

TOTAL NO. OF INDIVIDUALS = 4
FROM 24Ø MM TO 249 MM N= 1
FROM 25Ø MM TO 259 MM N= 1
FROM 26Ø MM TO 269 MM N= 1
FROM 3ØØ MM TO 3Ø9 MM N= 1

PARALABRAX NEBULIFER
AUGUST 27,1979
STATION SO-3-4Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 18Ø MM TO 189 MM N= 1
FROM 2ØØ MM TO 2Ø9 MM N= 1

HYPERPROSOPON ARGENTEUM
AUGUST 27,1979
STATION SO-3-4Ø

TOTAL NO. OF INDIVIDUALS = 11
FROM 65 MM TO 69 MM N= 3
FROM 7Ø MM TO 74 MM N= 6
FROM 75 MM TO 79 MM N= 2

PHANERODON FURCATUS
AUGUST 27,1979
STATION SO-3-4Ø

TOTAL NO. OF INDIVIDUALS = 4
FROM 55 MM TO 59 MM N= 1
FROM 65 MM TO 69 MM N= 3

PARALICHTHYS CALIFORNICUS
AUGUST 27,1979
STATION SO-4-4Ø

TOTAL NO. OF INDIVIDUALS = 3
FROM 22Ø MM TO 229 MM N= 1
FROM 28Ø MM TO 289 MM N= 1
FROM 32Ø MM TO 329 MM N= 1

PHANERODON FURCATUS
AUGUST 27,1979
STATION SO-4-4Ø

TOTAL NO. OF INDIVIDUALS = 9
FROM 65 MM TO 69 MM N= 3
FROM 75 MM TO 79 MM N= 3
FROM 8Ø MM TO 84 MM N= 3

HYPERPROSOPON ARGENTEUM
AUGUST 27,1979
STATION SO-4-4Ø

TOTAL NO. OF INDIVIDUALS = 42
FROM 1Ø MM TO 14 MM N= 1
FROM 65 MM TO 69 MM N= 11
FROM 7Ø MM TO 74 MM N= 9
FROM 75 MM TO 79 MM N= 15
FROM 8Ø MM TO 84 MM N= 2
FROM 85 MM TO 89 MM N= 2
FROM 11Ø MM TO 114 MM N= 1
FROM 115 MM TO 119 MM N= 1

PARALICHTHYS CALIFORNICUS
AUGUST 27,1979
STATION SO-1-6Ø

TOTAL NO. OF INDIVIDUALS = 4
FROM 29Ø MM TO 299 MM N= 1
FROM 31Ø MM TO 319 MM N= 1
FROM 34Ø MM TO 349 MM N= 1
FROM 38Ø MM TO 389 MM N= 1

PARALICHTHYS CALIFORNICUS
AUGUST 26,1979
STATION SO-2-6Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 27Ø MM TO 279 MM N= 1
FROM 52Ø MM TO 529 MM N= 1

PARALABRAX NEBULIFER
AUGUST 26,1979
STATION SO-2-6Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 19Ø MM TO 199 MM N= 1

PARALICHTHYS CALIFORNICUS
AUGUST 27,1979
STATION SO-3-6Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 34Ø MM TO 349 MM N= 1

PARALICHTHYS CALIFORNICUS
AUGUST 27,1979
STATION SO-4-6Ø

TOTAL NO. OF INDIVIDUALS = 3
FROM 28Ø MM TO 289 MM N= 1
FROM 31Ø MM TO 319 MM N= 1
FROM 33Ø MM TO 339 MM N= 1

HYPERPROSOPON ARGENTEUM
AUGUST 26,1979
STATION DL-1-2Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 6Ø MM TO 64 MM N= 1
FROM 65 MM TO 69 MM N= 1

PARALICHTHYS CALIFORNICUS
AUGUST 26,1979
STATION DL-2-2Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 23Ø MM TO 239 MM N= 1

HYPERPROSOPON ARGENTEUM
AUGUST 26,1979
STATION DL-2-2Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 6Ø MM TO 64 MM N= 1

PHANERODON FURCATUS
AUGUST 26,1979
STATION DL-2-2Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 75 MM TO 79 MM N= 1
FROM 8Ø MM TO 84 MM N= 1

PARALICHTHYS CALIFORNICUS
AUGUST 27,1979
STATION DL-3-2Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 18Ø MM TO 189 MM N= 1

HYPERPROSOPON ARGENTEUM
AUGUST 27,1979
STATION DL-3-2Ø

TOTAL NO. OF INDIVIDUALS = 9
FROM 55 MM TO 59 MM N= 1
FROM 6Ø MM TO 64 MM N= 3
FROM 65 MM TO 69 MM N= 4
FROM 75 MM TO 79 MM N= 1

PARALICHTHYS CALIFORNICUS
AUGUST 27,1979
STATION DL-4-2Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 2ØØ MM TO 2Ø9 MM N= 1
FROM 25Ø MM TO 259 MM N= 1

HYPERPROSOPON ARGENTEUM
AUGUST 27,1979
STATION DL-4-2Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 75 MM TO 79 MM N= 1

PARALICHTHYS CALIFORNICUS
AUGUST 26,1979
STATION DL-1-4Ø

TOTAL NO. OF INDIVIDUALS = 9
FROM 2ØØ MM TO 2Ø9 MM N= 1
FROM 28Ø MM TO 289 MM N= 1
FROM 3ØØ MM TO 3Ø9 MM N= 1
FROM 31Ø MM TO 319 MM N= 2
FROM 32Ø MM TO 329 MM N= 1
FROM 33Ø MM TO 339 MM N= 2
FROM 38Ø MM TO 389 MM N= 1

PHANERODON FURCATUS
AUGUST 26,1979
STATION DL-1-4Ø

TOTAL NO. OF INDIVIDUALS = 13
FROM 6Ø MM TO 64 MM N= 1
FROM 65 MM TO 69 MM N= 3
FROM 7Ø MM TO 74 MM N= 4
FROM 75 MM TO 79 MM N= 2
FROM 8Ø MM TO 84 MM N= 1
FROM 145 MM TO 149 MM N= 1
FROM 16Ø MM TO 164 MM N= 1

HYPERPROSOPON ARGENTEUM
AUGUST 26,1979
STATION DL-1-4Ø

TOTAL NO. OF INDIVIDUALS = 32
FROM 6Ø MM TO 64 MM N= 1
FROM 65 MM TO 69 MM N= 1
FROM 7Ø MM TO 74 MM N= 15
FROM 75 MM TO 79 MM N= 11
FROM 8Ø MM TO 84 MM N= 4

PARALICHTHYS CALIFORNICUS
AUGUST 26,1979
STATION DL-2-4Ø

TOTAL NO. OF INDIVIDUALS = 3
FROM 23Ø MM TO 239 MM N= 1
FROM 31Ø MM TO 319 MM N= 1
FROM 39Ø MM TO 399 MM N= 1

HYPERPROSOPON ARGENTEUM
AUGUST 26,1979
STATION DL-2-4Ø

TOTAL NO. OF INDIVIDUALS = 42
FROM 6Ø MM TO 64 MM N= 2
FROM 65 MM TO 69 MM N= 4
FROM 7Ø MM TO 74 MM N= 26
FROM 75 MM TO 79 MM N= 9
FROM 8Ø MM TO 84 MM N= 1

PHANERODON FURCATUS
AUGUST 26,1979
STATION DL-2-4Ø

TOTAL NO. OF INDIVIDUALS = 6
FROM 6Ø MM TO 64 MM N= 1
FROM 7Ø MM TO 74 MM N= 3
FROM 8Ø MM TO 84 MM N= 1
FROM 17Ø MM TO 174 MM N= 1

PARALICHTHYS CALIFORNICUS
AUGUST 27,1979
STATION DL-3-4Ø

TOTAL NO. OF INDIVIDUALS = 3
FROM 23Ø MM TO 239 MM N= 1
FROM 24Ø MM TO 249 MM N= 1
FROM 29Ø MM TO 299 MM N= 1

PARALABRAX NEBULIFER
AUGUST 27,1979
STATION DL-3-4Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 18Ø MM TO 189 MM N= 1

HYPERPROSOPON ARGENTEUM
AUGUST 27,1979
STATION DL-3-4Ø

TOTAL NO. OF INDIVIDUALS = 8
FROM 7Ø MM TO 74 MM N= 4
FROM 75 MM TO 79 MM N= 2
FROM 8Ø MM TO 84 MM N= 1
FROM 9Ø MM TO 94 MM N= 1

PHANERODON FURCATUS
AUGUST 27,1979
STATION DL-3-4Ø

TOTAL NO. OF INDIVIDUALS = 94
FROM 55 MM TO 59 MM N= 1
FROM 6Ø MM TO 64 MM N= 1
FROM 65 MM TO 69 MM N= 6
FROM 7Ø MM TO 74 MM N= 36
FROM 75 MM TO 79 MM N= 33
FROM 8Ø MM TO 84 MM N= 15
FROM 9Ø MM TO 94 MM N= 1
FROM 17Ø MM TO 174 MM N= 1

PARALABRAX NEBULIFER
AUGUST 27,1979
STATION DL-4-4Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 17Ø MM TO 179 MM N= 1
FROM 2ØØ MM TO 2Ø9 MM N= 1

PARALICHTHYS CALIFORNICUS
AUGUST 27,1979
STATION DL-4-4Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 29Ø MM TO 299 MM N= 1
FROM 35Ø MM TO 359 MM N= 1

PHANERODON FURCATUS
AUGUST 27,1979
STATION DL-4-4Ø

TOTAL NO. OF INDIVIDUALS = 41
FROM 65 MM TO 69 MM N= 2
FROM 7Ø MM TO 74 MM N= 11
FROM 75 MM TO 79 MM N= 14
FROM 8Ø MM TO 84 MM N= 9
FROM 13Ø MM TO 134 MM N= 3
FROM 155 MM TO 159 MM N= 1
FROM 18Ø MM TO 184 MM N= 1

PARALICHTHYS CALIFORNICUS
AUGUST 26,1979
STATION DL-1-6Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 28Ø MM TO 289 MM N= 1
FROM 3ØØ MM TO 3Ø9 MM N= 1

PARALABRAX NEBULIFER
AUGUST 26,1979
STATION DL-2-6Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 23Ø MM TO 239 MM N= 1

PHANERODON FURCATUS
AUGUST 27,1979
STATION DL-3-6Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 75 MM TO 79 MM N= 1

PARALABRAX NEBULIFER
AUGUST 27,1979
STATION DL-3-6Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 18Ø MM TO 189 MM N= 1
FROM 22Ø MM TO 229 MM N= 1

PARALICHTHYS CALIFORNICUS
AUGUST 27,1979
STATION DL-4-6Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 42Ø MM TO 429 MM N= 1

PARALABRAX NEBULIFER
AUGUST 27,1979
STATION DL-4-6Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 2ØØ MM TO 2Ø9 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 30 ft offshore San Mateo Point during Survey of October 16-17, 1979.

PARALABRAX CLATHRATUS
OCTOBER 16-17,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 3
FROM 190 MM TO 199 MM N= 1
FROM 200 MM TO 209 MM N= 1
FROM 220 MM TO 229 MM N= 1

PARALABRAX NEBULIFER
OCTOBER 16-17,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 180 MM TO 189 MM N= 1

CHEILOTREMA SATURNUM
OCTOBER 16-17,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 165 MM TO 169 MM N= 1

MUSTELUS CALIFORNICUS
OCTOBER 16-17,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 780 MM TO 799 MM N= 1
FROM 880 MM TO 899 MM N= 1

TRIAKIS SEMIFASCIATA
OCTOBER 16-17,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 820 MM TO 839 MM N= 1

TRIAKIS SEMIFASCIATA
OCTOBER 16-17,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 380 MM TO 399 MM N= 1

HALICHOERES SEMICINCTUS
OCTOBER 16-17,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 185 MM TO 189 MM N= 1

CHEILOTREMA SATURNUM
OCTOBER 16-17,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 5
FROM 160 MM TO 164 MM N= 1
FROM 165 MM TO 169 MM N= 1
FROM 175 MM TO 179 MM N= 1
FROM 195 MM TC 199 MM N= 2

PARALABRAX NEBULIFER
OCTOBER 16-17,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 210 MM TO 219 MM N= 1
FROM 240 MM TO 249 MM N= 2

HYPERPROSOPON ARGENTEUM
OCTOBER 16-17,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 130 MM TO 134 MM N= 1
FROM 145 MM TO 149 MM N= 1

RHACOCHILUS TOXOTES
OCTOBER 16-17,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 110 MM TO 119 MM N= 2
FROM 170 MM TO 179 MM N= 1

ANISOTREMUS DAVIDSONII
OCTOBER 16-17,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 120 MM TO 124 MM N= 1

PHANERODON FURCATUS
OCTOBER 16-17,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 125 MM TO 129 MM N= 1

PLEURONICHTHYS COENOSUS
OCTOBER 16-17,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 240 MM TO 244 MM N= 1

MENTICIRRHUS UNDULATUS
OCTOBER 16-17,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 260 MM TO 269 MM N= 1

HYPERPROSOPON ARGENTEUM
OCTOBER 16-17,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 80 MM TO 84 MM N= 1
FROM 85 MM TO 89 MM N= 1

PHANERODON FURCATUS
OCTOBER 16-17,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 90 MM TO 94 MM N= 1
FROM 130 MM TO 134 MM N= 1

XENISTIUS CALIFORNIENSIS
OCTOBER 16-17,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 165 MM TO 169 MM N= 1

MENTICIRRHUS UNDULATUS
OCTOBER 16-17,1979
STATION 12-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 300 MM TO 309 MM N= 1

SCOMBER JAPONICUS
OCTOBER 16-17,1979
STATION 12-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 280 MM TO 284 MM N= 1
FROM 285 MM TO 289 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
OCTOBER 16-17,1979
STATION 12-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 270 MM TO 274 MM N= 1

PARALABRAX NEBULIFER
OCTOBER 16-17,1979
STATION 12-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 170 MM TO 179 MM N= 1

CHROMIS PUNCTIPINNIS
OCTOBER 16-17,1979
STATION 12-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 140 MM TO 144 MM N= 1

HYPERPROSOPON ARGENTEUM
OCTOBER 16-17,1979
STATION 12-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 80 MM TO 84 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 30 ft offshore San Onofre during Survey of October 16-17, 1979.

MUSTELUS CALIFORNICUS
OCTOBER 16-17,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 3
FROM 450 MM TO 459 MM N= 1
FROM 520 MM TO 529 MM N= 1
FROM 600 MM TO 609 MM N= 1

TRIAKIS SEMIFASCIATA
OCTOBER 16-17,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 3
FROM 540 MM TO 559 MM N= 1
FROM 600 MM TO 619 MM N= 1
FROM1000 MM TO1019 MM N= 1

HYPERPROSOPON ARGENTEUM
OCTOBER 16-17,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 80 MM TO 84 MM N= 1

CHEILOTREMA SATURNUM
OCTOBER 16-17,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 135 MM TO 139 MM N= 1

PARALABRAX NEBULIFER
OCTOBER 16-17,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 150 MM TO 159 MM N= 1
FROM 190 MM TO 199 MM N= 1

MENTICIRRHUS UNDULATUS
OCTOBER 16-17,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 280 MM TO 289 MM N= 1

ANISOTREMUS DAVIDSONII
OCTOBER 16-17,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 145 MM TO 149 MM N= 1
FROM 150 MM TO 154 MM N= 1

CHROMIS PUNCTIPINNIS
OCTOBER 16-17,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 125 MM TO 129 MM N= 1

TRIAKIS SEMIFASCIATA
OCTOBER 16-17,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 360 MM TO 379 MM N= 1

EMBIOTOCA JACKSONI
OCTOBER 16-17,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 10
FROM 120 MM TO 124 MM N= 2
FROM 125 MM TO 129 MM N= 4
FROM 130 MM TO 134 MM N= 1
FROM 135 MM TO 139 MM N= 1
FROM 150 MM TO 154 MM N= 1
FROM 165 MM TO 169 MM N= 1

PARALABRAX NEBULIFER
OCTOBER 16-17,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 200 MM TO 209 MM N= 1

HETEROSTICHUS ROSTRATUS
OCTOBER 16-17,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 195 MM TO 199 MM N= 1

CHEILOTREMA SATURNUM
OCTOBER 16-17,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 29
FROM 145 MM TO 149 MM N= 1
FROM 155 MM TO 159 MM N= 2
FROM 160 MM TO 164 MM N= 7
FROM 165 MM TO 169 MM N= 2
FROM 170 MM TO 174 MM N= 3
FROM 175 MM TO 179 MM N= 4
FROM 180 MM TO 184 MM N= 4
FROM 185 MM TO 189 MM N= 2
FROM 190 MM TO 194 MM N= 2
FROM 195 MM TO 199 MM N= 1
FROM 205 MM TO 209 MM N= 1

RHACOCHILUS TOXOTES
OCTOBER 16-17,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 80 MM TO 89 MM N= 1
FROM 300 MM TO 309 MM N= 1

HYPERPROSOPON ARGENTEUM
OCTOBER 16-17,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 140 MM TO 144 MM N= 1

PHANERODON FURCATUS
OCTOBER 16-17,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 130 MM TO 134 MM N= 1

EMBIOTOCA JACKSONI
OCTOBER 16-17,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 4
FROM 120 MM TO 124 MM N= 1
FROM 125 MM TO 129 MM N= 1
FROM 130 MM TO 134 MM N= 2

PARALABRAX NEBULIFER
OCTOBER 16-17,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 180 MM TO 189 MM N= 1
FROM 200 MM TO 209 MM N= 1

HETEROSTICHUS ROSTRATUS
OCTOBER 16-17,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 180 MM TO 184 MM N= 1

CHEILOTREMA SATURNUM
OCTOBER 16-17,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 10
FROM 125 MM TO 129 MM N= 1
FROM 130 MM TO 134 MM N= 1
FROM 150 MM TO 154 MM N= 1
FROM 155 MM TO 159 MM N= 1
FROM 160 MM TO 164 MM N= 2
FROM 165 MM TO 169 MM N= 2
FROM 175 MM TO 179 MM N= 1
FROM 190 MM TO 194 MM N= 1

PARALICHTHYS CALIFORNICUS
OCTOBER 16-17,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 290 MM TO 299 MM N= 1

MUSTELUS CALIFORNICUS
OCTOBER 16-17,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 880 MM TO 899 MM N= 1

SQUALUS ACANTHIAS
OCTOBER 16-17,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 900 MM TO 919 MM N= 1

PARALABRAX NEBULIFER
OCTOBER 16-17,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 7
FROM 140 MM TO 149 MM N= 1
FROM 150 MM TO 159 MM N= 1
FROM 190 MM TO 199 MM N= 1
FROM 200 MM TO 209 MM N= 2
FROM 260 MM TO 269 MM N= 2

SCORPAENA GUTTATA
OCTOBER 16-17,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 145 MM TO 149 MM N= 1

EMBIOTOCA JACKSONI
OCTOBER 16-17,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 120 MM TO 124 MM N= 1

SARDA CHILIENSIS
OCTOBER 16-17,1979
STATION 3-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 350 MM TO 359 MM N= 1

MENTICIRRHUS UNDULATUS
OCTOBER 16-17,1979
STATION 3-1

TOTAL NO. OF INDIVIDUALS - 4
FROM 210 MM TO 219 MM N= 1
FROM 230 MM TO 239 MM N= 1
FROM 240 MM TO 249 MM N= 1
FROM 260 MM TO 269 MM N= 1

CYNOSCION NOBILIS
OCTOBER 16-17,1979
STATION 3-1

TOTAL NO. OF INDIVIDUALS - 1
FROM 280 MM TO 289 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
OCTOBER 16-17,1979
STATION 3-1

TOTAL NO. OF INDIVIDUALS - 4
FROM 215 MM TO 219 MM N= 1
FROM 245 MM TO 249 MM N= 1
FROM 250 MM TO 254 MM N= 1
FROM 295 MM TO 299 MM N= 1

HYPERPROSOPON ARGENTEUM
OCTOBER 16-17,1979
STATION 3-1

TOTAL NO. OF INDIVIDUALS - 3
FROM 80 MM TO 84 MM N= 1
FROM 85 MM TO 89 MM N= 1
FROM 120 MM TO 124 MM N= 1

PHANERODON FURCATUS
OCTOBER 16-17,1979
STATION 3-1

TOTAL NO. OF INDIVIDUALS - 1
FROM 90 MM TO 94 MM N= 1

MUSTELUS CALIFORNICUS
OCTOBER 16-17,1979
STATION 3-2

TOTAL NO. OF INDIVIDUALS - 1
FROM 840 MM TO 859 MM N= 1

SARDA CHILIENSIS
OCTOBER 16-17,1979
STATION 3-2

TOTAL NO. OF INDIVIDUALS - 2
FROM 330 MM TO 339 MM N= 1
FROM 350 MM TO 359 MM N= 1

SYNODUS LUCIOCEPS
OCTOBER 16-17,1979
STATION 3-2

TOTAL NO. OF INDIVIDUALS - 1
FROM 310 MM TO 319 MM N= 1

SCOMBER JAPONICUS
OCTOBER 16-17,1979
STATION 3-2

TOTAL NO. OF INDIVIDUALS - 1
FROM 215 MM TO 219 MM N= 1

SCORPAENA GUTTATA
OCTOBER 16-17,1979
STATION 3-2

TOTAL NO. OF INDIVIDUALS - 1
FROM 125 MM TO 129 MM N= 1

MENTICIRRHUS UNDULATUS
OCTOBER 16-17,1979
STATION 3-2

TOTAL NO. OF INDIVIDUALS - 3
FROM 180 MM TO 189 MM N= 1
FROM 220 MM TO 229 MM N= 1
FROM 250 MM TO 259 MM N= 1

HYPERPROSOPON ARGENTEUM
OCTOBER 16-17,1979
STATION 3-2

TOTAL NO. OF INDIVIDUALS - 4
FROM 75 MM TO 79 MM N= 1
FROM 80 MM TO 84 MM N= 3

ATHERINOPSIS CALIFORNIENSIS
OCTOBER 16-17,1979
STATION 3-2

TOTAL NO. OF INDIVIDUALS - 13
FROM 225 MM TO 229 MM N= 4
FROM 235 MM TO 239 MM N= 2
FROM 240 MM TO 244 MM N= 2
FROM 245 MM TO 249 MM N= 1
FROM 255 MM TO 259 MM N= 2
FROM 270 MM TO 274 MM N= 1
FROM 290 MM TO 294 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 30 ft offshore Don Light during Survey of October 16-17, 1979.

SARDA CHILIENSIS
OCTOBER 16-17,1979
STATION 6-1

TOTAL NO. OF INDIVIDUALS = 4
FROM 330 MM TO 339 MM N= 3
FROM 340 MM TO 349 MM N= 1

LEPTOCOTTUS ARMATUS
OCTOBER 16-17,1979
STATION 6-1

TOTAL NO. OF INDIVIDUALS = 3
FROM 125 MM TO 129 MM N= 1
FROM 150 MM TO 154 MM N= 1
FROM 165 MM TO 169 MM N= 1

MENTICIRRHUS UNDULATUS
OCTOBER 16-17,1979
STATION 6-1

TOTAL NO. OF INDIVIDUALS = 5
FROM 220 MM TO 229 MM N= 2
FROM 250 MM TO 259 MM N= 1
FROM 260 MM TO 269 MM N= 1
FROM 310 MM TO 319 MM N= 1

SCOMBER JAPONICUS
OCTOBER 16-17,1979
STATION 6-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 210 MM TO 214 MM N= 1
FROM 290 MM TO 294 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
OCTOBER 16-17,1979
STATION 6-1

TOTAL NO. OF INDIVIDUALS = 8
FROM 165 MM TO 169 MM N= 1
FROM 215 MM TO 219 MM N= 1
FROM 230 MM TO 234 MM N= 3
FROM 235 MM TO 239 MM N= 1
FROM 240 MM TO 244 MM N= 1
FROM 245 MM TO 249 MM N= 1

HYPERPROSOPON ARGENTEUM
OCTOBER 16-17,1979
STATION 6-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 130 MM TO 134 MM N= 1

ELASMOBRANCH,UNIDENT.
OCTOBER 16-17,1979
STATION 6-2

TOTAL NO. OF INDIVIDUALS = 1
FROM1500 MM TO1519 MM N= 1

SARDA CHILIENSIS
OCTOBER 16-17,1979
STATION 6-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 300 MM TO 309 MM N= 1
FROM 340 MM TO 349 MM N= 1
FROM 360 MM TO 369 MM N= 1

SCOMBER JAPONICUS
OCTOBER 16-17,1979
STATION 6-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 285 MM TO 289 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
OCTOBER 16-17,1979
STATION 6-2

TOTAL NO. OF INDIVIDUALS = 6
FROM 220 MM TO 224 MM N= 1
FROM 235 MM TO 239 MM N= 2
FROM 240 MM TO 244 MM N= 1
FROM 245 MM TO 249 MM N= 2

MENTICIRRHUS UNDULATUS
OCTOBER 16-17,1979
STATION 6-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 240 MM TO 249 MM N= 2
FROM 250 MM TO 259 MM N= 1

PHANERODON FURCATUS
OCTOBER 16-17,1979
STATION 6-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 130 MM TO 134 MM N= 2

TRIAKIS SEMIFASCIATA
OCTOBER 16-17,1979
STATION 6-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 360 MM TO 379 MM N= 1

HYPERPROSOPON ARGENTEUM
OCTOBER 16-17,1979
STATION 6-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 85 MM TO 89 MM N= 1
FROM 90 MM TO 94 MM N= 1

SARDA CHILIENSIS
OCTOBER 16-17,1979
STATION 7-1

TOTAL NO. OF INDIVIDUALS = 6
FROM 320 MM TO 329 MM N= 4
FROM 330 MM TO 339 MM N= 1
FROM 340 MM TO 349 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
OCTOBER 16-17,1979
STATION 7-1

TOTAL NO. OF INDIVIDUALS = 8
FROM 205 MM TO 209 MM N= 1
FROM 225 MM TO 229 MM N= 1
FROM 230 MM TO 234 MM N= 1
FROM 235 MM TO 239 MM N= 3
FROM 250 MM TO 254 MM N= 1
FROM 265 MM TO 269 MM N= 1

MENTICIRRHUS UNDULATUS
OCTOBER 16-17,1979
STATION 7-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 200 MM TO 209 MM N= 1
FROM 270 MM TO 279 MM N= 1

PHANERODON FURCATUS
OCTOBER 16-17,1979
STATION 7-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 155 MM TO 159 MM N= 1

SYNODUS LUCIOCEPS
OCTOBER 16-17,1979
STATION 7-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 280 MM TO 289 MM N= 1

PARALABRAX NEBULIFER
OCTOBER 16-17,1979
STATION 7-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 230 MM TO 239 MM N= 1

SCORPAENA GUTTATA
OCTOBER 16-17,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 155 MM TO 159 MM N= 1

PARALABRAX CLATHRATUS
OCTOBER 16-17,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 200 MM TO 209 MM N= 1

PIMELOMETOPON PULCHRUM
OCTOBER 16-17,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 190 MM TO 199 MM N= 1

PARALICHTHYS CALIFORNICUS
OCTOBER 16-17,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 330 MM TO 339 MM N= 1

RHACOCHILUS TOXOTES
OCTOBER 16-17,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 110 MM TO 119 MM N= 1

EMBIOTOCA JACKSONI
OCTOBER 16-17,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 75 MM TO 79 MM N= 1
FROM 90 MM TO 94 MM N= 1

HYPERPROSOPON ARGENTEUM
OCTOBER 16-17,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 85 MM TO 89 MM N= 1

CHROMIS PUNCTIPINNIS
OCTOBER 16-17,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 130 MM TO 134 MM N= 1

CHEILOTREMA SATURNUM
OCTOBER 16-17,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 16
FROM 165 MM TO 169 MM N= 2
FROM 170 MM TO 174 MM N= 1
FROM 175 MM TO 179 MM N= 1
FROM 180 MM TO 184 MM N= 1
FROM 185 MM TO 189 MM N= 2
FROM 190 MM TO 194 MM N= 2
FROM 195 MM TO 199 MM N= 2
FROM 200 MM TO 204 MM N= 1
FROM 205 MM TO 209 MM N= 2
FROM 210 MM TO 214 MM N= 2

SARDA CHILIENSIS
OCTOBER 16-17,1979
STATION 8-1

TOTAL NO. OF INDIVIDUALS = 5
FROM 320 MM TO 329 MM N= 1
FROM 330 MM TO 339 MM N= 1
FROM 340 MM TO 349 MM N= 2
FROM 360 MM TO 369 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
OCTOBER 16-17,1979
STATION 8-1

TOTAL NO. OF INDIVIDUALS = 4
FROM 220 MM TO 224 MM N= 1
FROM 225 MM TO 229 MM N= 1
FROM 235 MM TO 239 MM N= 1
FROM 240 MM TO 244 MM N= 1

HYPERPROSOPON ARGENTEUM
OCTOBER 16-17,1979
STATION 8-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 80 MM TO 84 MM N= 1

LEPTOCOTTUS ARMATUS
OCTOBER 16-17,1979
STATION 8-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 130 MM TO 134 MM N= 1
FROM 160 MM TO 164 MM N= 1

EMBIOTOCA JACKSONI
OCTOBER 16-17,1979
STATION 8-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 120 MM TO 124 MM N= 1

SARDA CHILIENSIS
OCTOBER 16-17,1979
STATION 8-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 320 MM TO 329 MM N= 2
FROM 340 MM TO 349 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
OCTOBER 16-17,1979
STATION 8-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 240 MM TO 244 MM N= 1
FROM 270 MM TO 274 MM N= 2

MENTICIRRHUS UNDULATUS
OCTOBER 16-17,1979
STATION 8-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 270 MM TO 279 MM N= 1
FROM 300 MM TO 309 MM N= 1

SCOMBER JAPONICUS
OCTOBER 16-17,1979
STATION 8-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 215 MM TO 219 MM N= 1

ANISOTREMUS DAVIDSONII
OCTOBER 16-17,1979
STATION 8-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 170 MM TO 174 MM N= 1

PARALABRAX NEBULIFER
OCTOBER 16-17,1979
STATION 8-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 270 MM TO 279 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 45 ft offshore San Onofre during Survey of October 16-17, 1979.

PHANERODON FURCATUS
OCTOBER 16-17,1979
STATION 4-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 150 MM TO 154 MM N= 1
FROM 165 MM TO 169 MM N= 1

PHANERODON FURCATUS
OCTOBER 16-17,1979
STATION 4-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 130 MM TO 134 MM N= 1

PARALABRAX NEBULIFER
OCTOBER 16-17,1979
STATION 4-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 200 MM TO 209 MM N= 2

HYPERPROSOPON ARGENTEUM
OCTOBER 16-17,1979
STATION 5-1

TOTAL NO. OF INDIVIDUALS = 5
FROM 120 MM TO 124 MM N= 1
FROM 130 MM TO 134 MM N= 3
FROM 135 MM TO 139 MM N= 1

PHANERODON FURCATUS
OCTOBER 16-17,1979
STATION 5-1

TOTAL NO. OF INDIVIDUALS = 7
FROM 80 MM TO 84 MM N= 1
FROM 110 MM TO 114 MM N= 1
FROM 115 MM TO 119 MM N= 1
FROM 120 MM TO 124 MM N= 1
FROM 145 MM TO 149 MM N= 1
FROM 150 MM TO 154 MM N= 1
FROM 170 MM TO 174 MM N= 1

CYNOSCION NOBILIS
OCTOBER 16-17,1979
STATION 5-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 240 MM TO 249 MM N= 1
FROM 330 MM TO 339 MM N= 1
FROM 340 MM TO 349 MM N= 1

PARALABRAX NEBULIFER
OCTOBER 16-17,1979
STATION 5-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 190 MM TO 199 MM N= 1

PHANERODON FURCATUS
OCTOBER 16-17,1979
STATION 5-2

TOTAL NO. OF INDIVIDUALS = 7
FROM 90 MM TO 94 MM N= 1
FROM 120 MM TO 124 MM N= 1
FROM 130 MM TO 134 MM N= 1
FROM 135 MM TO 139 MM N= 1
FROM 140 MM TO 144 MM N= 1
FROM 155 MM TO 159 MM N= 1
FROM 180 MM TO 184 MM N= 1

HYPERPROSOPON ARGENTEUM
OCTOBER 16-17,1979
STATION 5-2

TOTAL NO. OF INDIVIDUALS = 4
FROM 80 MM TO 84 MM N= 1
FROM 85 MM TO 89 MM N= 1
FROM 115 MM TO 119 MM N= 2

Length frequency distributions of select species collected in 24-h gill nets at 45 ft offshore Don Light during Survey of October 16-17, 1979.

PHANERODON FURCATUS
OCTOBER 16-17,1979
STATION 10-1

TOTAL NO. OF INDIVIDUALS =		23
FROM 90 MM TO 94 MM	N=	2
FROM 95 MM TO 99 MM	N=	1
FROM 120 MM TO 124 MM	N=	1
FROM 125 MM TO 129 MM	N=	4
FROM 130 MM TO 134 MM	N=	4
FROM 135 MM TO 139 MM	N=	1
FROM 155 MM TO 159 MM	N=	2
FROM 160 MM TO 164 MM	N=	1
FROM 165 MM TO 169 MM	N=	1
FROM 170 MM TO 174 MM	N=	1
FROM 175 MM TO 179 MM	N=	4
FROM 180 MM TO 184 MM	N=	1

PARALABRAX NEBULIFER
OCTOBER 16-17,1979
STATION 10-1

TOTAL NO. OF INDIVIDUALS =		2
FROM 200 MM TO 209 MM	N=	1
FROM 240 MM TO 249 MM	N=	1

PARALABRAX NEBULIFER
OCTOBER 16-17,1979
STATION 10-2

TOTAL NO. OF INDIVIDUALS =		1
FROM 220 MM TO 229 MM	N=	1

PHANERODON FURCATUS
OCTOBER 16-17,1979
STATION 10-2

TOTAL NO. OF INDIVIDUALS =		6
FROM 95 MM TO 99 MM	N=	1
FROM 135 MM TO 139 MM	N=	2
FROM 140 MM TO 144 MM	N=	1
FROM 150 MM TO 154 MM	N=	1
FROM 160 MM TO 164 MM	N=	1

Length frequency distributions of select species collected in 5-min otter trawls at 20, 40, and 60 ft offshore at San Mateo Point, San Onofre, and Don Light during survey of October 16-17, 1979.

SAN MATEO POINT

PARALICHTHYS CALIFORNICUS
OCTOBER 16,1979
STATION SM-1-20

TOTAL NO. OF INDIVIDUALS = 1
FROM 170 MM TO 179 MM N= 1

PHANERODON FURCATUS
OCTOBER 16,1979
STATION SM-1-20

TOTAL NO. OF INDIVIDUALS = 2
FROM 75 MM TO 79 MM N= 2

HYPERPROSOPON ARGENTEUM
OCTOBER 16,1979
STATION SM-1-20

TOTAL NO. OF INDIVIDUALS = 6
FROM 75 MM TO 79 MM N= 2
FROM 80 MM TO 84 MM N= 2
FROM 85 MM TO 89 MM N= 2

PHANERODON FURCATUS
OCTOBER 16,1979
STATION SM-2-20

TOTAL NO. OF INDIVIDUALS = 1
FROM 75 MM TO 79 MM N= 1

PARALICHTHYS CALIFORNICUS
OCTOBER 17,1979
STATION SM-3-20

TOTAL NO. OF INDIVIDUALS = 2
FROM 220 MM TO 229 MM N= 1
FROM 320 MM TO 329 MM N= 1

HYPERPROSOPON ARGENTEUM
OCTOBER 17,1979
STATION SM-3-20

TOTAL NO. OF INDIVIDUALS = 1
FROM 85 MM TO 89 MM N= 1

CYNOSCION NOBILIS
OCTOBER 17,1979
STATION SM-3-20

TOTAL NO. OF INDIVIDUALS = 3
FROM 110 MM TO 119 MM N= 1
FROM 140 MM TO 149 MM N= 1
FROM 150 MM TO 159 MM N= 1

HYPERPROSOPON ARGENTEUM
OCTOBER 17,1979
STATION SM-4-20

TOTAL NO. OF INDIVIDUALS = 9
FROM 70 MM TO 74 MM N= 1
FROM 75 MM TO 79 MM N= 5
FROM 80 MM TO 84 MM N= 2
FROM 140 MM TO 144 MM N= 1

PHANERODON FURCATUS
OCTOBER 17,1979
STATION SM-4-20

TOTAL NO. OF INDIVIDUALS = 7
FROM 70 MM TO 74 MM N= 1
FROM 75 MM TO 79 MM N= 2
FROM 80 MM TO 84 MM N= 1
FROM 120 MM TO 124 MM N= 3

PARALABRAX NEBULIFER
OCTOBER 17,1979
STATION SM-4-20

TOTAL NO. OF INDIVIDUALS = 2
FROM 140 MM TO 149 MM N= 1
FROM 160 MM TO 169 MM N= 1

SAN MATEO POINT

CYNOSCION NOBILIS
OCTOBER 17,1979
STATION SM-4-20

TOTAL NO. OF INDIVIDUALS = 5
FROM 80 MM TO 89 MM N= 1
FROM 110 MM TO 119 MM N= 1
FROM 120 MM TO 129 MM N= 2
FROM 140 MM TO 149 MM N= 1

PARALICHTHYS CALIFORNICUS
OCTOBER 16,1979
STATION SM-1-40

TOTAL NO. OF INDIVIDUALS = 1
FROM 240 MM TO 249 MM N= 1

PARALICHTHYS CALIFORNICUS
OCTOBER 16,1979
STATION SM-2-40

TOTAL NO. OF INDIVIDUALS = 1
FROM 270 MM TO 279 MM N= 1

PARALICHTHYS CALIFORNICUS
OCTOBER 17,1979
STATION SM-3-40

TOTAL NO. OF INDIVIDUALS = 2
FROM 270 MM TO 279 MM N= 1
FROM 390 MM TO 399 MM N= 1

PARALICHTHYS CALIFORNICUS
OCTOBER 17,1979
STATION SM-4-40

TOTAL NO. OF INDIVIDUALS = 1
FROM 260 MM TO 269 MM N= 1

PARALICHTHYS CALIFORNICUS
OCTOBER 17,1979
STATION SM-3-60

TOTAL NO. OF INDIVIDUALS = 1
FROM 400 MM TO 409 MM N= 1

SAN ONOFRE

PARALICHTHYS CALIFORNICUS
OCTOBER 16,1979
STATION SO-1-20

TOTAL NO. OF INDIVIDUALS = 2
FROM 170 MM TO 179 MM N= 2

PHANERODON FURCATUS
OCTOBER 16,1979
STATION SO-1-20

TOTAL NO. OF INDIVIDUALS = 1
FROM 80 MM TO 84 MM N= 1

PARALICHTHYS CALIFORNICUS
OCTOBER 16,1979
STATION SO-2-20

TOTAL NO. OF INDIVIDUALS = 2
FROM 170 MM TO 179 MM N= 1
FROM 240 MM TO 249 MM N= 1

PHANERODON FURCATUS
OCTOBER 16,1979
STATION SO-2-20

TOTAL NO. OF INDIVIDUALS = 1
FROM 80 MM TO 84 MM N= 1

PARALICHTHYS CALIFORNICUS
OCTOBER 17,1979
STATION SO-3-20

TOTAL NO. OF INDIVIDUALS = 2
FROM 190 MM TO 199 MM N= 2

HYPERPROSOPON ARGENTEUM
OCTOBER 17,1979
STATION SO-3-20

TOTAL NO. OF INDIVIDUALS = 6
FROM 65 MM TO 69 MM N= 1
FROM 70 MM TO 74 MM N= 2
FROM 75 MM TO 79 MM N= 1
FROM 80 MM TO 84 MM N= 1
FROM 85 MM TO 89 MM N= 1

CYNOSCION NOBILIS
OCTOBER 17,1979
STATION SO-4-20

TOTAL NO. OF INDIVIDUALS = 1
FROM 110 MM TO 119 MM N= 1

PARALICHTHYS CALIFORNICUS
OCTOBER 17,1979
STATION SO-4-20

TOTAL NO. OF INDIVIDUALS = 3
FROM 160 MM TO 169 MM N= 1
FROM 220 MM TO 229 MM N= 1
FROM 230 MM TO 239 MM N= 1

PARALABRAX NEBULIFER
OCTOBER 17,1979
STATION SO-4-20

TOTAL NO. OF INDIVIDUALS = 1
FROM 170 MM TO 179 MM N= 1

HYPERPROSOPON ARGENTEUM
OCTOBER 17,1979
STATION SO-4-20

TOTAL NO. OF INDIVIDUALS = 1
FROM 80 MM TO 84 MM N= 1

SAN ONOFRE

PARALABRAX NEBULIFER
OCTOBER 16,1979
STATION SO-1-4Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 14Ø MM TO 149 MM N= 1
FROM 18Ø MM TO 189 MM N= 1

PARALICHTHYS CALIFORNICUS
OCTOBER 16,1979
STATION SO-1-4Ø

TOTAL NO. OF INDIVIDUALS = 6
FROM 26Ø MM TO 269 MM N= 1
FROM 27Ø MM TO 279 MM N= 2
FROM 29Ø MM TO 299 MM N= 1
FROM 33Ø MM TO 339 MM N= 2

PHANERODON FURCATUS
OCTOBER 16,1979
STATION SO-1-4Ø

TOTAL NO. OF INDIVIDUALS = 19
FROM 75 MM TO 79 MM N= 3
FROM 8Ø MM TO 84 MM N= 6
FROM 85 MM TO 89 MM N= 6
FROM 9Ø MM TO 94 MM N= 3
FROM 125 MM TO 129 MM N= 1

PARALABRAX NEBULIFER
OCTOBER 16,1979
STATION SO-2-4Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 16Ø MM TO 169 MM N= 1
FROM 17Ø MM TO 179 MM N= 1

PARALICHTHYS CALIFORNICUS
OCTOBER 16,1979
STATION SO-2-4Ø

TOTAL NO. OF INDIVIDUALS = 5
FROM 16Ø MM TO 169 MM N= 1
FROM 21Ø MM TO 219 MM N= 1
FROM 29Ø MM TO 299 MM N= 1
FROM 36Ø MM TO 369 MM N= 1
FROM 42Ø MM TO 429 MM N= 1

HYPERPROSOPON ARGENTEUM
OCTOBER 16,1979
STATION SO-2-4Ø

TOTAL NO. OF INDIVIDUALS = 3
FROM 95 MM TO 99 MM N= 1
FROM 115 MM TO 119 MM N= 2

PHANERODON FURCATUS
OCTOBER 16,1979
STATION SO-2-4Ø

TOTAL NO. OF INDIVIDUALS = 44
FROM 65 MM TO 69 MM N= 1
FROM 7Ø MM TO 74 MM N= 2
FROM 75 MM TO 79 MM N= 9
FROM 8Ø MM TO 84 MM N= 15
FROM 85 MM TO 89 MM N= 15
FROM 9Ø MM TO 94 MM N= 7
FROM 95 MM TO 99 MM N= 3
FROM 1ØØ MM TO 1Ø4 MM N= 1
FROM 1Ø5 MM TO 1Ø9 MM N= 1
FROM 12Ø MM TO 124 MM N= 1

PARALICHTHYS CALIFORNICUS
OCTOBER 17,1979
STATION SO-3-4Ø

TOTAL NO. OF INDIVIDUALS = 8
FROM 27Ø MM TO 279 MM N= 1
FROM 29Ø MM TO 299 MM N= 1
FROM 3ØØ MM TO 3Ø9 MM N= 3
FROM 33Ø MM TO 339 MM N= 1
FROM 36Ø MM TO 369 MM N= 1
FROM 39Ø MM TO 399 MM N= 1

SAN ONOFRE

HYPERPROSOPON ARGENTEUM
OCTOBER 17,1979
STATION SO-3-4Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 12Ø MM TO 124 MM N= 1
FROM 125 MM TO 129 MM N= 1

PHANERODON FURCATUS
OCTOBER 17,1979
STATION SO-3-4Ø

TOTAL NO. OF INDIVIDUALS = 42
FROM 6Ø MM TO 64 MM N= 1
FROM 7Ø MM TO 74 MM N= 4
FROM 75 MM TO 79 MM N= 9
FROM 8Ø MM TO 84 MM N= 8
FROM 85 MM TO 89 MM N= 11
FROM 9Ø MM TO 94 MM N= 5
FROM 95 MM TO 99 MM N= 1
FROM 125 MM TO 129 MM N= 1
FROM 13Ø MM TO 134 MM N= 1
FROM 165 MM TO 169 MM N= 1

PARALABRAX NEBULIFER
OCTOBER 17,1979
STATION SO-4-4Ø

TOTAL NO. OF INDIVIDUALS = 3
FROM 16Ø MM TO 169 MM N= 1
FROM 19Ø MM TO 199 MM N= 1
FROM 2ØØ MM TO 2Ø9 MM N= 1

PARALICHTHYS CALIFORNICUS
OCTOBER 17,1979
STATION SO-4-4Ø

TOTAL NO. OF INDIVIDUALS = 4
FROM 25Ø MM TO 259 MM N= 1
FROM 27Ø MM TO 279 MM N= 2
FROM 54Ø MM TO 549 MM N= 1

HYPERPROSOPON ARGENTEUM
OCTOBER 17,1979
STATION SO-4-4Ø

TOTAL NO. OF INDIVIDUALS = 3
FROM 8Ø MM TO 84 MM N= 1
FROM 85 MM TO 89 MM N= 2

PHANERODON FURCATUS
OCTOBER 17,1979
STATION SO-4-4Ø

TOTAL NO. OF INDIVIDUALS = 18
FROM 65 MM TO 69 MM N= 1
FROM 75 MM TO 79 MM N= 9
FROM 8Ø MM TO 84 MM N= 1
FROM 85 MM TO 89 MM N= 6
FROM 12Ø MM TO 124 MM N= 1

DON LIGHT

PARALICHTHYS CALIFORNICUS
OCTOBER 16,1979
STATION DL-1-2Ø

TOTAL NO. OF INDIVIDUALS = 7
FROM 17Ø MM TO 179 MM N= 1
FROM 18Ø MM TO 189 MM N= 1
FROM 19Ø MM TO 199 MM N= 1
FROM 22Ø MM TO 229 MM N= 1
FROM 23Ø MM TO 239 MM N= 1
FROM 24Ø MM TO 249 MM N= 2

PHANERODON FURCATUS
OCTOBER 16,1979
STATION DL-1-2Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 8Ø MM TO 84 MM N= 1

HYPERPROSOPON ARGENTEUM
OCTOBER 16,1979
STATION DL-1-2Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 75 MM TO 79 MM N= 1
FROM 8Ø MM TO 84 MM N= 1

PARALICHTHYS CALIFORNICUS
OCTOBER 16,1979
STATION DL-2-2Ø

TOTAL NO. OF INDIVIDUALS = 3
FROM 2ØØ MM TO 2Ø9 MM N= 1
FROM 26Ø MM TO 269 MM N= 1
FROM 28Ø MM TO 289 MM N= 1

PARALABRAX NEBULIFER
OCTOBER 16,1979
STATION DL-2-2Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 14Ø MM TO 149 MM N= 1

PARALICHTHYS CALIFORNICUS
OCTOBER 17,1979
STATION DL-3-2Ø

TOTAL NO. OF INDIVIDUALS = 12
FROM 16Ø MM TO 169 MM N= 1
FROM 18Ø MM TO 189 MM N= 1
FROM 19Ø MM TO 199 MM N= 1
FROM 22Ø MM TO 229 MM N= 3
FROM 23Ø MM TO 239 MM N= 1
FROM 24Ø MM TO 249 MM N= 1
FROM 26Ø MM TO 269 MM N= 2
FROM 29Ø MM TO 299 MM N= 1
FROM 3ØØ MM TO 3Ø9 MM N= 1

HYPERPROSOPON ARGENTEUM
OCTOBER 17,1979
STATION DL-3-2Ø

TOTAL NO. OF INDIVIDUALS = 3
FROM 75 MM TO 79 MM N= 2
FROM 8Ø MM TO 84 MM N= 1

PARALICHTHYS CALIFORNICUS
OCTOBER 17,1979
STATION DL-4-2Ø

TOTAL NO. OF INDIVIDUALS = 4
FROM 21Ø MM TO 219 MM N= 1
FROM 23Ø MM TO 239 MM N= 1
FROM 25Ø MM TO 259 MM N= 1
FROM 27Ø MM TO 279 MM N= 1

PARALICHTHYS CALIFORNICUS
OCTOBER 17,1979
STATION DL-3-4Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 21Ø MM TO 219 MM N= 1
FROM 27Ø MM TO 279 MM N= 1

DON LIGHT

PHANERODON FURCATUS
OCTOBER 17,1979
STATION DL-3-40

TOTAL NO. OF INDIVIDUALS =					88
FROM	65	MM TO	69	MM	N= 1
FROM	75	MM TO	79	MM	N= 8
FROM	80	MM TO	84	MM	N= 27
FROM	85	MM TO	89	MM	N= 35
FROM	90	MM TO	94	MM	N= 13
FROM	95	MM TO	99	MM	N= 2
FROM	100	MM TO	104	MM	N= 1
FROM	135	MM TO	139	MM	N= 1

PHANERODON FURCATUS
OCTOBER 17,1979
STATION DL-4-40

TOTAL NO. OF INDIVIDUALS =					97
FROM	75	MM TO	79	MM	N= 1
FROM	80	MM TO	84	MM	N= 22
FROM	85	MM TO	89	MM	N= 44
FROM	90	MM TO	94	MM	N= 20
FROM	95	MM TO	99	MM	N= 6
FROM	100	MM TO	104	MM	N= 1
FROM	125	MM TO	129	MM	N= 1
FROM	130	MM TO	134	MM	N= 1
FROM	135	MM TO	139	MM	N= 1

Length frequency distributions of select species collected in 24-h gill nets at 30 ft offshore San Mateo Point during Survey of December 12-13, 1979.

TRIAKIS SEMIFASCIATA
DECEMBER 12-13,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS =		**4**
FROM 460 MM TO 479 MM	**N=**	**1**
FROM 500 MM TO 519 MM	**N=**	**1**
FROM 660 MM TO 679 MM	N=	1
FROM 920 MM TO 939 MM	N=	1

CHEILOTREMA SATURNUM
DECEMBER 12-13,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS =		125
FROM 150 MM TO 154 MM	N=	2
FROM 155 MM TO 159 MM	N=	1
FROM 160 MM TO 164 MM	N=	3
FROM 165 MM TO 169 MM	N=	6
FROM 170 MM TO 174 MM	N=	22
FROM 175 MM TO 179 MM	N=	4
FROM 180 MM TO 184 MM	N=	11
FROM 185 MM TO 189 MM	N=	7
FROM 190 MM TO 194 MM	N=	15
FROM 195 MM TO 199 MM	N=	19
FROM 200 MM TO 204 MM	N=	14
FROM 205 MM TO 209 MM	N=	7
FROM 210 MM TO 214 MM	N=	7
FROM 215 MM TO 219 MM	N=	3
FROM 220 MM TO 224 MM	N=	3
FROM 225 MM TO 229 MM	N=	1

MEDIALUNA CALIFORNIENSIS
DECEMBER 12-13,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS =		**7**
FROM 180 MM TO 184 MM	**N=**	**1**
FROM 190 MM TO 194 MM	**N=**	**1**
FROM 200 MM TO 204 MM	**N=**	**2**
FROM 205 MM TO 209 MM	**N=**	**1**
FROM 230 MM TO 234 MM	N=	1
FROM 295 MM TO 299 MM	N=	1

SPHYRAENA ARGENTEA
DECEMBER 12-13,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS =		**5**
FROM 360 MM TO 369 MM	**N=**	**1**
FROM 390 MM TO 399 MM	N=	1
FROM 400 MM TO 409 MM	N=	2
FROM 460 MM TO 469 MM	N=	1

CYNOSCION NOBILIS
DECEMBER 12-13,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS =		16
FROM 190 MM TO 199 MM	N=	2
FROM 200 MM TO 209 MM	N=	2
FROM 210 MM TO 219 MM	N=	2
FROM 300 MM TO 309 MM	N=	1
FROM 310 MM TO 319 MM	N=	1
FROM 320 MM TO 329 MM	N=	2
FROM 330 MM TO 339 MM	N=	1
FROM 340 MM TO 349 MM	N=	1
FROM 350 MM TO 359 MM	N=	1
FROM 360 MM TO 369 MM	N=	2
FROM 450 MM TO 459 MM	N=	1

GIRELLA NIGRICANS
DECEMBER 12-13,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS =		**6**
FROM 235 MM TO 239 MM	**N=**	**1**
FROM 300 MM TO 309 MM	**N=**	**1**
FROM 310 MM TO 319 MM	**N=**	**1**
FROM 320 MM TO 329 MM	**N=**	**2**
FROM 330 MM TO 339 MM	**N=**	**1**

PARALABRAX CLATHRATUS
DECEMBER 12-13,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS =		9
FROM 110 MM TO 119 MM	**N=**	**1**
FROM 120 MM TO 129 MM	**N=**	**1**
FROM 130 MM TO 139 MM	**N=**	**1**
FROM 140 MM TO 149 MM	**N=**	**1**
FROM 170 MM TO 179 MM	N=	2
FROM 190 MM TO 199 MM	N=	2
FROM 310 MM TO 319 MM	N=	1

ATHERINOPSIS CALIFORNIENSIS
DECEMBER 12-13,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS =		1
FROM 240 MM TO 244 MM	N=	1

XENISTIUS CALIFORNIENSIS
DECEMBER 12-13,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS =		**4**
FROM 120 MM TO 124 MM	N=	1
FROM 140 MM TO 144 MM	N=	1
FROM 165 MM TO 169 MM	N=	1
FROM 170 MM TO 174 MM	N=	1

EMBIOTOCA JACKSONI
DECEMBER 12-13,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS =		3
FROM 90 MM TO 94 MM	N=	1
FROM 165 MM TO 169 MM	N=	2

RHACOCHILUS TOXOTES
DECEMBER 12-13,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS =		1
FROM 110 MM TO 114 MM	N=	1

HYPERPROSOPON ARGENTEUM
DECEMBER 12-13,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS =		1
FROM 85 MM TO 89 MM	N=	1

PHANERODON FURCATUS
DECEMBER 12-13,1979
STATION 11-1

TOTAL NO. OF INDIVIDUALS =		**21**
FROM 85 MM TO 89 MM	**N=**	**8**
FROM 90 MM TO 94 MM	**N=**	**8**
FROM 130 MM TO 134 MM	N=	1
FROM 135 MM TO 139 MM	N=	1
FROM 165 MM TO 169 MM	N=	2
FROM 175 MM TO 179 MM	N=	1

TRIAKIS SEMIFASCIATA
DECEMBER 12-13,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS =		2
FROM 640 MM TO 659 MM	N=	1
FROM 700 MM TO 719 MM	N=	1

CYNOSCION NOBILIS
DECEMBER 12-13,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS =		7
FROM 200 MM TO 209 MM	N=	2
FROM 320 MM TO 329 MM	**N=**	**3**
FROM 330 MM TO 339 MM	**N=**	**1**
FROM 600 MM TO 609 MM	**N=**	**1**

MUSTELUS CALIFORNICUS
DECEMBER 12-13,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS =		1
FROM 620 MM TO 639 MM	N=	1

MENTICIRRHUS UNDULATUS
DECEMBER 12-13,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS =		1
FROM 220 MM TO 229 MM	N=	1

PARALABRAX CLATHRATUS
DECEMBER 12-13,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS =		**6**
FROM 120 MM TO 129 MM	**N=**	**1**
FROM 130 MM TO 139 MM	**N=**	**1**
FROM 150 MM TO 159 MM	N=	1
FROM 160 MM TO 169 MM	N=	2
FROM 170 MM TO 179 MM	N=	1

EMBIOTOCA JACKSONI
DECEMBER 12-13,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS =		1
FROM 170 MM TO 174 MM	N=	1

HYPERPROSOPON ARGENTEUM
DECEMBER 12-13,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS =		**1**
FROM 125 MM TO 129 MM	**N=**	**1**

MEDIALUNA CALIFORNIENSIS
DECEMBER 12-13,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS =		1
FROM 185 MM TO 189 MM	N=	1

OXYJULIS CALIFORNICA
DECEMBER 12-13,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS =		1
FROM 160 MM TO 164 MM	N=	1

HALICHOERES SEMICINCTUS
DECEMBER 12-13,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS =		1
FROM 180 MM TO 184 MM	N=	1

XENISTIUS CALIFORNIENSIS
DECEMBER 12-13,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS =		**4**
FROM 145 MM TO 149 MM	N=	1
FROM 155 MM TO 159 MM	N=	1
FROM 165 MM TO 169 MM	N=	2

PIMELOMETOPON PULCHRUM
DECEMBER 12-13,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS =		**1**
FROM 185 MM TO 189 MM	**N=**	**1**

SCORPAENA GUTTATA
DECEMBER 12-13,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 125 MM TO 129 MM N= 1
FROM 140 MM TO 144 MM N= 1

CHEILOTREMA SATURNUM
DECEMBER 12-13,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 103
FROM 135 MM TO 139 MM N= 2
FROM 155 MM TO 159 MM N= 2
FROM 160 MM TO 164 MM N= 5
FROM 165 MM TO 169 MM N= 12
FROM 170 MM TO 174 MM N= 7
FROM 175 MM TO 179 MM N= 3
FROM 180 MM TO 184 MM N= 5
FROM 185 MM TO 189 MM N= 13
FROM 190 MM TO 194 MM N= 13
FROM 195 MM TO 199 MM N= 19
FROM 200 MM TO 204 MM N= 8
FROM 205 MM TO 209 MM N= 5
FROM 210 MM TO 214 MM N= 4
FROM 215 MM TO 219 MM N= 1
FROM 220 MM TO 224 MM N= 2
FROM 225 MM TO 229 MM N= 1
FROM 230 MM TO 234 MM N= 1

RHACOCHILUS TOXOTES
DECEMBER 12-13,1979
STATION 11-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 190 MM TO 194 MM N= 1

CHEILOTREMA SATURNUM
DECEMBER 12-13,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 160 MM TO 164 MM N= 1
FROM 170 MM TO 174 MM N= 1

PARALABRAX NEBULIFER
DECEMBER 12-13,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 160 MM TO 169 MM N= 1

MUSTELUS CALIFORNICUS
DECEMBER 12-13,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 600 MM TO 619 MM N= 1

CYNOSCION NOBILIS
DECEMBER 12-13,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 7
FROM 160 MM TO 169 MM N= 3
FROM 180 MM TO 189 MM N= 1
FROM 190 MM TO 199 MM N= 2
FROM 200 MM TO 209 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
DECEMBER 12-13,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 7
FROM 205 MM TO 209 MM N= 1
FROM 215 MM TO 219 MM N= 1
FROM 220 MM TO 224 MM N= 1
FROM 225 MM TO 229 MM N= 1
FROM 235 MM TO 239 MM N= 1
FROM 240 MM TO 244 MM N= 1

HYPEREPROSOPON ARGENTEUM
DECEMBER 12-13,1979
STATION 12-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 80 MM TO 84 MM N= 1

CYNOSCION NOBILIS
DECEMBER 12-13,1979
STATION 12-2

TOTAL NO. OF INDIVIDUALS = 7
FROM 190 MM TO 199 MM N= 2
FROM 200 MM TO 209 MM N= 2
FROM 210 MM TO 219 MM N= 1
FROM 300 MM TO 309 MM N= 1
FROM 670 MM TO 679 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
DECEMBER 12-13,1979
STATION 12-2

TOTAL NO. OF INDIVIDUALS = 5
FROM 240 MM TO 244 MM N= 1
FROM 250 MM TO 254 MM N= 1
FROM 265 MM TO 269 MM N= 1
FROM 270 MM TO 274 MM N= 1

SARDA CHILIENSIS
DECEMBER 12-13,1979
STATION 12-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 330 MM TO 339 MM N= 1

MENTICIRRHUS UNDULATUS
DECEMBER 12-13,1979
STATION 12-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 250 MM TO 259 MM N= 1

CHEILOTREMA SATURNUM
DECEMBER 12-13,1979
STATION 12-2

TOTAL NO. OF INDIVIDUALS = 7
FROM 165 MM TO 169 MM N= 1
FROM 170 MM TO 174 MM N= 1
FROM 180 MM TO 184 MM N= 1
FROM 185 MM TO 189 MM N= 1
FROM 190 MM TO 194 MM N= 1
FROM 195 MM TO 199 MM N= 1
FROM 205 MM TO 209 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 30 ft offshore San Onofre during Survey of December 12-13, 1979.

UROLOPHUS HALLERI
DECEMBER 12-13,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 320 MM TO 339 MM N= 1

TRIAKIS SEMIFASCIATA
DECEMBER 12-13,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 6
FROM 360 MM TO 379 MM N= 1
FROM 460 MM TO 479 MM N= 1
FROM 500 MM TO 519 MM N= 1
FROM 560 MM TO 579 MM N= 1
FROM 580 MM TO 599 MM N= 1
FROM 780 MM TO 799 MM N= 1

XENISTIUS CALIFORNIENSIS
DECEMBER 12-13,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 160 MM TO 164 MM N= 1

PARALABRAX NEBULIFER
DECEMBER 12-13,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 5
FROM 120 MM TO 129 MM N= 1
FROM 150 MM TO 159 MM N= 3
FROM 190 MM TO 199 MM N= 1

ANISOTREMUS DAVIDSONII
DECEMBER 12-13,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 150 MM TO 154 MM N= 1

CHEILOTREMA SATURNUM
DECEMBER 12-13,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 135 MM TO 139 MM N= 1

MEDIALUNA CALIFORNIENSIS
DECEMBER 12-13,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 180 MM TO 184 MM N= 1

HYPSURUS CARYI
DECEMBER 12-13,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 90 MM TO 94 MM N= 1

RHACOCHILUS TOXOTES
DECEMBER 12-13,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 4
FROM 110 MM TO 114 MM N= 2
FROM 120 MM TO 124 MM N= 1
FROM 180 MM TO 184 MM N= 1

EMBIOTOCA JACKSONI
DECEMBER 12-13,1979
STATION 1-1

TOTAL NO. OF INDIVIDUALS = 4
FROM 85 MM TO 89 MM N= 1
FROM 90 MM TO 94 MM N= 2
FROM 165 MM TO 169 MM N= 1

PARALABRAX NEBULIFER
DECEMBER 12-13,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 280 MM TO 289 MM N= 1

HYPSURUS CARYI
DECEMBER 12-13,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 85 MM TO 89 MM N= 1
FROM 100 MM TO 104 MM N= 1

PHANERODON FURCATUS
DECEMBER 12-13,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 85 MM TO 89 MM N= 1
FROM 105 MM TO 109 MM N= 1

DAMALICHTHYS VACCA
DECEMBER 12-13,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 5
FROM 80 MM TO 84 MM N= 1
FROM 100 MM TO 104 MM N= 1
FROM 105 MM TO 109 MM N= 1
FROM 150 MM TO 154 MM N= 1
FROM 155 MM TO 159 MM N= 1

EMBIOTOCA JACKSONI
DECEMBER 12-13,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 39
FROM 70 MM TO 74 MM N= 1
FROM 85 MM TO 89 MM N= 11
FROM 90 MM TO 94 MM N= 20
FROM 95 MM TO 99 MM N= 6
FROM 125 MM TO 129 MM N= 1

RHACOCHILUS TOXOTES
DECEMBER 12-13,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 29
FROM 90 MM TO 94 MM N= 1
FROM 100 MM TO 104 MM N= 4
FROM 105 MM TO 109 MM N= 6
FROM 110 MM TO 114 MM N= 11
FROM 115 MM TO 119 MM N= 6
FROM 120 MM TO 124 MM N= 1

PARALABRAX CLATHRATUS
DECEMBER 12-13,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 130 MM TO 139 MM N= 1

TRIAKIS SEMIFASCIATA
DECEMBER 12-13,1979
STATION 1-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 400 MM TO 419 MM N= 1

PARALABRAX NEBULIFER
DECEMBER 12-13,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 200 MM TO 289 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
DECEMBER 12-13,1979
STATION 2-1

TOTAL NO. OF INDIVIDUALS = 10
FROM 220 MM TO 224 MM N= 2
FROM 225 MM TO 229 MM N= 1
FROM 240 MM TO 244 MM N= 3
FROM 250 MM TO 254 MM N= 2
FROM 255 MM TO 259 MM N= 2

TRIAKIS SEMIFASCIATA
DECEMBER 12-13,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 520 MM TO 519 MM N= 1

EMBIOTOCA JACKSONI
DECEMBER 12-13,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 100 MM TO 104 MM N= 1

PHANERODON FURCATUS
DECEMBER 12-13,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 155 MM TO 159 MM N= 1

PARALABRAX NEBULIFER
DECEMBER 12-13,1979
STATION 2-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 150 MM TO 159 MM N= 1
FROM 170 MM TO 179 MM N= 1
FROM 190 MM TO 199 MM N= 1

PHANERODON FURCATUS
DECEMBER 12-13,1979
STATION 3-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 80 MM TO 84 MM N= 1
FROM 85 MM TO 89 MM N= 1

MENTICIRRHUS UNDULATUS
DECEMBER 12-13,1979
STATION 3-1

TOTAL NO. OF INDIVIDUALS = 5
FROM 220 MM TO 229 MM N= 1
FROM 230 MM TO 239 MM N= 1
FROM 250 MM TO 259 MM N= 1
FROM 270 MM TO 279 MM N= 1
FROM 290 MM TO 299 MM N= 1

UMBRINA RONCADOR
DECEMBER 12-13,1979
STATION 3-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 135 MM TO 139 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
DECEMBER 12-13,1979
STATION 3-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 175 MM TO 179 MM N= 1

SCORPAENA GUTTATA
DECEMBER 12-13,1979
STATION 3-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 140 MM TO 144 MM N= 1
FROM 155 MM TO 159 MM N= 1

AMPHISTICHUS ARGENTEUS
DECEMBER 12-13,1979
STATION 3-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 155 MM TO 159 MM N= 1

MENTICIRRHUS UNDULATUS
DECEMBER 12-13,1979
STATION 3-2

TOTAL NO. OF INDIVIDUALS = 4
FROM 200 MM TO 209 MM N= 1
FROM 210 MM TO 219 MM N= 1
FROM 270 MM TO 279 MM N= 2

UMBRINA RONCADOR
DECEMBER 12-13,1979
STATION 3-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 155 MM TO 159 MM N= 1

PARALICHTHYS CALIFORNICUS
DECEMBER 12-13,1979
STATION 3-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 230 MM TO 239 MM N= 1

PHANERODON FURCATUS
DECEMBER 12-13,1979
STATION 3-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 85 MM TO 89 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 30 ft offshore Don Light during Survey of December 12-13, 1979.

SQUALUS ACANTHIAS
DECEMBER 12-13,1979
STATION 6-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 880 MM TO 899 MM N= 1

PARALABRAX NEBULIFER
DECEMBER 12-13,1979
STATION 6-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 180 MM TO 189 MM N= 1

SCORPAENA GUTTATA
DECEMBER 12-13,1979
STATION 6-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 150 MM TO 154 MM N= 1

SQUALUS ACANTHIAS
DECEMBER 12-13,1979
STATION 7-1

TOTAL NO. OF INDIVIDUALS = 7
FROM 840 MM TO 859 MM N= 1
FROM 860 MM TO 879 MM N= 1
FROM 880 MM TO 899 MM N= 1
FROM 920 MM TO 939 MM N= 1
FROM 960 MM TO 979 MM N= 1
FROM 980 MM TO 999 MM N= 2

PARALABRAX NEBULIFER
DECEMBER 12-13,1979
STATION 7-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 210 MM TO 219 MM N= 1
FROM 230 MM TO 239 MM N= 1

CHEILOTREMA SATURNUM
DECEMBER 12-13,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 190 MM TO 194 MM N= 1

PARALABRAX NEBULIFER
DECEMBER 12-13,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 210 MM TO 219 MM N= 1
FROM 270 MM TO 279 MM N= 1

ATHERINOPSIS CALIFORNIENSIS
DECEMBER 12-13,1979
STATION 7-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 250 MM TO 254 MM N= 1

RHINOBATOS PRODUCTUS
DECEMBER 12-13,1979
STATION 8-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 400 MM TO 419 MM N= 1

SCORPAENA GUTTATA
DECEMBER 12-13,1979
STATION 8-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 140 MM TO 144 MM N= 1

PHANERODON FURCATUS
DECEMBER 12-13,1979
STATION 8-1

TOTAL NO. OF INDIVIDUALS = 3
FROM 135 MM TO 139 MM N= 1
FROM 165 MM TO 169 MM N= 1
FROM 170 MM TO 174 MM N= 1

SQUALUS ACANTHIAS
DECEMBER 12-13,1979
STATION 8-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 800 MM TO 819 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 45 ft offshore San Mateo Point during Survey of December 12-13, 1979.

PHANERODON FURCATUS
DECEMBER 12-13,1979
STATION 13-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 125 MM TO 129 MM N= 1

PARALABRAX NEBULIFER
DECEMBER 12-13,1979
STATION 13-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 430 MM TO 439 MM N= 1

CYNOSCION NOBILIS
DECEMBER 12-13,1979
STATION 13-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 190 MM TO 199 MM N= 1

PHANERODON FURCATUS
DECEMBER 12-13,1979
STATION 13-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 90 MM TO 94 MM N= 1
FROM 135 MM TO 139 MM N= 2

PARALABRAX NEBULIFER
DECEMBER 12-13,1979
STATION 14-1

TOTAL NO. OF INDIVIDUALS = 9
FROM 150 MM TO 159 MM N= 1
FROM 160 MM TO 169 MM N= 1
FROM 170 MM TO 179 MM N= 3
FROM 180 MM TO 189 MM N= 1
FROM 190 MM TO 199 MM N= 1
FROM 260 MM TO 269 MM N= 1
FROM 340 MM TO 349 MM N= 1

CYNOSCION NOBILIS
DECEMBER 12-13,1979
STATION 14-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 160 MM TO 169 MM N= 1
FROM 360 MM TO 369 MM N= 1

PHANERODON FURCATUS
DECEMBER 12-13,1979
STATION 14-1

TOTAL NO. OF INDIVIDUALS = 4
FROM 85 MM TO 89 MM N= 1
FROM 125 MM TO 129 MM N= 1
FROM 130 MM TO 134 MM N= 1
FROM 170 MM TO 174 MM N= 1

HYPERPROSOPON ARGENTEUM
DECEMBER 12-13,1979
STATION 14-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 115 MM TO 119 MM N= 1

PARALABRAX CLATHRATUS
DECEMBER 12-13,1979
STATION 14-1

TOTAL NO. OF INDIVIDUALS = 10
FROM 130 MM TO 139 MM N= 1
FROM 160 MM TO 169 MM N= 1
FROM 180 MM TO 189 MM N= 4
FROM 210 MM TO 219 MM N= 2
FROM 220 MM TO 229 MM N= 1
FROM 250 MM TO 259 MM N= 1

CYNOSCION NOBILIS
DECEMBER 12-13,1979
STATION 14-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 500 MM TO 509 MM N= 1

PARALABRAX NEBULIFER
DECEMBER 12-13,1979
STATION 14-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 190 MM TO 199 MM N= 1

PARALABRAX CLATHRATUS
DECEMBER 12-13,1979
STATION 14-2

TOTAL NO. OF INDIVIDUALS = 3
FROM 120 MM TO 129 MM N= 1
FROM 170 MM TO 179 MM N= 1
FROM 180 MM TO 189 MM N= 1

PHANERODON FURCATUS
DECEMBER 12-13,1979
STATION 14-2

TOTAL NO. OF INDIVIDUALS = 4
FROM 90 MM TO 94 MM N= 1
FROM 95 MM TO 99 MM N= 1
FROM 100 MM TO 104 MM N= 1
FROM 130 MM TO 134 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 45 ft offshore San Onofre during Survey of December 12-13, 1979.

PARALABRAX CLATHRATUS
DECEMBER 12-13,1979
STATION 4-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 280 MM TO 289 MM N= 1

HYPERPROSOPON ARGENTEUM
DECEMBER 12-13,1979
STATION 4-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 115 MM TO 119 MM N= 1

PHANERODON FURCATUS
DECEMBER 12-13,1979
STATION 4-1

TOTAL NO. OF INDIVIDUALS = 7
FROM 95 MM TO 99 MM N= 2
FROM 125 MM TO 129 MM N= 3
FROM 130 MM TO 134 MM N= 1
FROM 180 MM TO 184 MM N= 1

CYNOSCION NOBILIS
DECEMBER 12-13,1979
STATION 4-1

TOTAL NO. OF INDIVIDUALS = 3
FROM 180 MM TO 189 MM N= 1
FROM 190 MM TO 199 MM N= 1
FROM 210 MM TO 219 MM N= 1

PARALABRAX CLATHRATUS
DECEMBER 12-13,1979
STATION 4-2

TOTAL NO. OF INDIVIDUALS = 5
FROM 160 MM TO 169 MM N= 1
FROM 190 MM TO 199 MM N= 1
FROM 200 MM TO 209 MM N= 3

PHANERODON FURCATUS
DECEMBER 12-13,1979
STATION 4-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 90 MM TO 94 MM N= 1
FROM 160 MM TO 164 MM N= 1

CYNOSCION NOBILIS
DECEMBER 12-13,1979
STATION 5-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 170 MM TO 179 MM N= 1
FROM 180 MM TO 189 MM N= 1

PARALABRAX CLATHRATUS
DECEMBER 12-13,1979
STATION 5-1

TOTAL NO. OF INDIVIDUALS = 2
FROM 150 MM TO 159 MM N= 1
FROM 160 MM TO 169 MM N= 1

PARALABRAX NEBULIFER
DECEMBER 12-13,1979
STATION 5-1

TOTAL NO. OF INDIVIDUALS = 4
FROM 190 MM TO 199 MM N= 1
FROM 200 MM TO 209 MM N= 1
FROM 210 MM TO 219 MM N= 1
FROM 240 MM TO 249 MM N= 1

PHANERODON FURCATUS
DECEMBER 12-13,1979
STATION 5-1

TOTAL NO. OF INDIVIDUALS = 3
FROM 85 MM TO 89 MM N= 1
FROM 90 MM TO 94 MM N= 1
FROM 140 MM TO 144 MM N= 1

PHANERODON FURCATUS
DECEMBER 12-13,1979
STATION 5-2

TOTAL NO. OF INDIVIDUALS = 1
FROM 120 MM TO 124 MM N= 1

Length frequency distributions of select species collected in 24-h gill nets at 45 ft offshore Don Light during Survey of December 12-13, 1979.

PARALABRAX CLATHRATUS
DECEMBER 12-13,1979
STATION 9-1

TOTAL NO. OF INDIVIDUALS = 1
FROM 200 MM TO 209 MM N= 1

PARALABRAX NEBULIFER
DECEMBER 12-13,1979
STATION 9-1

TOTAL NO. OF INDIVIDUALS = 5
FROM 200 MM TO 209 MM N= 1
FROM 210 MM TO 219 MM N= 2
FROM 290 MM TO 299 MM N= 2

PHANERODON FURCATUS
DECEMBER 12-13,1979
STATION 9-1

TOTAL NO. OF INDIVIDUALS = 16
FROM 85 MM TO 89 MM N= 4
FROM 90 MM TO 94 MM N= 7
FROM 95 MM TO 99 MM N= 5

PARALABRAX NEBULIFER
DECEMBER 12-13,1979
STATION 9-2

TOTAL NO. OF INDIVIDUALS = 6
FROM 190 MM TO 199 MM N= 2
FROM 200 MM TO 209 MM N= 1
FROM 210 MM TO 219 MM N= 1
FROM 250 MM TO 259 MM N= 1
FROM 370 MM TO 379 MM N= 1

PARALABRAX CLATHRATUS
DECEMBER 12-13,1979
STATION 9-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 150 MM TO 159 MM N= 1
FROM 210 MM TO 219 MM N= 1

PARALABRAX CLATHRATUS
DECEMBER 12-13,1979
STATION 10-2

TOTAL NO. OF INDIVIDUALS = 9
FROM 160 MM TO 169 MM N= 1
FROM 180 MM TO 189 MM N= 3
FROM 190 MM TO 199 MM N= 2
FROM 200 MM TO 209 MM N= 3

PARALABRAX NEBULIFER
DECEMBER 12-13,1979
STATION 10-2

TOTAL NO. OF INDIVIDUALS = 4
FROM 210 MM TO 219 MM N= 1
FROM 220 MM TO 229 MM N= 1
FROM 230 MM TO 239 MM N= 1
FROM 280 MM TO 289 MM N= 1

PHANERODON FURCATUS
DECEMBER 12-13,1979
STATION 10-2

TOTAL NO. OF INDIVIDUALS = 2
FROM 85 MM TO 89 MM N= 1
FROM 135 MM TO 139 MM N= 1

Length frequency distributions of select species collected in 5-min otter trawls at 20, 40, and 60 ft offshore at San Mateo Point, San Onofre, and Don Light during survey of December 12-13, 1979.

SAN MATEO

PARALICHTHYS CALIFORNICUS
DECEMBER 12,1979
STATION SM-1-2Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 19Ø MM TO 199 MM N= 1
FROM 26Ø MM TO 269 MM N= 1

PARALICHTHYS CALIFORNICUS
DECEMBER 13,1979
STATION SM-3-2Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 23Ø MM TO 239 MM N= 1

PARALICHTHYS CALIFORNICUS
DECEMBER 12,1979
STATION SM-1-4Ø

TOTAL NO. OF INDIVIDUALS = 4
FROM 25Ø MM TO 259 MM N= 1
FROM 28Ø MM TO 289 MM N= 1
FROM 29Ø MM TO 299 MM N= 1
FROM 31Ø MM TO 319 MM N= 1

PARALICHTHYS CALIFORNICUS
DECEMBER 12,1979
STATION SM-2-4Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 25Ø MM TO 259 MM N= 1

PARALICHTHYS CALIFORNICUS
DECEMBER 13,1979
STATION SM-3-4Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 33Ø MM TO 339 MM N= 1

PARALICHTHYS CALIFORNICUS
DECEMBER 12,1979
STATION SM-1-6Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 25Ø MM TO 259 MM N= 1

PARALABRAX NEBULIFER
DECEMBER 12,1979
STATION SM-2-6Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 14Ø MM TO 149 MM N= 1

PARALABRAX NEBULIFER
DECEMBER 13,1979
STATION SM-4-6Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 19Ø MM TO 199 MM N= 1

PARALICHTHYS CALIFORNICUS
DECEMBER 13,1979
STATION SM-4-6Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 33Ø MM TO 339 MM N= 1

SAN ONOFRE

PARALICHTHYS CALIFORNICUS
DECEMBER 12,1979
STATION SO-1-2Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 15Ø MM TO 159 MM N= 1
FROM 18Ø MM TO 189 MM N= 1

PARALICHTHYS CALIFORNICUS
DECEMBER 12,1979
STATION SO-2-2Ø

TOTAL NO. OF INDIVIDUALS = 7
FROM 15Ø MM TO 159 MM N= 2
FROM 16Ø MM TO 169 MM N= 2
FROM 22Ø MM TO 229 MM N= 1
FROM 27Ø MM TO 279 MM N= 1
FROM 46Ø MM TO 469 MM N= 1

PARALICHTHYS CALIFORNICUS
DECEMBER 13,1979
STATION SO-3-2Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 27Ø MM TO 279 MM N= 1

PARALICHTHYS CALIFORNICUS
DECEMBER 13,1979
STATION SO-4-2Ø

TOTAL NO. OF INDIVIDUALS = 3
FROM 15Ø MM TO 159 MM N= 2
FROM 17Ø MM TO 179 MM N= 1

PARALICHTHYS CALIFORNICUS
DECEMBER 12,1979
STATION SO-1-4Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 27Ø MM TO 279 MM N= 1
FROM 29Ø MM TO 299 MM N= 1

PARALICHTHYS CALIFORNICUS
DECEMBER 12,1979
STATION SO-2-4Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 4ØØ MM TO 4Ø9 MM N= 1

PARALICHTHYS CALIFORNICUS
DECEMBER 13,1979
STATION SO-4-4Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 19Ø MM TO 199 MM N= 1

PARALICHTHYS CALIFORNICUS
DECEMBER 12,1979
STATION SO-1-6Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 34Ø MM TO 349 MM N= 1

PARALABRAX NEBULIFER
DECEMBER 12,1979
STATION SO-2-6Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 26Ø MM TO 269 MM N= 1

PARALICHTHYS CALIFORNICUS
DECEMBER 12,1979
STATION SO-2-6Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 41Ø MM TO 419 MM N= 1

DON LIGHT

PARALICHTHYS CALIFORNICUS
DECEMBER 13,1979
STATION DL-3-2Ø

TOTAL NO. OF INDIVIDUALS = 11
FROM 1ØØ MM TO 1Ø9 MM N= 1
FROM 14Ø MM TO 149 MM N= 1
FROM 15Ø MM TO 159 MM N= 1
FROM 16Ø MM TO 169 MM N= 1
FROM 17Ø MM TO 179 MM N= 1
FROM 2ØØ MM TO 2Ø9 MM N= 1
FROM 21Ø MM TO 219 MM N= 2
FROM 22Ø MM TO 229 MM N= 3

PARALICHTHYS CALIFORNICUS
DECEMBER 13,1979
STATION DL-4-2Ø

TOTAL NO. OF INDIVIDUALS = 5
FROM 15Ø MM TO 159 MM N= 1
FROM 19Ø MM TO 199 MM N= 1
FROM 2ØØ MM TO 2Ø9 MM N= 1
FROM 22Ø MM TO 229 MM N= 1
FROM 25Ø MM TO 259 MM N= 1

PARALICHTHYS CALIFORNICUS
DECEMBER 12,1979
STATION DL-1-4Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 22Ø MM TO 229 MM N= 1

PARALICHTHYS CALIFORNICUS
DECEMBER 12,1979
STATION DL-2-4Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 33Ø MM TO 339 MM N= 1

PARALICHTHYS CALIFORNICUS
DECEMBER 13,1979
STATION DL-3-4Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 22Ø MM TO 229 MM N= 1
FROM 23Ø MM TO 239 MM N= 1

PARALICHTHYS CALIFORNICUS
DECEMBER 12,1979
STATION DL-2-6Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 34Ø MM TO 349 MM N= 1
FROM 42Ø MM TO 429 MM N= 1

PARALABRAX NEBULIFER
DECEMBER 12,1979
STATION DL-2-6Ø

TOTAL NO. OF INDIVIDUALS = 1
FROM 26Ø MM TO 269 MM N= 1

PARALICHTHYS CALIFORNICUS
DECEMBER 13,1979
STATION DL-3-6Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 3ØØ MM TO 3Ø9 MM N= 1
FROM 31Ø MM TO 319 MM N= 1

PARALICHTHYS CALIFORNICUS
DECEMBER 13,1979
STATION DL-4-6Ø

TOTAL NO. OF INDIVIDUALS = 2
FROM 29Ø MM TO 299 MM N= 1
FROM 33Ø MM TO 339 MM N= 1

F. SEX COMPOSITION

Sex composition (Male-M, Female-F, Indeterminate-I) of resident fish species collected in 24-h gill nets at depths of 30 and 45 ft during the survey of February 15-16, 1979.

30-ft gill nets

SURVIELLANCE ZONE	SAN ONOFRE																	
STATION NUMBER	1						2						3					
REPLICATE NET NUMBER	1			2			1			2			1			2		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Amphisticus argenteus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anisotremus davidsonii	0	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cheilotrema saturnum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cynoscion nobilis	0	1	0	1	1	0	3	0	0	1	0	1	-	-	-	0	1	0
Embiotica jacksonii	-	-	-	-	-	-	-	-	-	0	1	0	-	-	-	-	-	-
Genyonemus lineatus	0	1	0	-	-	-	0	1	0	1	0	0	2	14	1	0	9	1
Girella nigricans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hyperprosopon argenteum	0	1	0	-	-	-	-	-	-	-	-	-	0	1	0	-	-	-
Hypsurus caryi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Micrometrus minimus	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax clathratus	-	-	-	-	-	-	-	-	-	0	0	1	-	-	-	-	-	-
Paralabrax maculatofasciatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax nebulifer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralichthys californicus	-	-	-	-	-	-	0	1	0	-	-	-	-	-	-	-	-	-
Phanerodon furcatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Porichthys myriaster	-	-	-	-	-	-	-	-	-	0	1	0	-	-	-	-	-	-
Rhacochilus toxotes	-	-	-	0	1	0	1	1	0	-	-	-	-	-	-	-	-	-
Roncador stearnsii	1	0	0	-	-	-	-	-	-	4	1	0	-	-	-	-	-	-
Seriphus politus	3	9	0	6	6	1	7	11	0	10	20	2	17	8	0	6	7	0
Xenistius californiensis	-	-	-	-	-	-	-	-	-	0	0	1	-	-	-	-	-	-

SURVIELLANCE ZONE	DON LIGHT																	
STATION NUMBER	6						7						8					
REPLICATE NET NUMBER	1			2			1			2			1			2		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Amphisticus argenteus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anisotremus davidsonii	-	-	-	-	-	-	-	-	-	0	0	2	-	-	-	-	-	-
Cheilotrema saturnum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cynoscion nobilis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Embiotica jacksonii	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Genyonemus lineatus	0	3	0	0	8	0	3	2	0	-	-	-	1	3	0	0	5	0
Girella nigricans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hyperprosopon argenteum	-	-	-	-	-	-	-	-	-	0	1	0	0	2	0	-	-	-
Hypsurus caryi	-	-	-	-	-	-	0	0	1	-	-	-	-	-	-	-	-	-
Micrometrus minimus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax clathratus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax maculatofasciatus	-	-	-	-	-	-	-	-	-	0	2	0	-	-	-	-	-	-
Paralabrax nebulifer	-	-	-	-	-	-	-	-	-	0	1	0	0	1	0	-	-	-
Paralichthys californicus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phanerodon furcatus	-	-	-	0	2	0	0	1	0	1	0	3	0	2	0	0	4	0
Porichthys myriaster	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rhacochilus toxotes	-	-	-	-	-	-	-	-	-	-	-	-	1	0	0	-	-	-
Roncador stearnsii	-	-	-	-	-	-	-	-	-	0	2	0	-	-	-	0	0	1
Seriphus politus	4	2	1	9	2	0	4	6	1	-	-	-	4	0	0	17	16	0
Xenistius californiensis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SURVIELLANCE ZONE	SAN MATEO POINT											
STATION NUMBER	11						12					
REPLICATE NET NUMBER	1			2			1			2		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I
Amphisticus argenteus	-	-	-	0	1	1	-	-	-	-	-	-
Anisotremus davidsonii	4	0	1	-	-	-	-	-	-	-	-	-
Cheilotrema saturnum	0	0	1	-	-	-	-	-	-	-	-	-
Cynoscion nobilis	1	0	0	7	4	0	-	-	-	-	-	-
Embiotica jacksonii	0	4	0	2	0	0	-	-	-	-	-	-
Genyonemus lineatus	1	3	0	2	3	0	0	2	2	0	4	0
Girella nigricans	0	0	1	0	0	1	-	-	-	-	-	-
Hyperprosopon argenteum	1	0	2	1	0	0	-	-	-	-	-	-
Hypsurus caryi	-	-	-	-	-	-	-	-	-	-	-	-
Micrometrus minimus	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax clathratus	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax maculatofasciatus	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax nebulifer	-	-	-	-	-	-	-	-	-	-	-	-
Paralichthys californicus	-	-	-	0	0	1	-	-	-	-	-	-
Phanerodon furcatus	-	-	-	-	-	-	-	-	-	-	-	-
Porichthys myriaster	-	-	-	-	-	-	-	-	-	-	-	-
Rhacochilus toxotes	0	1	0	1	1	0	-	-	-	-	-	-
Roncador stearnsii	-	-	-	0	1	0	-	-	-	-	-	-
Seriphus politus	5	6	1	3	14	0	0	4	0	0	1	0
Xenistius californiensis	-	-	-	-	-	-	-	-	-	-	-	-

45-ft gill nets

SURVIELLANCE ZONE	SAN ONOFRE											
STATION NUMBER	4						5					
REPLICATE NET NUMBER	1			2			1			2		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I
Cynoscion nobilis	-	-	-	1	0	2	-	-	-	1	1	0
Genyonemus lineatus	5	13	2	23	12	0	7	6	1	15	10	1
Hyperprosopon argenteum	-	-	-	-	-	-	0	3	0	1	0	0
Paralabrax clathratus	-	-	-	-	-	-	-	-	-	1	0	0
Paralabrax nebulifer	-	-	-	0	1	0	0	2	0	-	-	-
Paralichthys californicus	1	0	0	2	0	0	-	-	-	-	-	-
Phanerodon furcatus	-	-	-	1	1	0	0	1	0	0	1	0
Roncador stearnsii	-	-	-	-	-	-	-	-	-	-	-	-
Seriphus politus	2	3	0	1	1	0	1	4	0	4	8	0

SURVIELLANCE ZONE	DON LIGHT											
STATION NUMBER	9						10					
REPLICATE NET NUMBER	1			2			1			2		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I
Cynoscion nobilis	-	-	-	-	-	-	-	-	-	0	0	1
Genyonemus lineatus	8	24	2	18	22	0	16	33	1	17	17	0
Hyperprosopon argenteum	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax clathratus	-	-	-	-	-	-	-	-	-	0	0	1
Paralabrax nebulifer	0	0	1	1	0	0	-	-	-	0	1	0
Paralichthys californicus	-	-	-	2	0	0	1	0	0	0	0	1
Phanerodon furcatus	0	6	1	1	3	0	0	0	1	0	5	0
Roncador stearnsii	-	-	-	-	-	-	0	1	0	1	0	0
Seriphus politus	7	4	0	3	10	1	11	5	2	9	9	6

SURVIELLANCE ZONE	SAN MATEO POINT											
STATION NUMBER	13						14					
REPLICATE NET NUMBER	1			2			1			2		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I
Cynoscion nobilis	0	3	0	13	1	3	2	0	1	-	-	-
Genyonemus lineatus	9	7	0	4	6	0	0	1	0	3	2	0
Hyperprosopon argenteum	-	-	-	-	-	-	0	1	0	-	-	-
Paralabrax clathratus	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax nebulifer	-	-	-	0	1	0	0	0	2	-	-	-
Paralichthys californicus	-	-	-	0	0	2	0	0	3	-	-	-
Phanerodon furcatus	-	-	-	0	1	0	0	1	0	-	-	-
Roncador stearnsii	1	0	0	-	-	-	-	-	-	-	-	-
Seriphus politus	8	9	0	0	9	1	1	0	0	2	10	0

Sex composition (Male-M, Female-F, Indeterminate-I) of selected fish species collected in replicate 5-min otter trawls at depths of 20, 40, and 60 ft at San Mateo Point, San Onofre, and Don Light during the survey of February 15-16, 1979.

San Mateo Point

TRAWL NUMBER	SM-T-20												SM-T-40												SM-T-60											
REPLICATE NUMBER	1			2			3			4			1			2			3			4			1			2			3			4		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Cynoscion nobilis	-	-	-	-	-	-	-	-	-	-	-	-	0	0	4	1	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Genyonemus lineatus	0	0	1	-	-	-	-	-	-	-	-	-	3	18	29	6	7	7	3	4	10	0	0	7	6	2	0	-	-	-	-	-	-	-	-	-
Paralichthys californicus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	0	-	-	-	0	0	1
Phanerodon furcatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	0	1	0	0	-	-	-	0	1	0	1	2	0	-	-	-	-	-	-
Seriphus politus	-	-	-	0	2	3	-	-	-	-	-	-	24	24	2	8	35	7	25	25	0	8	1	41	-	-	-	-	-	-	-	-	-	-	-	-

San Onofre

TRAWL NUMBER	SO-T-20												SO-T-40												SO-T-60											
REPLICATE NUMBER	1			2			3			4			1			2			3			4			1			2			3			4		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Genyonemus lineatus	0	0	1	1	0	2	0	1	2	-	-	-	1	0	0	1	0	0	-	-	-	2	3	0	-	-	-	-	-	-	-	-	-	-	-	-
Hyperprosopon argenteum	0	2	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralichthys californicus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	1	-	-	-	-	-	-	-	-	-
Seriphus politus	1	2	8	0	0	4	1	0	1	0	1	4	2	0	0	3	0	3	-	-	-	23	7	12	-	-	-	0	0	2	-	-	-	-	-	-

Don Light

TRAWL NUMBER	DL-T-20												DL-T-40												DL-T-60											
REPLICATE NUMBER	1			2			3			4			1			2			3			4			1			2			3			4		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Genyonemus lineatus	0	3	13	0	1	6	11	11	28	0	0	1	15	17	18	5	3	1	-	-	-	-	-	-	0	1	0	-	-	-	-	-	-	0	0	1
Hyperprosopon argenteum	-	-	-	-	-	-	1	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralichthys californicus	-	-	-	-	-	-	0	1	0	-	-	-	0	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phanerodon furcatus	-	-	-	-	-	-	-	-	-	-	-	-	0	0	2	-	-	-	1	0	2	0	3	0	-	-	-	-	-	-	-	-	-	-	-	-
Seriphus politus	7	0	15	5	1	10	19	20	11	3	6	0	35	15	0	13	5	4	-	-	-	-	-	-	5	0	0	-	-	-	-	-	-	-	-	-

- Indicates that no individuals of that species were captured.

Sex composition (Male-M, Female-F, Indeterminate-I) of resident fish species collected in 24-h gill nets at depths of 30 and 45 ft during the survey of April 17-18, 1979.

30-ft gill nets

SURVIELLANCE ZONE	SAN ONOFRE																		DON LIGHT																		SAN MATEO POINT											
STATION NUMBER	1						2						3						6						7						8						11						12					
REPLICATE NET NUMBER	1			2			1			2			1			2			1			2			1			2			1			2			1			2			1			2		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Anisotremus davidsonii	0	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	1	-	-	-	-	-	-
Cheilotrema saturnum	2	2	0	1	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	0	-	-	-	-	-	-
Cynoscion nobilis	2	1	2	0	0	1	4	2	2	-	-	-	0	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	0	-	-	-	0	1	0	-	-	-	1	1	0
Damalichthys vacca	-	-	-	1	0	0	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	0	0	-	-	-	-	-	-	-	-	-	-	-	-
Embiotica jacksonii	-	-	-	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	0	-	-	-	1	2	0	-	-	-	-	-	-
Genyonemus lineatus	0	1	0	-	-	-	0	1	0	0	4	1	3	10	0	6	10	0	2	3	0	0	5	1	0	1	0	-	-	-	0	1	0	2	3	0	2	2	1	0	2	0	2	3	0	9	8	0
Girella nigricans	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	0	-	-	-
Hyperprosopon argenteum	-	-	-	0	1	0	-	-	-	-	-	-	0	2	0	0	2	0	-	-	-	-	-	-	-	-	-	0	1	0	-	-	-	-	-	-	0	2	0	0	3	0	-	-	-	-	-	-
Medialuna californiensis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	0
Paralabrax nebulifer	-	-	-	-	-	-	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	0	-	-	-	0	1	0	0	2	0	0	1	0	0	2	1	-	-	-
Paralichthys californicus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	0	-	-	-	-	-	-	-	-	-
Phanerodon furcatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	0	-	-	-	0	1	0	-	-	-	-	-	-	0	1	0	-	-	-	-	-	-	0	0	1
Pimelometopon pulchrum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	0	1	0	0
Rhacochilus toxotes	-	-	-	1	0	0	2	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	0	-	-	-	0	1	0	-	-	-
Roncador stearnsii	-	-	-	1	1	0	9	0	0	7	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Scorpaena guttata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Seriphus politus	3	5	0	2	1	0	1	10	1	5	14	0	0	18	0	0	11	0	1	1	0	5	7	0	12	7	0	14	9	4	22	11	3	13	27	0	5	14	0	1	19	0	7	30	0	9	35	0

45-ft gill nets

SURVIELLANCE ZONE	SAN ONOFRE												DON LIGHT												SAN MATEO POINT											
STATION NUMBER	4						5						9						10						13						14					
REPLICATE NET NUMBER	1			2			1			2			1			2			1			2			1			2			1			2		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Cynoscion nobilis	-	-	-	-	-	-	1	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	0	-	-	-	1	0	0
Genyonemus lineatus	2	4	0	1	0	0	13	9	3	16	4	0	2	2	1	7	2	0	4	4	1	8	4	0	11	10	1	19	7	2	-	-	-	2	3	0
Hyperprosopon argenteum	-	-	-	-	-	-	0	1	0	-	-	-	0	2	0	-	-	-	-	-	-	-	-	-	0	2	0	-	-	-	-	-	-	3	3	0
Paralabrax clathratus	1	5	2	-	-	-	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax maculatofasciatus	-	-	-	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax nebulifer	0	0	1	-	-	-	-	-	-	-	-	-	0	0	2	-	-	-	0	1	0	0	1	0	-	-	-	1	1	0	-	-	-	0	0	2
Paralichthys californicus	-	-	-	1	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	0	0	-	-	-	-	-	-	-	-	-
Phanerodon furcatus	0	7	0	-	-	-	-	-	-	-	-	-	1	3	0	-	-	-	-	-	-	-	-	-	3	10	0	1	5	0	-	-	-	2	2	0
Seriphus politus	0	4	0	8	8	0	14	27	0	9	22	0	16	15	0	12	13	0	11	11	0	17	29	2	10	16	0	30	20	0	-	-	-	11	24	0

Sex composition (Male-M, Female-F, Indeterminate-I) of selected fish species collected in replicate 5-min otter trawls at depths of 20, 40, and 60 ft at San Mateo Point, San Onofre, and Don Light during the survey of April 17-18, 1979.

San Mateo Point

TRAWL NUMBER	SM-T-20												SM-T-40												SM-T-60											
REPLICATE NUMBER	1			2			3			4			1			2			3			4			1			2			3			4		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Genyonemus lineatus	-	-	-	0	0	1	-	-	-	-	-	-	17	8	25	7	7	27	1	0	0	0	1	0	-	-	-	-	-	-	0	0	1	0	1	0
Hyperprosopon argenteum	-	-	-	0	2	0	-	-	-	-	-	-	0	2	0	0	2	0	-	-	-	-	-	-	-	-	-	-	-	-	1	0	0	2	0	0
Paralichthys californicus	-	-	-	-	-	-	-	-	-	-	-	-	0	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	1	-	-	-
Phanerodon furcatus	-	-	-	0	4	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	2	0
Seriphus politus	0	1	0	0	5	0	-	-	-	-	-	-	15	5	7	34	14	2	0	0	1	-	-	-	-	-	-	-	-	-	0	1	0	2	1	0

San Onofre

TRAWL NUMBER	SO-T-20												SO-T-40												SO-T-60											
REPLICATE NUMBER	1			2			3			4			1			2			3			4			1			2			3			4		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Genyonemus lineatus	-	-	-	-	-	-	-	-	-	1	0	1	-	-	-	-	-	-	6	1	2	1	0	0	-	-	-	-	-	-	-	-	-	1	0	0
Hyperprosopon argenteum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-
Phanerodon furcatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	2	0	-	-	-
Seriphus politus	-	-	-	-	-	-	1	1	0	0	1	13	-	-	-	-	-	-	26	7	12	30	6	9	-	-	-	-	-	-	-	-	-	-	-	-

Don Light

TRAWL NUMBER	DL-T-20												DL-T-40												DL-T-60											
REPLICATE NUMBER	1			2			3			4			1			2			3			4			1			2			3			4		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Genyonemus lineatus	0	0	50	4	0	31	0	0	1	-	-	-	-	-	-	-	-	-	4	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hyperprosopon argenteum	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phanerodon furcatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-
Seriphus politus	10	8	32	35	15	0	0	0	1	0	2	5	-	-	-	-	-	-	23	8	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

- Indicates that no individuals of that species were captured.

Sex composition (Male-M, Female-F, Indeterminate-I) of resident fish species collected in 24-h gill nets at depths of 30 and 45 ft during the survey of June 27-28, 1979.

30-ft gill nets

SURVIELLANCE ZONE	SAN ONOFRE																	
STATION NUMBER	1						2						3					
REPLICATE NET NUMBER	1			2			1			2			1			2		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Amphisticus argenteus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cheilotrema saturnum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cymatogaster aggregata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cynoscion nobilis	-	-	-	2	2	0	2	0	0	-	-	-	-	-	-	-	-	-
Damalichthys vacca	0	1	0	1	0	0	1	1	0	-	-	-	-	-	-	-	-	-
Embiotica jacksonii	1	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Genyonemus lineatus	0	2	0	-	-	-	0	2	7	1	0	6	7	3	3	3	2	8
Girella nigricans	-	-	-	0	1	0	5	0	0	-	-	-	-	-	-	-	-	-
Halichoeres semicinctus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heterostichus rostratus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hyperprosopon argenteum	0	2	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Medialuna californiensis	-	-	-	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax clathratus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax nebulifer	-	-	-	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-
Paralichthys californicus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Peprilus simillimus	1	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phanerodon furcatus	-	-	-	-	-	-	0	1	0	-	-	-	-	-	-	-	-	-
Pimelometopon pulchrum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Porichthys notatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rhacochilus toxotes	-	-	-	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-
Roncador stearnsii	-	-	-	-	-	-	2	0	0	-	-	-	-	-	-	-	-	-
Scorpaena guttata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Seriphus politus	22	22	0	1	4	0	11	27	4	6	10	0	6	9	0	5	6	0

SURVIELLANCE ZONE	DON LIGHT																	
STATION NUMBER	6						7						8					
REPLICATE NET NUMBER	1			2			1			2			1			2		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Amphisticus argenteus	-	-	-	1	0	0	-	-	-	-	-	-	-	-	-	-	-	-
Cheilotrema saturnum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cymatogaster aggregata	-	-	-	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-
Cynoscion nobilis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Damalichthys vacca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Embiotica jacksonii	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	0
Genyonemus lineatus	5	1	2	8	7	10	11	8	2	10	3	8	5	8	5	2	4	6
Girella nigricans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Halichoeres semicinctus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heterostichus rostratus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hyperprosopon argenteum	-	-	-	-	-	-	-	-	-	0	3	0	0	1	0	0	1	0
Medialuna californiensis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax clathratus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax nebulifer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralichthys californicus	-	-	-	-	-	-	-	-	-	0	1	0	-	-	-	-	-	-
Peprilus simillimus	-	-	-	1	0	0	-	-	-	-	-	-	0	1	0	-	-	-
Phanerodon furcatus	-	-	-	0	2	0	-	-	-	2	2	0	0	3	0	2	8	0
Pimelometopon pulchrum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Porichthys notatus	-	-	-	-	-	-	1	0	0	-	-	-	-	-	-	0	0	1
Rhacochilus toxotes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Roncador stearnsii	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Scorpaena guttata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	0	0
Seriphus politus	3	13	0	3	10	0	7	19	0	8	14	0	4	15	1	4	8	0

SURVIELLANCE ZONE	SAN MATEO POINT											
STATION NUMBER	11						12					
REPLICATE NET NUMBER	1			2			1			2		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I
Amphisticus argenteus	-	-	-	-	-	-	-	-	-	-	-	-
Cheilotrema saturnum	1	0	0	-	-	-	-	-	-	-	-	-
Cymatogaster aggregata	-	-	-	-	-	-	-	-	-	-	-	-
Cynoscion nobilis	2	0	0	1	0	0	1	2	0	-	-	-
Damalichthys vacca	1	0	0	0	1	0	-	-	-	-	-	-
Embiotica jacksonii	3	1	0	0	1	0	-	-	-	-	-	-
Genyonemus lineatus	-	-	-	1	0	0	3	0	9	9	5	0
Girella nigricans	-	-	-	-	-	-	-	-	-	-	-	-
Halichoeres semicinctus	2	1	0	-	-	-	-	-	-	-	-	-
Heterostichus rostratus	0	1	1	-	-	-	-	-	-	-	-	-
Hyperprosopon argenteum	-	-	-	0	6	0	-	-	-	-	-	-
Medialuna californiensis	2	0	0	-	-	-	-	-	-	-	-	-
Paralabrax clathratus	-	-	-	0	1	0	-	-	-	-	-	-
Paralabrax nebulifer	1	0	0	0	1	1	-	-	-	-	-	-
Paralichthys californicus	-	-	-	-	-	-	1	1	0	-	-	-
Peprilus simillimus	-	-	-	-	-	-	-	-	-	-	-	-
Phanerodon furcatus	0	1	0	1	0	0	-	-	-	-	-	-
Pimelometopon pulchrum	1	1	0	0	1	0	-	-	-	-	-	-
Porichthys notatus	-	-	-	-	-	-	-	-	-	-	-	-
Rhacochilus toxotes	0	1	0	1	0	0	-	-	-	-	-	-
Roncador stearnsii	-	-	-	-	-	-	-	-	-	-	-	-
Scorpaena guttata	-	-	-	-	-	-	-	-	-	-	-	-
Seriphus politus	0	1	0	5	4	0	1	18	0	1	27	0

45-ft gill nets

SURVIELLANCE ZONE	SAN ONOFRE											
STATION NUMBER	4						5					
REPLICATE NET NUMBER	1			2			1			2		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I
Genyonemus lineatus	0	2	0	5	0	0	3	2	1	0	0	1
Hyperprosopon argenteum	0	1	0	0	3	0	0	6	0	-	-	-
Paralabrax clathratus	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax maculatofasciatus	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax nebulifer	1	1	0	0	1	1	-	-	-	1	0	0
Paralichthys californicus	-	-	-	-	-	-	-	-	-	1	0	0
Phanerodon furcatus	7	39	0	1	4	0	1	1	0	4	7	0
Seriphus politus	2	7	0	0	5	0	1	6	0	6	5	0

SURVIELLANCE ZONE	DON LIGHT											
STATION NUMBER	9						10					
REPLICATE NET NUMBER	1			2			1			2		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I
Genyonemus lineatus	0	6	4	14	8	1	8	5	23	20	22	8
Hyperprosopon argenteum	-	-	-	-	-	-	1	0	0	2	1	0
Paralabrax clathratus	-	-	-	-	-	-	-	-	-	1	0	2
Paralabrax maculatofasciatus	-	-	-	-	-	-	-	-	-	1	2	0
Paralabrax nebulifer	1	0	0	-	-	-	-	-	-	0	1	0
Paralichthys californicus	-	-	-	1	1	0	0	1	0	-	-	-
Phanerodon furcatus	0	3	0	-	-	-	-	-	-	6	5	0
Seriphus politus	1	5	0	0	3	0	0	4	0	4	7	0

SURVIELLANCE ZONE	SAN MATEO POINT											
STATION NUMBER	13						14					
REPLICATE NET NUMBER	1			2			1			2		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I
Genyonemus lineatus	4	2	6	4	7	2	-	-	-	-	-	-
Hyperprosopon argenteum	1	0	0	-	-	-	0	2	0	0	1	0
Paralabrax clathratus	-	-	-	-	-	-	0	1	0	-	-	-
Paralabrax maculatofasciatus	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax nebulifer	0	1	0	-	-	-	1	1	0	2	6	2
Paralichthys californicus	-	-	-	-	-	-	-	-	-	1	0	0
Phanerodon furcatus	-	-	-	-	-	-	-	-	-	-	-	-
Seriphus politus	1	2	0	2	0	0	3	2	0	2	1	0

Sex composition (Male-M, Female-F, Indeterminate-I) of selected fish species collected in replicate 5-min otter trawls at depths of 20, 40, and 60 ft at San Mateo Point, San Onofre, and Don Light during the survey of June 27-28, 1979.

San Mateo Point

TRAWL NUMBER	SM-T-20												SM-T-40												SM-T-60											
REPLICATE NUMBER	1			2			3			4			1			2			3			4			1			2			3			4		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Genyonemus lineatus	-	-	-	0	4	11	5	1	44	0	2	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hyperprosopon argenteum	0	0	1	0	0	2	0	0	11	0	0	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax nebulifer	-	-	-	-	-	-	-	-	-	0	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	1	-	-	-	0	1	0
Paralichthys californicus	-	-	-	0	0	2	-	-	-	0	0	1	-	-	-	-	-	-	0	0	1	0	0	3	-	-	-	-	-	-	-	-	-	0	0	1
Phanerodon furcatus	-	-	-	-	-	-	0	4	1	0	3	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Seriphus politus	0	0	21	14	16	20	26	20	4	0	2	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

San Onofre Survey Date: 0679 SO Trawls

TRAWL NUMBER	SO-T-20												SO-T-40												SO-T-60											
REPLICATE NUMBER	1			2			3			4			1			2			3			4			1			2			3			4		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Genyonemus lineatus	0	0	50	0	0	50	0	1	33	-	-	-	7	24	19	0	10	40	10	10	30	3	5	39	-	-	-	-	-	-	-	-	-	-	-	-
Hyperprosopon argenteum	-	-	-	0	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralichthys californicus	-	-	-	-	-	-	-	-	-	-	-	-	0	2	0	0	0	3	0	0	1	0	0	3	-	-	-	1	0	0	0	0	1	-	-	-
Phanerodon furcatus	-	-	-	-	-	-	-	-	-	-	-	-	1	0	0	2	4	0	0	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Seriphus politus	3	3	8	2	2	1	0	0	11	6	1	0	5	2	0	0	1	1	7	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Don Light Survey Date: 0679 DL Trawls

TRAWL NUMBER	DL-T-20												DL-T-40												DL-T-60											
REPLICATE NUMBER	1			2			3			4			1			2			3			4			1			2			3			4		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Genyonemus lineatus	4	7	39	5	18	27	0	0	5	6	10	22	0	0	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hyperprosopon argenteum	0	0	6	0	0	38	-	-	-	0	0	2	0	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax nebulifer	-	-	-	0	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralichthys californicus	0	0	1	1	0	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	0	-	-	-	-	-	-	-	-	-
Phanerodon furcatus	0	0	18	0	0	19	-	-	-	0	0	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Seriphus politus	15	3	2	0	0	50	4	12	2	27	21	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

- Indicates that no individuals of that species were captured.

Sex composition (Male-M, Female-F, Indeterminate-I) of resident fish species collected in 24-h gill nets at depths of 30 and 45 ft during the survey of August 26-27, 1979.

30-ft gill nets

SURVIELLANCE ZONE	SAN ONOFRE																		DON LIGHT																		SAN MATEO POINT											
STATION NUMBER	1						2						3						6						7						8						11						12					
REPLICATE NET NUMBER	1			2			1			2			1			2			1			2			1			2			1			2			1			2			1			2		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Amphisticus argenteus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	2	-	-	-	0	0	1	0	0	1	1	3	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anisotremus davidsonii	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	0	1	0	0	-	-	-	-	-	-
Cheilotrema saturnum	-	-	-	3	4	0	-	-	-	-	-	-	1	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	4	0	4	1	0	-	-	-	-	-	-
Cynoscion nobilis	-	-	-	-	-	-	1	1	0	-	-	-	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	2	0	-	-	-
Damalichthys vacca	-	-	-	-	-	-	-	-	-	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-	0	1	0	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Embiotica jacksonii	1	0	1	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	0	-	-	-	-	-	-	-	-	-	0	1	1	-	-	-	-	-	-	-	-	-
Genyonemus lineatus	0	1	0	0	0	1	0	1	0	1	0	4	5	10	1	1	1	5	2	6	3	1	9	2	2	3	2	3	8	1	3	5	1	1	1	1	-	-	-	-	-	-	0	1	7	14	2	5
Girella nigricans	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	2	-	-	-	-	-	-	-	-	-
Halichoeres semicinctus	-	-	-	1	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	2	0	1	2	2	-	-	-	-	-	-
Hermosilla azurea	-	-	-	-	-	-	1	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hyperprosopon argenteum	0	1	0	6	6	0	-	-	-	1	0	0	0	2	0	-	-	-	0	0	1	0	0	1	-	-	-	-	-	-	-	-	-	1	0	0	2	0	0	-	-	-	-	-	-	-	-	-
Medialuna californiensis	1	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax clathratus	0	1	0	0	1	0	0	1	0	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	0	0	0	1	0	-	-	-	-	-	-
Paralabrax nebulifer	-	-	-	1	1	0	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	0	0	1	0	0	1	1	-	-	-	-	-	-
Paralichthys californicus	-	-	-	-	-	-	3	0	0	0	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	0	-	-	-	-	-	-	-	-	-	-	-	-
Phanerodon furcatus	-	-	-	-	-	-	0	1	0	0	0	3	0	1	0	-	-	-	-	-	-	0	1	0	-	-	-	-	-	-	-	-	-	1	1	0	-	-	-	-	-	-	-	-	-	-	-	-
Pimelometopon pulchrum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	0	0	1	0	-	-	-	-	-	-
Rhacochilus toxotes	0	1	0	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	1	-	-	-	-	-	-	-	-	-
Roncador stearnsii	-	-	-	0	0	1	2	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	3	0	-	-	-	0	0	1	-	-	-
Scorpaena guttata	0	0	2	0	1	1	-	-	-	0	0	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	3	-	-	-	0	0	1
Sebastes rastrelliger	-	-	-	-	-	-	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	0	-	-	-	-	-	-	-	-	-
Seriphus politus	2	10	19	4	4	2	2	19	5	2	16	8	11	22	10	3	13	3	13	32	5	4	19	4	3	21	3	16	26	7	10	28	5	16	31	3	1	1	1	2	1	1	12	33	5	14	26	10
Xenistius californiensis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	0	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

45-ft gill nets

SURVIELLANCE ZONE	SAN ONOFRE												DON LIGHT												SAN MATEO POINT											
STATION NUMBER	4						5						9						10						13						14					
REPLICATE NET NUMBER	1			2			1			2			1			2			1			2			1			2			1			2		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Genyonemus lineatus	4	0	0	1	0	3	0	1	1	2	0	1	0	2	0	1	1	1	1	0	0	-	-	-	4	8	7	0	1	7	0	1	1	0	1	1
Hyperprosopon argenteum	1	1	0	2	1	0	1	0	0	1	1	0	-	-	-	-	-	-	-	-	-	-	-	-	0	1	0	0	1	0	1	2	0	-	-	-
Paralabrax clathratus	2	1	1	0	0	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	1	0	0	0	1	-	-	-	3	2	0	-	-	-
Paralabrax nebulifer	1	1	0	1	0	0	-	-	-	-	-	-	1	0	0	0	1	0	1	1	0	3	0	0	-	-	-	-	-	-	3	1	0	0	2	0
Paralichthys californicus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	1	-	-	-
Phanerodon furcatus	3	16	3	0	3	0	0	3	0	0	1	0	0	1	0	-	-	-	-	-	-	-	-	-	3	9	0	6	9	2	1	3	0	1	2	0
Seriphus politus	2	2	0	3	4	0	3	4	2	2	2	2	-	-	-	0	1	0	-	-	-	-	-	-	2	2	0	1	1	1	4	4	1	3	7	3

Sex composition (Male-M, Female-F, Indeterminate-I) of selected fish species collected in replicate 5-min otter trawls at depths of 20, 40, and 60 ft at San Mateo Point, San Onofre, and Don Light during the survey of August 26-27, 1979.

San Mateo Point

TRAWL NUMBER	SM-T-20												SM-T-40															SM-T-60								
REPLICATE NUMBER	1			2			3			4			1			2			3			4			1			2			3			4		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Cynoscion nobilis	-	-	-	0	0	1	-	-	-	0	0	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Genyonemus lineatus	-	-	-	0	1	0	3	5	3	4	11	16	-	-	-	-	-	-	18	14	12	0	0	18	-	-	-	-	-	-	-	-	-	-	-	-
Hyperprosopon argenteum	-	-	-	-	-	-	0	0	14	0	0	2	-	-	-	-	-	-	1	3	0	6	3	0	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax nebulifer	-	-	-	-	-	-	0	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralichthys californicus	0	0	3	0	0	1	0	0	11	0	0	4	0	0	2	1	0	0	0	0	6	3	0	2	-	-	-	0	0	1	-	-	-	1	0	0
Phanerodon furcatus	-	-	-	0	4	0	0	1	0	0	1	1	0	2	0	-	-	-	3	13	3	0	25	0	-	-	-	-	-	-	-	-	-	1	0	0
Roncador stearnsii	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Seriphus politus	0	0	7	0	0	3	7	10	32	3	3	44	-	-	-	-	-	-	0	0	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

San Onofre

TRAWL NUMBER	SO-T-20												SO-T-40															SO-T-60								
REPLICATE NUMBER	1			2			3			4			1			2			3			4			1			2			3			4		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Cynoscion nobilis	0	0	1	1	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Genyonemus lineatus	1	1	2	3	2	6	1	0	12	-	-	-	2	1	41	7	9	15	12	23	0	7	43	-	-	-	-	-	-	-	-	-	-	-	-	-
Hyperprosopon argenteum	5	5	25	0	0	1	0	1	0	0	0	1	0	0	5	0	1	27	0	0	11	5	4	33	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax nebulifer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1	-	-	-	-	-	-	1	0	0	-	-	-	-	-	-
Paralichthys californicus	-	-	-	0	0	4	-	-	-	0	0	3	-	-	-	0	0	2	2	0	2	1	0	2	2	0	2	0	1	1	0	0	1	0	0	3
Phanerodon furcatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	1	0	0	4	0	0	9	-	-	-	-	-	-	-	-	-	-	-	-
Roncador stearnsii	0	0	1	-	-	-	-	-	-	-	-	-	-	-	-	1	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Seriphus politus	5	4	41	12	13	25	2	5	43	0	0	2	17	3	30	18	7	25	21	16	13	14	16	14	-	-	-	-	-	-	-	-	-	-	-	-

Don Light

TRAWL NUMBER	DL-T-20												DL-T-40															DL-T-60								
REPLICATE NUMBER	1			2			3			4			1			2			3			4			1			2			3			4		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Genyonemus lineatus	0	3	47	3	5	42	1	4	45	6	3	41	7	3	40	2	6	42	17	4	29	14	8	28	-	-	-	-	-	-	-	-	-	-	-	-
Hyperprosopon argenteum	0	0	2	0	0	1	0	0	9	0	0	1	0	0	32	0	0	42	0	0	8	-	-	-	0	0	1	-	-	-	-	-	-	-	-	-
Paralabrax nebulifer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	0	2	0	0	-	-	-	0	0	1	1	0	1	1	0	0
Paralichthys californicus	-	-	-	0	0	1	0	0	1	0	0	2	0	0	9	0	0	3	0	0	3	0	0	2	0	0	2	-	-	-	-	-	-	1	0	0
Phanerodon furcatus	-	-	-	0	0	2	-	-	-	-	-	-	0	2	11	1	0	5	0	0	50	2	3	36	1	1	0	-	-	-	0	0	1	-	-	-
Seriphus politus	5	13	32	8	10	32	5	20	25	6	6	38	6	12	32	20	19	3	3	2	2	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-

- Indicates that no individuals of that species were captured.

Sex composition (Male-M, Female-F, Indeterminate-I) of resident fish species collected in 24-h gill nets at depths of 30 and 45 ft during the survey of October 16-17, 1979.

30-ft gill nets

SURVIELLANCE ZONE	SAN ONOFRE																	
STATION NUMBER	1						2						3					
REPLICATE NET NUMBER	1			2			1			2			1			2		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Anisotremus davidsonii	-	-	-	1	1	0	-	-	-	-	-	-	-	-	-	-	-	-
Cheilotrema saturnum	1	0	0	6	4	0	8	1	1	-	-	-	-	-	-	-	-	-
Cynoscion nobilis	-	-	-	-	-	-	-	-	-	-	-	-	0	1	0	-	-	-
Embiotica jacksonii	-	-	-	6	3	1	4	0	0	0	1	0	-	-	-	-	-	-
Genyonemus lineatus	1	0	0	1	0	0	11	3	4	3	1	0	6	6	0	0	2	0
Halichoeres semicinctus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heterostichus rostratus	-	-	-	0	1	0	0	1	0	-	-	-	-	-	-	-	-	-
Hyperprosopon argenteum	0	1	0	-	-	-	0	1	0	-	-	-	3	0	0	0	0	4
Paralabrax clathratus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax nebulifer	1	1	0	1	0	0	1	0	1	0	1	6	-	-	-	-	-	-
Paralichthys californicus	-	-	-	-	-	-	-	-	-	0	1	0	-	-	-	-	-	-
Phanerodon furcatus	-	-	-	-	-	-	0	1	0	-	-	-	0	1	0	-	-	-
Pimelometopon pulchrum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rhacochilus toxotes	-	-	-	-	-	-	1	0	1	-	-	-	-	-	-	-	-	-
Scorpaena guttata	-	-	-	-	-	-	-	-	-	0	0	1	-	-	-	0	0	1
Seriphus politus	1	4	0	0	2	0	0	13	0	-	-	-	4	17	0	4	8	0

SURVIELLANCE ZONE	DON LIGHT																	
STATION NUMBER	6						7						8					
REPLICATE NET NUMBER	1			2			1			2			1			2		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Anisotremus davidsonii	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	1
Cheilotrema saturnum	-	-	-	-	-	-	-	-	-	9	4	3	-	-	-	-	-	-
Cynoscion nobilis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Embiotica jacksonii	-	-	-	-	-	-	-	-	-	0	0	2	0	0	1	-	-	-
Genyonemus lineatus	4	3	1	1	1	0	1	2	0	-	-	-	1	9	3	1	1	2
Halichoeres semicinctus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heterostichus rostratus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hyperprosopon argenteum	0	1	0	0	1	2	-	-	-	0	0	1	0	0	1	-	-	-
Paralabrax clathratus	0	1	0	-	-	-	-	-	-	0	1	0	-	-	-	-	-	-
Paralabrax nebulifer	-	-	-	-	-	-	0	1	0	-	-	-	-	-	-	0	1	0
Paralichthys californicus	-	-	-	-	-	-	-	-	-	1	0	0	-	-	-	-	-	-
Phanerodon furcatus	-	-	-	1	0	1	0	1	0	-	-	-	-	-	-	-	-	-
Pimelometopon pulchrum	-	-	-	-	-	-	-	-	-	0	1	0	-	-	-	-	-	-
Rhacochilus toxotes	-	-	-	-	-	-	-	-	-	0	0	1	-	-	-	-	-	-
Scorpaena guttata	-	-	-	-	-	-	-	-	-	0	0	1	-	-	-	-	-	-
Seriphus politus	0	5	4	0	4	0	2	8	9	0	2	3	0	11	3	6	9	6

SURVIELLANCE ZONE	SAN MATEO POINT											
STATION NUMBER	11						12					
REPLICATE NET NUMBER	1			2			1			2		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I
Anisotremus davidsonii	-	-	-	0	0	1	-	-	-	-	-	-
Cheilotrema saturnum	1	0	0	1	4	0	-	-	-	-	-	-
Cynoscion nobilis	-	-	-	-	-	-	-	-	-	-	-	-
Embiotica jacksonii	-	-	-	-	-	-	-	-	-	-	-	-
Genyonemus lineatus	-	-	-	-	-	-	0	1	1	-	-	-
Halichoeres semicinctus	-	-	-	0	1	0	-	-	-	-	-	-
Heterostichus rostratus	-	-	-	-	-	-	-	-	-	-	-	-
Hyperprosopon argenteum	-	-	-	0	2	0	2	0	0	0	0	1
Paralabrax clathratus	3	0	0	-	-	-	-	-	-	-	-	-
Paralabrax nebulifer	0	0	1	1	2	0	-	-	-	0	0	1
Paralichthys californicus	-	-	-	-	-	-	-	-	-	-	-	-
Phanerodon furcatus	-	-	-	1	0	0	0	2	0	-	-	-
Pimelometopon pulchrum	-	-	-	-	-	-	-	-	-	-	-	-
Rhacochilus toxotes	-	-	-	1	1	1	-	-	-	-	-	-
Scorpaena guttata	-	-	-	-	-	-	-	-	-	-	-	-
Seriphus politus	-	-	-	1	4	0	3	19	2	1	4	2

45-ft gill nets

SURVIELLANCE ZONE	SAN ONOFRE												DON LIGHT												SAN MATEO POINT											
STATION NUMBER	4						5						9						10						13						14					
REPLICATE NET NUMBER	1			2			1			2			1			2			1			2			1			2			1			2		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Cynoscion nobilis	-	-	-	-	-	-	-	-	-	1	2	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Genyonemus lineatus	15	7	0	-	-	-	10	4	0	1	3	1	-	-	-	1	0	0	1	1	0	-	-	-	0	1	0	-	-	-	-	-	-	-	-	-
Hyperprosopon argenteum	-	-	-	-	-	-	2	3	0	3	1	0	0	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax nebulifer	-	-	-	1	1	0	-	-	-	0	0	1	-	-	-	-	-	-	2	0	0	1	0	0	-	-	-	-	-	-	-	-	-	-	-	-
Phanerodon furcatus	2	0	0	0	1	0	1	4	2	3	3	1	-	-	-	-	-	-	6	14	3	4	1	1	-	-	-	-	-	-	-	-	-	-	-	-
Seriphus politus	3	11	4	-	-	-	8	27	3	0	0	4	0	1	4	-	-	-	0	3	1	0	2	2	0	2	6	-	-	-	-	-	-	-	-	-

Sex composition (Male-M, Female-F, Indeterminate-I) of selected fish species collected in replicate 5-min otter trawls at depths of 20, 40, and 60 ft at San Mateo Point, San Onofre, and Don Light during the survey of October 16-17, 1979.

San Mateo Point

TRAWL NUMBER	SM-T-20												SM-T-40												SM-T-60											
REPLICATE NUMBER	1			2			3			4			1			2			3			4			1			2			3			4		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Cynoscion nobilis	-	-	-	-	-	-	2	0	1	0	0	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Genyonemus lineatus	14	6	0	4	3	1	3	2	7	9	10	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hyperprosopon argenteum	0	6	0	-	-	-	0	1	0	4	5	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax nebulifer	-	-	-	-	-	-	-	-	-	0	0	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralichthys californicus	0	0	1	-	-	-	0	0	2	-	-	-	0	0	1	0	0	1	0	0	2	1	0	0	-	-	-	-	-	-	0	0	1	-	-	-
Phanerodon furcatus	0	0	2	0	0	1	-	-	-	2	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Seriphus politus	1	21	12	10	35	5	5	10	35	3	12	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

San Onofre

TRAWL NUMBER	SO-T-20												SO-T-40												SO-T-60											
REPLICATE NUMBER	1			2			3			4			1			2			3			4			1			2			3			4		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Cynoscion nobilis	-	-	-	-	-	-	-	-	-	0	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Genyonemus lineatus	0	6	5	5	11	5	2	1	1	10	12	20	3	1	1	24	21	5	25	23	2	36	14	0	-	-	-	-	-	-	-	-	-	-	-	-
Hyperprosopon argenteum	-	-	-	-	-	-	4	2	0	1	0	0	-	-	-	2	1	0	2	0	0	2	1	0	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax nebulifer	-	-	-	-	-	-	-	-	-	0	0	1	0	0	2	0	0	2	-	-	-	0	0	3	-	-	-	-	-	-	-	-	-	-	-	-
Paralichthys californicus	0	0	2	0	0	2	0	0	2	0	0	3	3	0	3	1	0	4	3	0	5	0	1	3	-	-	-	-	-	-	-	-	-	-	-	-
Phanerodon furcatus	0	0	1	0	0	1	-	-	-	-	-	-	0	3	16	0	3	41	1	2	39	3	5	10	-	-	-	-	-	-	-	-	-	-	-	-
Seriphus politus	0	15	18	10	16	24	4	16	30	12	11	27	-	-	-	10	32	8	3	8	3	17	26	3	-	-	-	-	-	-	-	-	-	-	-	-

Don Light

TRAWL NUMBER	DL-T-20												DL-T-40												DL-T-60											
REPLICATE NUMBER	1			2			3			4			1			2			3			4			1			2			3			4		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Genyonemus lineatus	5	19	26	1	0	1	13	19	18	5	3	7	-	-	-	-	-	-	29	13	4	5	6	0	-	-	-	-	-	-	-	-	-	-	-	-
Hyperprosopon argenteum	2	0	0	-	-	-	0	3	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralabrax nebulifer	-	-	-	0	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralichthys californicus	0	0	7	0	0	3	0	0	12	0	0	4	-	-	-	-	-	-	0	0	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phanerodon furcatus	0	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	49	3	0	47	-	-	-	-	-	-	-	-	-	-	-	-
Seriphus politus	0	15	35	6	12	32	0	14	36	11	12	27	-	-	-	-	-	-	27	21	2	9	10	0	-	-	-	-	-	-	-	-	-	-	-	-

- Indicates that no individuals of that species were captured.

Sex composition (Male-M, Female-F, Indeterminate-I) of resident fish species collected in 24-h gill nets at depths of 30 and 45 ft during the survey of December 12-13, 1979.

30-ft gill nets

SURVIELLANCE ZONE	SAN ONOFRE																		DON LIGHT																						SAN MATEO POINT											
STATION NUMBER	1						2						3						6						7						8						11						12					
REPLICATE NET NUMBER	1			2			1			2			1			2			1			2			1			2			1			2			1			2			1			2		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Amphisticus argenteus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anisotremus davidsonii	1	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cheilotrema saturnum	1	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	2	0	-	-	-	-	-	4	6	0	6	4	0	0	2	0	4	3	0
Cynoscion nobilis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	6	0	1	3	3	6	0	1	2	0	5
Damalichthys vacca	-	-	-	1	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Embiotica jacksonii	1	0	3	1	0	9	-	-	-	0	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	2	1	0	1	0	-	-	-	-	-	-	-
Genyonemus lineatus	3	5	0	-	-	-	-	-	-	0	1	0	5	17	0	3	3	0	-	-	-	0	1	0	-	-	-	-	-	-	1	0	0	-	-	-	1	0	0	-	-	-	0	1	0	0	1	0
Girella nigricans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	1	0	-	-	-	-	-	-	-	-	-	-	-
Halichoeres semicinctus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	0	-	-	-	-	-	-	-	-
Hyperprosopon argenteum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	0	1	0	0	0	1	0	-	-	-
Hypsurus caryi	0	0	1	0	0	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Medialuna californiensis	1	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	4	0	1	0	0	-	-	-	-	-	-	-
Oxyjulis californensis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	1	-	-	-	-	-	-	-	-
Paralabrax clathratus	-	-	-	0	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	4	5	0	2	4	-	-	-	-	-	-	-
Paralabrax nebulifer	0	1	4	0	1	0	1	1	0	0	1	2	-	-	-	-	-	-	-	-	-	0	0	1	0	0	2	0	2	0	-	-	-	-	-	-	-	-	-	-	-	-	0	0	1	-	-	-
Phanerodon furcatus	-	-	-	0	1	1	-	-	-	1	0	0	0	0	2	0	0	1	-	-	-	-	-	-	-	-	-	-	-	-	0	3	0	-	-	-	4	1	16	-	-	-	-	-	-	-	-	-	-	-
Pimelometopon pulchrum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	0	-	-	-	-	-	-	-
Rhacochilus toxotes	1	0	3	0	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	1	0	1	0	-	-	-	-	-	-	-
Scorpaena guttata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	2	-	-	-	0	0	1	-	-	-	-	-	-	0	0	1	-	-	-	-	-	-	0	0	2	-	-	-	-	-	-	-
Seriphus politus	0	4	0	-	-	-	2	1	1	2	0	0	0	1	0	2	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	16	3	0	11	0	27	23	0	14	20	2
Xenistius californiensis	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	1	1	3	0	-	-	-	-	-	-	-

45-ft gill nets

SURVIELLANCE ZONE	SAN ONOFRE												DON LIGHT																		SAN MATEO POINT																	
STATION NUMBER	4			5									9						10						13						14																	
REPLICATE NET NUMBER	1			2			1			2			1			2			1			2			1			2			1			2			1			2			1			2		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Cynoscion nobilis	0	0	3	-	-	-	1	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	1	1	0	1	1	0	0								
Genyonemus lineatus	1	1	0	-	-	-	1	0	0	-	-	-	-	-	-	2	0	0	-	-	-	-	-	-	-	-	-	0	5	0	0	5	0	-	-	-	-	-	-								
Hyperprosopon argenteum	1	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	0	-	-	-								
Paralabrax clathratus	0	1	0	1	2	2	2	0	0	-	-	-	0	0	1	1	1	0	-	-	-	1	7	1	-	-	-	-	-	-	4	4	2	0	1	2											
Paralabrax nebulifer	-	-	-	-	-	-	0	4	0	-	-	-	0	5	0	4	2	0	-	-	-	1	2	1	-	-	-	0	1	0	1	4	4	0	0	1											
Phanerodon furcatus	2	3	2	1	0	1	0	1	2	1	0	0	0	0	16	-	-	-	-	-	-	0	0	2	0	1	0	0	2	1	3	0	1	0	1	3											
Seriphus politus	0	7	0	1	7	0	4	5	0	0	1	1	0	1	0	0	2	0	1	0	0	2	0	0	-	-	-	0	1	0	8	9	4	2	7	1											

Sex composition (Male-M, Female-F, Indeterminate-I) of selected fish species collected in replicate 5-min otter trawls at depths of 20, 40, and 60 ft at San Mateo Point, San Onofre, and Don Light during the survey of December 12-13, 1979.

San Mateo Point

TRAWL NUMBER	SM-T-20												SM-T-40												SM-T-60								
REPLICATE NUMBER	1			2			3			4			1			2			3			4			1			2			3			4		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Paralabrax nebulifer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	1	-	-	-	0	0	1
Paralichthys californicus	0	0	2	-	-	-	0	0	1	-	-	-	1	0	3	0	0	1	0	0	1	-	-	-	0	0	1	-	-	-	-	-	-	0	0	1

San Onofre

TRAWL NUMBER	SO-T-20												SO-T-40												SO-T-60								
REPLICATE NUMBER	1			2			3			4			1			2			3			4			1			2			3			4		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Paralabrax nebulifer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	1	-	-	-	-	-	-
Paralichthys californicus	0	0	2	0	0	7	0	0	1	0	0	3	1	0	1	0	0	1	-	-	-	0	0	1	1	0	0	0	0	1	-	-	-	-	-	-

Don Light

TRAWL NUMBER	DL-T-20												DL-T-40												DL-T-60								
REPLICATE NUMBER	1			2			3			4			1			2			3			4			1			2			3			4		
SPECIES	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I	M	F	I
Paralabrax nebulifer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	1	-	-	-	-	-	-
Paralichthys californicus	-	-	-	-	-	-	0	0	11	0	0	5	0	0	1	0	0	1	0	0	2	-	-	-	-	-	-	1	0	1	0	0	2	0	0	2

- Indicates that no individuals of that species were captured.

G. GONOSOMATIC INDICES

Gonosomatic indices (gonad wt/body wt x 100) for Seriphus politus and Genyonemus lineatus collected on February 15-16, 1979 in gill nets (GN) and otter trawls (OT) at varying depths in the San Mateo Point (SMP), San Onofre (SONGS) and Don Light (DL) areas.

SPECIES			Seriphus politus			Genyonemus lineatus		
Area/Gear Type			Females n	Mean GSI	Standard Deviation	Females n	Mean GSI	Standard Deviation
SMP	30'	GN	25	1.88	0.98	12	5.20	2.01
	45'	GN	28	1.96	0.82	15	5.57	1.92
	20'	OT	2	0.60	0.04	0		
	40'	OT	85	1.57	0.94	30	3.45	0.31
	60'	OT	0			0		
SONGS	30'	GN	53	2.12	0.95	25	3.98	1.20
	45'	GN	16	2.50	0.92	41	4.48	1.80
	20'	OT	2	1.04	0.64	2	1.34	0.13
	40'	OT	7	2.22	0.55	3	3.33	0.67
	60'	OT	0			0		
DL	30'	GN	22	2.69	2.67	10	3.76	0.70
	45'	GN	27	2.52	1.15	98	5.00	2.60
	20'	OT	24	1.35	0.91	15	3.59	0.22
	40'	OT	20	3.06	1.00	20	3.54	0.47
	60'	OT	0			1	1.49	-
ALL GN			171	2.24	1.34	201	4.76	2.22
ALL OT			140	1.75	1.08	73	3.42	1.71
ALL GN & OT			311	2.04	1.31	274	4.40	2.18

Gonosomatic indices (gonad wt/body wt x 100) for Seriphus politus and Genyonemus lineatus collected on April 17-18, 1979 in gill nets (GN) and otter trawls (OT) at varying depths in the San Mateo Point (SMP), San Onofre (SONGS) and Don Light (DL) areas.

SPECIES			Seriphus politus			Genyonemus lineatus		
Area/Gear		Type	Females n	Mean GSI	Standard Deviation	Females n	Mean GSI	Standard Deviation
SMP	30'	GN	44	4.79	1.67	14	2.49	0.93
	45'	GN	30	4.86	2.08	20	2.54	1.79
	20'	OT	6	3.20	0.60	0	-	-
	40'	OT	15	4.29	1.15	16	1.45	0.60
	60'	OT	2	6.70	1.68	1	3.38	-
SONGS	30'	GN*	45	4.64	1.81	24	2.17	1.21
	45'	GN	33	4.97	2.18	17	1.94	1.06
	20'	OT	2	4.99	1.82	0	-	-
	40'	OT	13	5.52	2.20	1	1.19	-
	60'	OT	0	-	-	0	-	-
DL	30'	GN**	46	4.44	1.41	11	2.14	0.77
	45'	GN	46	4.49	1.39	12	2.43	2.30
	20'	OT	30	3.30	1.22	0	-	-
	40'	OT	8	4.74	0.97	0	-	-
	60'	OT	0	-	-	0	-	-

* Includes data from replicates set adjacent the Unit 1 discharge.
** Includes data from all six replicates conducted in this area.

Gonosomatic indices (gonad wt/body wt x 100) for Seriphus politus and Genyonemus lineatus collected on June 27-28, 1979 in gill nets (GN) and otter trawls (OT) at varying depths in the San Mateo Point (SMP), San Onofre (SONGS) and Don Light (DL) areas.

SPECIES			Seriphus politus			Genyonemus lineatus		
Area/Gear Type			Females n	Mean GSI	Standard Deviation	Females n	Mean GSI	Standard Deviation
SMP	30'	GN	33	4.79	1.87	5	1.25	0.56
	45'	GN	5	3.70	0.72	9	1.77	0.68
	20'	OT	44	3.99	1.44	7	0.59	0.53
	40'	OT	0	-	-	0	-	-
	60'	OT	0	-	-	0	-	-
SONGS	30'	GN*	61	3.84	1.47	9	1.23	1.10
	45'	GN	23	4.16	1.20	2	2.59	0.16
	20'	OT	5	3.46	1.18	1	0.95	-
	40'	OT	7	3.74	1.35	58	0.72	1.07
	60'	OT	0	-	-	0	-	-
DL	30'	GN**	63	4.83	2.06	31	1.36	0.72
	45'	GN	19	4.22	1.24	29	0.96	0.60
	20'	OT	35	4.65	1.60	35	1.17	0.88
	40'	OT	0	-	-	0	-	-
	60'	OT	0	-	-	0	-	-

* Includes data from replicates set adjacent the Unit 1 discharge.
** Includes data from all six replicates conducted in this area.

Gonosomatic indices (gonad wt/body wt x 100) for Seriphus politus and Genyonemus lineatus collected on August 26-27, 1979 in gill nets (GN) and otter trawls (OT) at varying depths in the San Mateo Point (SMP), San Onofre (SONGS) and Don Light (DL) areas.

SPECIES			Seriphus politus			Genyonemus lineatus		
Area/Gear Type			Females n	Mean GSI	Standard Deviation	Females n	Mean GSI	Standard Deviation
SMP	30'	GN	22	3.03*	3.12	3	0.61*	0.03
	45'	GN	14	1.08	0.88	11	0.45	0.19
	20'	OT	13	0.59	0.15	6	0.61	0.34
	40'	OT	0	-	-	10	0.46	0.23
	60'	OT	0	-	-	0	-	-
SONGS	30'	GN**	51	1.48	1.17	13	0.70	0.37
	45'	GN	12	1.31	0.73	3	0.66	0.06
	20'	OT	14	0.98	0.79	3	0.90	0.34
	40'	OT	23	0.91	0.36	25	1.19	2.57
	60'	OT	0	-	-	0	-	-
DL	30'	GN***	60	1.93	1.69	32	0.82	0.43
	45'	GN	1	1.48	-	2	0.72	0.25
	20'	OT	25	1.34	1.04	15	0.49	0.30
	40'	OT	23	1.15	0.75	21	0.55	0.48
	60'	OT	0	-	-	0	-	-

* Significantly ($P < .05$) greater than 45-ft stations.
** Includes data from replicates set adjacent Unit 1 discharge.
*** Includes data from all six replicates in this area.

Gonosomatic indices (gonad wt/body wt x 100) for Seriphus politus and Genyonemus lineatus collected on October 16-17, 1979 in gill nets (GN) and otter trawls (OT) at varying depths in the San Mateo Point (SMP), San Onofre (SONGS) and Don Light (DL) areas.

SPECIES			Seriphus politus			Genyonemus lineatus		
Area/Gear		Type	Females n	Mean GSI	Standard Deviation	Females n	Mean GSI	Standard Deviation
SMP	30'	GN	18	0.647	0.062	1	2.418	--
	45'		2	0.717	0.002	1	0.930	--
	20'	OT	40	0.787	0.306	21	1.148	1.010
	40'		0	--	--	0	--	--
	60'		0	--	--	0	--	--
SONGS	30'	GN	13	0.925	0.052	4	1.403	0.232
	30'	DISCH.	18	1.036	0.046	8	3.127	1.899 *
	(30'	**	31	0.990	0.050	12	2.552	1.993)
	45'		20	0.869	0.054	13	2.214	1.504
	20'	OT	41	0.502	0.242	28	1.277	1.175
	40'		28	0.589	0.331	31	1.275	0.799
	60'		0	--	--	0	--	--
DL	30'	GN ***	37	0.880	0.068	16	1.022	1.130
	45'		6	0.715	0.129	1	0.808	--
	20'	OT	40	0.475	0.271	23	1.356	1.247
	40'		20	0.814	0.398 *	16	0.966	0.560
	60'		0	--	--	0	--	--

* Significantly ($P<0.05$) greater than corresponding gear type and depth station
** Includes data from replicates set adjacent Unit 1 discharge
*** Includes data from all 6 replicates in this area

Gonosomatic indices (gonad wt/body wt x 100) for Seriphus politus and Genyonemus lineatus collected on December 12-13, 1979 in gill nets (GN) and otter trawls (OT) at varying depths in the San Mateo Point (SMP), San Onofre (SONGS) and Don Light (DL) areas.

SPECIES			Seriphus politus			Genyonemus lineatus		
Area/Gear		Type	Females n	Mean GSI	Standard Deviation	Females n	Mean GSI	Standard Deviation
SMP	30'	GN	40	0.980	0.398	2	4.234	0.073*
	45'		17	0.996	0.297	10	2.790	0.825
	20'	OT	0	--	--	0	--	--
	40'		0	--	--	0	--	--
	60'		0	--	--	0	--	--
SONGS	30'	GN	8	0.838	0.370	18	4.222	1.128
	30'	DISCH.	3	1.076	0.134	13	4.038	0.637
	30'	**	5	0.694	0.403	5	4.699	1.947
	45'		19	0.920	0.344	1	3.750	--
	20'	OT	0	--	--	0	--	--
	40'		0	--	--	0	--	--
	60'		0	--	--	0	--	--
DL	30'	GN ***	0	--	--	1	4.574	--
	45'		2	1.175	0.106	0	--	--
	20'	OT	0	--	--	0	--	--
	40'		0	--	--	0	--	--
	60'		0	--	--	0	--	--

* Significantly ($P<0.05$) greater than corresponding gear type and depth station
** Includes data from replicates set adjacent Unit 1 discharge
*** Includes data from all 6 replicates in this area

H. SURVEY NOTES

FEBRUARY 15-16, 1979

Trawls

Small amounts of drift algae were present at the 20-ft isobath but not at other isobaths. Mats of fish eggs, probably Atherinopsis californiensis, adhered to drift algae.

Jack-up barge dredging operations prevented completion of replicate trawls 1 and 2 at the SONGS 40-ft station on February 15. Hydrowinch failure prevented the completion of replicate trawl 2 at the SONGS 60-ft station on February 15. All replicates not completed on February 15 were completed on February 16, in addition to regular sampling.

On February 15 trawl replicates 1 and 2 at the SONGS 20-ft station were completed after sunset.

Gill Nets

Shark predation was evident on fish caught in SONGS gill nets set at stations 1-1 and 4-1.

APRIL 17-18, 1979

Trawls

Replicate 1 at Don Light 20-ft station had a trawl line to depth ratio of 10:1.

Small amounts of drift algae with associated mats of fish eggs were collected in trawls taken on the 20-ft isobath at San Mateo Point.

Gill Nets

No comments.

JUNE 27-28, 1979

Trawls

Large amounts of drift algae in trawls conducted on the 20-ft isobath in all areas.

Gill Nets

No comments.

AUGUST 26-27, 1979

Trawls

No comments.

Gill Nets

No comments.

OCTOBER 16-17, 1979

Trawls

Porpoise and sea lions were observed in the area of the Don Light 60-ft trawl station.

Large Muricea californica in SONGS 40-ft replicate 1 trawl, indicate the presence of a rocky substratum in the area.

Gill Nets

A large (over 5 ft) unidentified shark was lost from the gill net at Don Light station 6-2 during net retrieval.

Sea lions observed around Don Light nets 8-1 and 8-2.

DECEMBER 12-13, 1979

Trawls

Large amounts of drift algae and eelgrass were collected in trawls taken on the 20-ft isobath at San Mateo Point.

Gill Nets

Shark predation evident on fish caught at Don Light Stations 6-1 and 6-2.

Kelco kelp cutter operating in the San Mateo kelp bed.

Sea lions observed in area of San Mateo Point gill net Stations 11-1 and 11-2.

Large quantities of Acrosorium uncinatum in gill nets set at 30 ft in the SONGS and Don Light areas.

Observations on embiotocid reproductive conditions during 1979 gill net and otter trawl sampling.

Species	Area/Depth/Station			Survey Date	Number of Individuals	Comment
Hyperprosopon argenteum	SONGS	30'	DISCHARGE (3-1)	April	2	Gravid female
	SMP	30'	(11-2)	April	1	Gravid female
	DL	45'	(9-1)	April	1	Gravid female
Phanerodon furcatus	SMP	45'	(9-1)	April	1	Gravid female
	SMP	45'	(9-2)	April	1	Gravid female
	SONGS	40'	(3)	June	1	Gravid female
	SONGS	45'	(4-1)	June	1	Female delivered 10 young

I. ANOMALOUS FISH

Anomalous fishes collected in gill nets during the 1979 Fish in Receiving Waters surveys at San Mateo Point (SMP), San Onofre (SONGS), SONGS Unit 1 Discharge, and Don Light (DL).

Species	Area/Depth/Station	Survey Date	Number of Individuals	Anomaly
Amphistichus argenteus	DL 30' (8-1)	August	1	Tumerous growth
Genyonemus lineatus	SONGS 45' (5-1)	October	1	Female with internal nematode parasites
Menticirrhus undulatus	SONGS 30' DISCHARGE (3-2)	October	1	Acanthocephalan parasite (external)
Paralabrax clathratus	DL 45' (10-2)	February	1	Pleurocercoid parasite attached to stomach.
Roncador stearnsii	SONGS 30' (2-2)	April	1	Nerocila sp. parasite on body
	SONGS 30' (2-2)	April	1	External copepod parasite
Seriphus politus	SONGS 30' (2-2)	April	1	Female with internal nematode parasites
	DL 30' (6-2)	April	1	Female with internal nematode parasites
	DL 45' (9-1)	April	2	Female with internal nematode parasites
	DL 45' (10-1)	April	3	Female with internal nematode parasites
	DL 45' (10-2)	April	4	Female with internal nematode parasites
	SONGS 30' (1-1)	June	2	Female with internal nematode parasites
	DL 30' (6-1)	June	1	Female with internal nematode parasites
	DL 30' (8-2)	June	2	Female with internal nematode parasites
	SONGS 45' (4-2)	June	1	Female with internal nematode parasites
	SONGS 30' (1-2)	August	1	Deformed mandible
	SMP 45' (14-1)	August	1	Deformed operculum
	SMP 30' (12-1)	August	3	Female with internal nematode parasites
	SONGS 30' (1-1)	October	1	Female with internal nematode parasites
	SONGS 30' DISCHARGE (3-2)	October	1	Female with internal nematode parasites
	SONGS 45' (5-1)	October	15	Female with internal nematode parasites
	SMP 30' (12-2)	October	1	Female with only one developing ovary
	SMP 30' (11-2)	December	1	Elongated caudal fin rays

Anomalous fishes collected in otter trawls conducted at 20, 40, and 60 ft during the 1979 Fish in Receiving Waters surveys at San Mateo Point (SMP), San Onofre (SONGS), and Don Light (DL).

Species	Area/Depth/Replicate	Survey Date	Number of Individuals	Anomaly
Genyonemus lineatus	SONGS 40' 3	August	1	Deformed mandible
	SMP 20' 4	October	1	Female with only one developing ovary.
Paralichthys californicus	SMP 20' 2	June	1	Partial ambicoloration
	DL 20' 1	June	1	Partial ambicoloration
	DL 20' 2	June	1	Partial ambicoloration
	SMP 20' 4	August	1	Partial ambicoloration
	SONGS 20' 4	August	1	Partial ambicoloration
	SONGS 20' 4	October	1	Partial ambicoloration
	DL 20' 4	October	1	Partial ambicoloration
Pleuronichthys verticalis	SMP 60' 3	June	1	Unidentified parasite leeches on head
Synodus lucioceps	SONGS 40' 1	October	1	Lironeca vulgaris in gill cavity
Seriphus politus	DL 20' 2	April	1	Female with internal nematode parasites
	DL 40' 3	April	1	Female with internal nematode parasites
	DL 20' 2	April	1	Lironeca vulgaris in gill cavity
	SONGS 40' 4	April	1	Deformed eye
	SONGS 40' 4	April	1	Deformed dorsum
	SMP 20' 3	June	1	Deformed mandible
	SONGS 20' 2	August	2	Female with internal nematode parasites
	DL 20' 2	August	1	Female with internal nematode parasites
	DL 40' 1	August	1	Male with internal nematode parasites
	SMP 20 2	October	1	Female with only one developing ovary

III. FISH - FISHERIES STATISTICS

Unpublished sportfisheries catch data from the California Department of Fish and Game Statistical Blocks 737, 756, 757, 801, and 802 are obtained each year in fulfillment of ETS section 3.1.2.a(1)B. The methods used in analyzing these data are presented below.

A. METHODS

Analysis of fisheries statistics is based on California Department of Fish and Game Statistical Block Catch Data for Blocks 737, 756, 757, 801, and 802. Each block covers an area approximately 10 minutes square. Block 756 is contiguous with the portion of the coastline in which SONGS Units 1, 2, and 3 are located. Blocks 757 and 802 are contiguous with Block 756, and Blocks 737 and 801 are contiguous with Block 757 and 802, respectively.

Data consists of the taxon and number of individuals per taxon caught by the sportfishing industry as represented by partyboat catch records for each of the aforementioned fish blocks. In addition, the number of angler hours and catch/effort for each block is tabulated.

Data utilized in this analysis is compiled by the California Department of Fish and Game on a yearly basis. This compilation of data normally requires two to three years; thus 1976, 1977, and 1978 data will be included in this report.

Total number of individuals of sport species captured in California Department of Fish and Game Blocks 737, 756, 757, 801, and 802 during 1976. (Numbers in parentheses indicate peak months.)

Common Name	Block Number 737	756	757	801	802
Pacific Bonito	3,391 (5)	13,996 (5)	3,297 (5)	2,926 (6)	2,586 (7)
Bluefin Tuna		1(10)	1 (7)	1 (7)	
Yellowtail	5 (9)	29 (7)	3(6,7,8)	1 (6)	
Pacific Mackerel	1,108(12)	1,261 (6)	1,219 (6)	303 (6)	129 (6)
Jack Mackerel	16 (2)	6 (1)	1 (1)	2(3,9)	
California Barracuda	1,031 (8)	18,989 (6)	2,691 (6)	1,815 (6)	2,698 (6)
California Sheephead	262(11)	722(10,12)	194 (6)	168(11)	143 (6)
Shark				12 (2)	
Bonito Shark		2(7,8)		1 (8)	2(10)
Spiny Dogfish				8 (3)	
Common Thresher				1 (7)	1 (8)
Bat Ray				1 (4)	1 (8)
Sting Ray				1 (3)	
Shovelnose Guitarfish				9 (2)	
Skate				1 (4)	
Jacksmelt	2(10)			4(12)	
Sablefish				15 (6)	
Lingcod	15 (1)	27 (1)	8(1,2,3,5)	72 (7)	17 (6)
California Halibut	59 (9)	352 (9)	102 (3)	100 (8)	96 (7)
Sanddab	2(4,6)	3(5,7,11)			
Flounder	41(11)	219(10)	37 (3)	16 (8)	181(12)
Cowcod	20 (3)	18 (1)	38 (3)		49(10)
Rockfish	8,792 (1)	25,517(10)	5,468 (3)	1,086 (4)	12,038(12)
Sculpin	822 (1)	4,033 (1)	1,669 (3)	757 (8)	396 (5)
Cabezon	129 (7)	253 (7)	72 (2)	27 (4)	16 (6)
Rock Bass	384 (5)	3,168 (7)	515 (5)		
Spotted Sand Bass				3 (8)	
Kelp Bass	4,719 (8)	19,815 (6)	4,720 (6)	4,157 (6)	3,957 (5)
Barred Sand Bass	4,320 (8)	24,538 (7)	2,436 (6)	3,049 (8)	4,298 (7)
Giant Sea Bass	4(5,6, 11,12)	6(10)	4 (7)	1(11)	
Salmon		3(5,6,7)	2 (5)		
King Salmon		2 (2)			1 (4)
Silver Salmon	1 (4)	1 (4)	1 (3)	1 (6)	
White Seabass	45(12)	321 (8)	15 (4)	48 (8)	50 (9)
Black Croaker				104(11)	89(10)
Spotfin Croaker		1(10)		1 (9)	
Yellowfin Croaker		33 (9)		22 (8)	21 (7)
White Croaker		709(11)		5,980 (8)	1,921 (8)
Queenfish				4(11)	
California Moray		1 (7)		1(11)	

Total number of individuals of sport species captured in California Department of Fish and Game Blocks 737, 756, 757, 801, and 802 during 1976. (Numbers in parentheses indicate peak months.)
(Continued)

Common Name	Block Number 737	756	757	801	802
California Lizardfish					2 (3)
California Needlefish		6(10)			
Opaleye	1 (5)				
Halfmoon	302(12)	114(12)	69(12)	43(11)	2(10)
Sargo	1 (5)	10 (9)	1 (3)	5 (8)	8(5,7,8)
Ocean Whitefish	428 (3)	327(10)	255(10)	86 (4)	69(12)
Kelpfishes			4 (1)		
Surfperch	1 (9)	2 (7)	17 (1)	3 (4)	
Rubberlip Surfperch		2(7,10)		2 (9)	1 (5)
Jumbo Squid	1,118 (7)	149 (8)	3 (8)	17 (9)	300 (8)
Miscellaneous Fish	9 (5)	2(5,8)	3 (5)	8 (6)	1(10)

Total number of individuals of sport species captured in California Department of Fish and Game Blocks 737, 756, 757, 801, and 802 during 1977. (Numbers in parentheses indicate peak months.)

Common Name	Block Number 737	756	757	801	802
Skipjack Tuna				1 (8)	1 (8)
Pacific Bonito	2,665 (3)	9,134 (3)	7,064 (3)	2,447 (4)	1,706 (4)
Yellowtail		42 (8)	5 (8)	2 (7)	10 (8)
Pacific Mackerel	9,633 (6)	19,992 (8)	12,708 (8)	5,767 (8)	6,001 (7)
Sierra				1 (8)	
Jack Mackerel		3 (9)	5 (9)	10 (9)	14 (1)
Pacific Butterfish			1 (9)		
Striped Marlin		1 (9)	1(10)		
California Barracuda	366 (6)	2,829 (7)	1,059 (8)	623 (8)	1,199 (7)
California Sheephead	199 (8)	953 (8)	282 (8)	90 (8)	99 (6)
Shark	2(11)				2 (8)
Bonito Shark		3 (8)		1 (8)	2(11)
Leopard Shark		1 (7)			
Spiny Dogfish	201(11)		5(12)		
Common Thresher		1(12)			
Shovelnose Guitarfish		8(10,11)	6(10)		
Smelt			4(10)		
Jack smelt	4 (2)	5(7,10)	3(12)		
Sablefish				1 (6)	
Lingcod	6(5,6)	12(1,6)	7(8,11)	2(9,11)	6 (1)
California Halibut	56 (5)	375 (8)	69 (8)	113 (8)	122 (7)
Sanddab	2(6,9)	7 (8)			
Flounder	13(6,10)	154(10)	49(10)	75 (9)	107(10)
Cow Cod	6 (2)	5 (2)	6 (2)	1(12)	4 (1)
Rockfish	5,156 (8)	18,381(10)	8,878 (8)	2,754 (9)	11,286 (1)
Sculpin	912 (8)	2,217 (8)	1,004 (9)	548 (8)	408 (6)
Cabezon	28(11)	65 (6)	39 (8)	21 (9)	14 (6)
Rock Bass	118 (7)	1,995 (2)		21 (5)	180 (7)
Kelp Bass	2,254 (8)	13,443 (7)	5,379 (8)	2,774 (8)	5,813 (6)
Barred Sand Bass	3,166 (6)	22,107 (7)	3,947 (6)	3,918 (8)	4,632 (7)
Giant Sea Bass		6 (8)	2(8,11)		
Trigger Fish		16(12)	2(11)		
White Sea Bass	33 (6)	195 (6)	63(10)	74 (7)	137 (5)
Black Croaker		23 (9)	9(10,11)	11 (9)	19 (5)
Spotfin Croaker		1 (5)			
Yellowfin Croaker		19 (7)	9 (8)	31 (7)	3 (8)
White Croaker	986(10)	1,121 (7)	553(10)	688 (9)	591 (9)
Queenfish		9(10)	3 (6)	37 (9)	86 (5)
Flying Fish				1 (9)	
Eel	1 (6)				
California Moray	1 (6)				
California Lizardfish		2 (8)			
Opaleye		4(6,7,8,12)	2(9,11)		

Total number of individuals of sport species captured in California Department of Fish and Game Blocks 737, 756, 757, 801, and 802 during 1977. (Numbers in parentheses indicate peak months.)
(Continued)

Common Name	Block Number 737	756	757	801	802
California Needlefish		2 (8)			
Halfmoon	812 (8)	1,655 (2)	1,783 (8)	23 (9)	64 (4)
Blacksmith			1(10)	1 (6)	
Sargo	4 (2)	276 (1)	2(4,10)	35 (8)	2(5,8)
Dolphinfish					1 (8)
Ocean Whitefish	251 (2)	491 (9)	326 (4)	84 (9)	68 (1)
Surfperch	5(10)		1(11)		
Barred Surfperch		1 (9)			
Black Surfperch			1 (4)		
Rubberlip Surfperch		1 (5)		3 (4)	
Octopus			1(10)		
Miscellaneous Fish		1(10)	14 (8)	35 (7)	1 (8)

Total number of individuals of sport species captured in California Department of Fish and Game Blocks 737, 756, 757, 801, and 802 during 1978. (Numbers in parentheses indicate peak months.)

Common Name	Block Number 737	756	757	801	802
Yellowfin Tuna				23(11)	
Skipjack Tuna				13(11)	
Pacific Bonito	5,539 (8)	33,894(10)	17,504 (9)	11,196 (9)	4,300(10)
Albacore				8(11)	
Yellowtail	7(5,6,7)	97 (9)	15(6,9)	105 (9)	13 (9)
Pacific Mackerel	21,103 (8)	38,131 (9)	40,128 (8)	19,187 (9)	8,715(10)
Jack Mackerel	34 (8)	281 (9)	8 (8)		225(12)
Swordfish		1 (9)			1 (9)
Striped Marlin		1 (9)	1(10)		1 (9)
California Barracuda	656 (6)	2,007 (6)	2,752 (6)	731 (7)	87 (6)
California Sheephead	199 (8)	871(11)	286 (8)	428 (5)	286(11)
Rock Wrasse		1 (8)	1 (2)		1(10)
Bonito Shark	4 (8)	9 (6)	11(7,11)		1(11)
Spiny Dogfish	27 (1)	3 (3)	2 (1)		
Leopard Shark			1(10)		
Common Thresher	2(4,8)	3(5,6,8)	1 (4)		
Smooth Hammerhead	2(7,8)				
Swell Shark	1 (2)	1 (1)			
Blue Shark	8(12)	1(11)			
Horn Shark	1 (4)				
Shovelnose Guitarfish		1 (9)			
Smelt	4 (2)		2 (1)		
Jacksmelt	15 (7)		6 (8)		
Smelt, Top or Jack	3 (4)				
Sablefish		7(10)			83 (2)
Lingcod	7(3,7)	13 (8)	10 (6)	2 (9)	6(11)
California Halibut	19 (5)	347 (6)	55 (6)	119 (7)	41(3,4)
Flounder	19 (8)	82(10)	13(6,8)	35 (9)	100(11)
Cow Cod		5(12)	1(12)		6(11)
Rockfish	3,947 (8)	9,978(10)	4,084 (6)	619 (7)	13,895(11)
Sculpin	819 (7)	1,661 (7)	651 (6)	754 (8)	223(11,12)
Cabezon	49 (2)	114 (6)	44 (6)	24 (2)	7(5,10)
Rock Bass		90(10)			
Kelp Bass	2,876 (6)	12,786 (6)	7,197 (6)	5,722 (7)	2,690 (5)
Barred Sand Bass	2,082 (8)	15,013 (6)	3,300 (8)	7,340 (9)	2,526 (9)
Giant Sea Bass		2(9,11)	2(4,9)		1 (4)
Triggerfish	9 (4)	7 (7)	6 (6)		1 (5)
Salmon	1 (8)				
Silver Salmon		4 (5)			
White Sea Bass	8 (5)	28 (6)	22(1,2)	1 (7)	6 (3)
Black Croaker	3(4,7,8)	35 (6)	4 (5)	3 (4)	11 (5)
Spotfin Croaker		4 (2)	1 (1)		
Yellowfin Croaker		10 (8)	2 (6)	1 (7)	

Total number of individuals of sport species captured in California Department of Fish and Game Blocks 737, 756, 757, 801, and 802 during 1978. (Numbers in parentheses indicate peak months.)
(Continued)

Common Name	Block Number 737	756	757	801	802
White Croaker	143 (2)	2,720 (5)	817 (1)	683(10)	383(10)
Queenfish		4 (4)			
Flying Fish		1 (8)			
California Moray				2(5,12)	
Opaleye		5(2,10)			
Halfmoon	289 (4)	397 (2)	149 (6)	223(10)	15(11)
Blacksmith	2 (2)	59 (2)			
Sargo	14 (6)	80 (2)	9 (2)	45 (8)	11 (9)
Salema		2(7,8)		2 (8)	1(10)
Ocean Whitefish	237 (7)	126(12)	252 (6)	66 (9)	184 (2)
Pacific Hake				1 (8)	
Surfperch	1 (8)			1 (8)	
Barred Surfperch		1 (7)			
Rubberlip Surfperch	2(7,8)	8 (6)	2 (8)		1(10)
Octopus	2 (2)	1(12)			
Miscellaneous Fish	8 (3)	36 (5)	45 (5)	1 (7)	

IV. FISH - IMPINGEMENT

The impingement study was conducted in compliance with ETS Section 3.1.2.a.(2) (Heat Treatment) and ETS Section 4.2 (Normal Operation) to provide data on the fish impinged by SONGS Unit 1.

A. METHODS

A detailed description of impingement sampling methods is given in ETS procedures for both normal operation (SCE R&D Procedures EMP 25-5-25) and heat treatments (SCE R&D Procedures EMP 25-5-58). A general review is presented below.

1. Normal Operation

Samples are collected at least weekly during normal flow operations. These samples are based upon a period of 24 h of continuous operations. Abundance data collected on an operational period of less than 24 h will be standardized to a 24 h operational period.

The data collected consists of the total number of taxa, number of individuals per taxon, and the aggregate weight per taxon of fish impinged on the traveling screens and bar rakes during the sampling period. Standard length for a maximum of 125 individuals per select species and sex for a maximum of 50 individuals per select species are also determined.

2. Heat Treatment

During each heat treatment, fish collected by traveling screens and bar rakes were identified, enumerated, weighed, and measured. Data collected is the same as described for normal operation sampling.

B. RESULTS

Fish impingement data collected during 1979 were obtained from six heat treatment, and 93 normal operation samples. Data collected are presented in the following tables. The number of individuals and aggregate weight per taxon are summarized for each normal operation and heat treatment collection date. Length frequency distribution for select species, including Seriphus politus, Genyonemus lineatus, Phanerodon furcatus, and Hyperprosopon argenteum are summarized in histograms by heat treatment interval. Sex determination for S. politus, G. lineatus, P. furcatus, and H. argenteum is summarized in tabular form also by heat treatment interval. These select species were chosen because of their historical importance in impingement samples, and because they were sufficiently abundant to allow meaningful comparisons of length-frequency distributions and sex ratios.

Species composition, aggregate numbers and weight (kg) of fishes taken during normal operation in 1979.

PLANT=SAN ONOFRE UNIT=1 DATE=JANUARY 3, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	13	0.11
CYMATOGASTER AGGREGATA	3	0.11
GENYONEMUS LINEATUS	4	0.11
HYPERPROSOPON ARGENTEUM	21	0.45
PEPRILUS SIMILLIMUS	1	0.11
PHANERODON FURCATUS	2	0.11
SCORPAENA GUTTATA	1	0.11
SERIPHUS POLITUS	347	3.52
TORPEDO CALIFORNICA	4	42.64
XENISTIUS CALIFORNIENSIS	3	0.23
TOTAL SPECIES	399	47.50

PLANT=SAN ONOFRE UNIT=1 DATE=JANUARY 4, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	13	0.11
CYMATOGASTER AGGREGATA	1	0.11
HYPERPROSOPON ARGENTEUM	34	0.57
MENTICIRRHUS UNDULATUS	1	0.11
PHANERODON FURCATUS	2	0.11
SERIPHUS POLITUS	376	2.38
TOTAL SPECIES	427	3.39

PLANT=SAN ONOFRE UNIT=1 DATE=JANUARY 9, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	33	0.23
ATHERINOPSIS CALIFORNIENSIS	2	0.23
BRACHYISTIUS FRENATUS	1	0.11
CHEILOTREMA SATURNUM	2	0.11
CYMATOGASTER AGGREGATA	21	0.68
CYNOSCION NOBILIS	1	0.23
DAMALICHTHYS VACCA	3	0.79
ENGRAULIS MORDAX	29	0.23
GENYONEMUS LINEATUS	30	0.57
HYPERPROSOPON ARGENTEUM	155	4.31
HYPSOPSETTA GUTTULATA	2	0.45
LEURESTHES TENUIS	1	0.11
MENTICIRRHUS UNDULATUS	3	0.57
PEPRILUS SIMILLIMUS	2	0.11
PHANERODON FURCATUS	23	1.02
PORICHTHYS MYRIASTER	2	0.68
SCORPAENA GUTTATA	3	0.34
SEBASTES RASTRELLIGER	1	0.11
SERIPHUS POLITUS	756	14.74
SQUALUS ACANTHIAS	5	13.83
SYNGNATHUS	2	0.11
TORPEDO CALIFORNICA	6	63.73
UROLOPHUS HALLERI	2	0.57
XYSTREURYS LIOLEPIS	1	0.23
TOTAL SPECIES	1086	104.09

PLANT=SAN ONOFRE UNIT=1 DATE=JANUARY 11, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	38	0.23
ATHERINOPS AFFINIS	1	0.11
ATHERINOPSIS CALIFORNIENSIS	4	0.34
CYMATOGASTER AGGREGATA	7	0.11
DAMALICHTHYS VACCA	1	0.23
EMBIOTOCA JACKSONI	1	0.23
ENGRAULIS MORDAX	54	0.23
GENYONEMUS LINEATUS	41	0.57
HETEROSTICHUS ROSTRATUS	1	0.11
HYPERPROSOPON ARGENTEUM	102	3.06
MEDIALUNA CALIFORNIENSIS	1	0.23
MENTICIRRHUS UNDULATUS	3	0.11
OTOPHIDIUM SCRIPPSI	1	0.11
PARALABRAX NEBULIFER	1	0.11
PARALICHTHYS CALIFORNICUS	1	0.11
PEPRILUS SIMILLIMUS	14	0.11
PHANERODON FURCATUS	4	0.23
SCORPAENA GUTTATA	2	0.23
SERIPHUS POLITUS	1035	16.90
TORPEDO CALIFORNICA	10	101.15
UROLOPHUS HALLERI	1	0.11
XENISTIUS CALIFORNIENSIS	2	0.11
TOTAL SPECIES	1325	124.73

PLANT=SAN ONOFRE UNIT=1 DATE=JANUARY 16, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	22	0.11
ATHERINOPSIS CALIFORNIENSIS	39	5.90
BRACHYISTIUS FRENATUS	1	0.11
CITHARICHTHYS STIGMAEUS	3	0.11
CYMATOGASTER AGGREGATA	4	0.11
DAMALICHTHYS VACCA	2	0.45
EMBIOTOCA JACKSONI	1	0.11
ENGRAULIS MORDAX	3	0.11
GENYONEMUS LINEATUS	36	0.68
HYPERPROSOPON ARGENTEUM	177	7.37
HYPSOPSETTA GUTTULATA	1	0.34
LEPTOCOTTUS ARMATUS	2	0.11
MEDIALUNA CALIFORNIENSIS	2	0.45
MENTICIRRHUS UNDULATUS	10	2.15
PARALABRAX CLATHRATUS	1	0.23
PARALABRAX NEBULIFER	3	0.45
PARALICHTHYS CALIFORNICUS	15	3.18
PEPRILUS SIMILLIMUS	15	0.34
PHANERODON FURCATUS	4	0.23
RHACOCHILUS TOXOTES	1	0.57
RHINOBATOS PRODUCTUS	1	0.23
RONCADOR STEARNSI	1	0.45
SCORPAENA GUTTATA	6	0.57
SERIPHUS POLITUS	536	13.38
SQUALUS ACANTHIAS	12	22.23
SYNGNATHUS	4	0.11
TORPEDO CALIFORNICA	33	327.16
TRIAKIS SEMIFASCIATA	1	0.45
UROLOPHUS HALLERI	17	7.94
TOTAL SPECIES	953	395.63

PLANT=SAN ONOFRE UNIT=1 DATE=JANUARY 18, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	18	0.11
ATHERINOPS AFFINIS	1	0.11
ATHERINOPSIS CALIFORNIENSIS	6	0.68
CYMATOGASTER AGGREGATA	7	0.11
DAMALICHTHYS VACCA	2	0.45
ENGRAULIS MORDAX	1	0.11
GENYONEMUS LINEATUS	7	0.11
HYPERPROSOPON ARGENTEUM	87	2.38
MENTICIRRHUS UNDULATUS	1	0.11
PARALABRAX NEBULIFER	1	0.11
PEPRILUS SIMILLIMUS	4	0.11
PHANERODON FURCATUS	4	0.23
PLEURONICHTHYS COENOSUS	1	0.23
RHINOBATOS PRODUCTUS	1	0.68
SERIPHUS POLITUS	363	11.68
SQUALUS ACANTHIAS	7	14.97
TORPEDO CALIFORNICA	7	54.55
UROLOPHUS HALLERI	3	1.25
XENISTIUS CALIFORNIENSIS	2	0.23
TOTAL SPECIES	523	88.21

PLANT=SAN ONOFRE UNIT=1 DATE=JANUARY 23, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	8	0.11
ANISOTREMUS DAVIDSONI	1	0.79
ATHERINOPSIS CALIFORNIENSIS	2	0.68
BRACHYISTIUS FRENATUS	1	0.11
CHROMIS PUNCTIPINNIS	1	0.11
CYMATOGASTER AGGREGATA	14	0.34
CYNOSCION NOBILIS	2	0.57
DAMALICHTHYS VACCA	4	1.13
ENGRAULIS MORDAX	2	0.11
GENYONEMUS LINEATUS	13	0.91
HETEROSTICHUS ROSTRATUS	1	0.11
HYPERPROSOPON ARGENTEUM	202	5.33
HYPSOPSETTA GUTTULATA	1	0.34
MEDIALUNA CALIFORNIENSIS	1	0.34
MENTICIRRHUS UNDULATUS	4	0.23
OTOPHIDIUM SCRIPPSI	1	0.23
PARALABRAX CLATHRATUS	1	0.11
PARALABRAX NEBULIFER	2	0.11
PEPRILUS SIMILLIMUS	18	0.23
PHANERODON FURCATUS	57	3.18
PORICHTHYS MYRIASTER	1	0.57
SCORPAENA GUTTATA	4	0.34
SERIPHUS POLITUS	894	32.43
SQUALUS ACANTHIAS	83	155.13
TORPEDO CALIFORNICA	4	40.71
XENISTIUS CALIFORNIENSIS	7	0.79
TOTAL SPECIES	1329	245.04

PLANT=SAN ONOFRE UNIT=1 DATE=JANUARY 25, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	1	0.11
CYMATOGASTER AGGREGATA	10	0.23
DAMALICHTHYS VACCA	2	0.34
GENYONEMUS LINEATUS	3	0.45
HYPERPROSOPON ARGENTEUM	56	1.47
PARALICHTHYS CALIFORNICUS	1	0.57
PEPRILUS SIMILLIMUS	5	0.11
PHANERODON FURCATUS	12	1.13
PLATYRHINOIDIS TRISERIATA	1	0.34
SCORPAENA GUTTATA	2	0.34
SERIPHUS POLITUS	145	2.84
SQUALUS ACANTHIAS	8	16.33
SYNGNATHUS	1	0.11
TORPEDO CALIFORNICA	2	19.73
TOTAL SPECIES	249	44.10

PLANT=SAN ONOFRE UNIT=1 DATE=JANUARY 30, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	12	0.23
ATHERINOPSIS CALIFORNIENSIS	5	0.68
CYMATOGASTER AGGREGATA	2	0.11
CYNOSCION NOBILIS	1	0.11
GIBBONSIA MONTEREYENSIS	1	0.11
HYPERPROSOPON ARGENTEUM	18	0.91
PARALABRAX CLATHRATUS	1	0.11
PEPRILUS SIMILLIMUS	6	0.11
PHANERODON FURCATUS	6	0.23
PLATYRHINOIDIS TRISERIATA	1	1.13
SCORPAENA GUTTATA	2	0.11
SERIPHUS POLITUS	150	2.49
TORPEDO CALIFORNICA	2	10.89
TRACHURUS SYMMETRICUS	4	0.57
TOTAL SPECIES	211	17.79

PLANT=SAN ONOFRE UNIT=1 DATE=FEBRUARY 2, 1979

SPNAME	COUNT	WEIGHT
AMPHISTICHUS ARGENTEUS	1	0.23
ANCHOA COMPRESSA	62	0.79
ATHERINOPSIS CALIFORNIENSIS	116	15.08
BRACHYISTIUS FRENATUS	1	0.11
CHEILOTREMA SATURNUM	1	0.11
CITHARICHTHYS STIGMAEUS	23	0.23
CYMATOGASTER AGGREGATA	2	0.11
CYNOSCION NOBILIS	2	0.23
DAMALICHTHYS VACCA	2	0.57
ENGRAULIS MORDAX	2	0.11
GENYONEMUS LINEATUS	104	3.18
HETERODONTUS FRANCISCI	2	0.11
HYPERPROSOPON ARGENTEUM	142	4.08
HYPSOPSETTA GUTTULATA	2	0.91
LEURESTHES TENUIS	2	0.11
MENTICIRRHUS UNDULATUS	21	1.13
MYLIOBATIS CALIFORNICA	2	0.79
OTOPHIDIUM SCRIPPSI	4	0.23
PARALABRAX NEBULIFER	3	0.68
PARALICHTHYS CALIFORNICUS	6	2.38
PEPRILUS SIMILLIMUS	1	0.11
PHANERODON FURCATUS	40	1.02
PLATYRHINOIDIS TRISERIATA	4	1.93
PLEURONICHTHYS RITTERI	1	0.11
PORICHTHYS MYRIASTER	1	0.45
SCORPAENA GUTTATA	9	0.79
SEBASTES RASTRELLIGER	1	0.23
SERIPHUS POLITUS	1523	54.77
SQUALUS ACANTHIAS	51	112.72
TORPEDO CALIFORNICA	6	50.69
UMBRINA RONCADOR	3	0.11
UROLOPHUS HALLERI	6	2.38
XENISTIUS CALIFORNIENSIS	2	0.11
TOTAL SPECIES	2148	256.59

PLANT=SAN ONOFRE UNIT=1 DATE=FEBRUARY 5, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	15	0.23
ATHERINOPS AFFINIS	9	0.23
ATHERINOPSIS CALIFORNIENSIS	28	3.06
CYMATOGASTER AGGREGATA	30	0.68
ENGRAULIS MORDAX	1	0.11
GENYONEMUS LINEATUS	16	1.47
HYPERPROSOPON ARGENTEUM	160	3.86
HYPSOBLENNIUS GILBERTI	1	0.11
HYPSYPOPS RUBICUNDA	1	0.34
MENTICIRRHUS UNDULATUS	15	2.04
MUSTELUS HENLEI	1	0.45
OTOPHIDIUM SCRIPPSI	2	0.11
PARALABRAX NEBULIFER	1	0.34
PARALICHTHYS CALIFORNICUS	1	0.11
PEPRILUS SIMILLIMUS	11	0.34
PHANERODON FURCATUS	22	1.02
PORICHTHYS MYRIASTER	3	0.11
RHINOBATOS PRODUCTUS	1	8.39
SERIPHUS POLITUS	1034	34.25
SYNGNATHUS	1	0.11
TORPEDO CALIFORNICA	9	88.57
UMBRINA RONCADOR	2	0.11
UROLOPHUS HALLERI	2	0.34
TOTAL SPECIES	1366	146.38

PLANT=SAN ONOFRE UNIT=1 DATE=FEBRUARY 8, 1979

SPNAME	COUNT	WEIGHT
ATHERINOPSIS CALIFORNIENSIS	1	0.11
CYMATOGASTER AGGREGATA	5	0.23
EMBIOTOCA JACKSONI	1	0.23
GENYONEMUS LINEATUS	2	0.34
HYPERPROSOPON ARGENTEUM	105	2.61
HYPSOBLENNIUS GILBERTI	1	0.11
OTOPHIDIUM SCRIPPSI	1	0.34
PARALABRAX CLATHRATUS	1	0.11
PEPRILUS SIMILLIMUS	3	0.11
PHANERODON FURCATUS	5	0.45
SARDA CHILIENSIS	1	0.68
SCORPAENA GUTTATA	1	0.11
SERIPHUS POLITUS	137	2.84
UROLOPHUS HALLERI	1	0.45
XENISTIUS CALIFORNIENSIS	2	0.34
TOTAL SPECIES	267	9.06

PLANT=SAN ONOFRE UNIT=1 DATE=FEBRUARY 13, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	1	0.11
CYMATOGASTER AGGREGATA	2	0.11
HYPERPROSOPON ARGENTEUM	4	0.11
PHANERODON FURCATUS	1	0.11
SCORPAENA GUTTATA	2	0.23
SERIPHUS POLITUS	14	0.23
TOTAL SPECIES	24	0.90

PLANT=SAN ONOFRE UNIT=1 DATE=FEBRUARY 16, 1979

SPNAME	COUNT	WEIGHT
AMPHISTICHUS ARGENTEUS	2	0.91
ANCHOA COMPRESSA	8	0.11
ATHERINOPS AFFINIS	1	0.11
ATHERINOPSIS CALIFORNIENSIS	1	0.11
CYMATOGASTER AGGREGATA	23	0.57
ENGRAULIS MORDAX	1	0.11
GENYONEMUS LINEATUS	30	2.27
HYPERPROSOPON ARGENTEUM	786	28.69
PEPRILUS SIMILLIMUS	2	0.23
PHANERODON FURCATUS	7	0.68
SCORPAENICHTHYS MARMORATUS	1	0.11
SERIPHUS POLITUS	1034	48.31
TORPEDO CALIFORNICA	3	29.82
XENISTIUS CALIFORNIENSIS	4	0.34
TOTAL SPECIES	1903	112.37

PLANT=SAN ONOFRE UNIT=1 DATE=FEBRUARY 20, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	4	0.11
ANISOTREMUS DAVIDSONI	1	0.11
ATHERINOPS AFFINIS	2	0.11
ATHERINOPSIS CALIFORNIENSIS	2	0.23
CYMATOGASTER AGGREGATA	442	9.53
CYNOSCION NOBILIS	2	0.23
ENGRAULIS MORDAX	1	0.11
GENYONEMUS LINEATUS	143	8.73
HYPERPROSOPON ARGENTEUM	2424	83.58
MENTICIRRHUS UNDULATUS	1	0.11
OTOPHIDIUM SCRIPPSI	1	0.11
PEPRILUS SIMILLIMUS	4	0.11
PHANERODON FURCATUS	15	1.02
PLATYRHINOIDIS TRISERIATA	3	0.79
RHINOBATOS PRODUCTUS	1	0.11
SCORPAENA GUTTATA	1	0.11
SERIPHUS POLITUS	6944	310.15
TORPEDO CALIFORNICA	7	72.46
TRACHURUS SYMMETRICUS	2	0.23
UROLOPHUS HALLERI	9	3.18
XENISTIUS CALIFORNIENSIS	17	0.91
TOTAL SPECIES	10026	492.03

PLANT=SAN ONOFRE UNIT=1 DATE=FEBRUARY 27, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	15	0.11
ATHERINOPS AFFINIS	1	0.11
CYMATOGASTER AGGREGATA	45	0.91
ENGRAULIS MORDAX	1	0.11
GENYONEMUS LINEATUS	13	0.57
HYPERPROSOPON ARGENTEUM	151	3.63
MENTIGIRRHUS UNDULATUS	4	0.11
MUSTELUS CALIFORNICUS	1	1.81
OTOPHIDIUM SCRIPPSI	1	0.11
PARALICHTHYS CALIFORNICUS	3	1.13
PEPRILUS SIMILLIMUS	167	2.72
PHANERODON FURCATUS	6	0.45
PLATYRHINOIDIS TRISERIATA	7	2.15
PSEUDUPENEUS DENTATUS	1	0.23
SCORPAENA GUTTATA	3	0.34
SERIPHUS POLITUS	846	24.95
UROLOPHUS HALLERI	3	0.79
XENISTIUS CALIFORNIENSIS	3	0.11
TOTAL SPECIES	1271	40.34

PLANT=SAN ONOFRE UNIT=1 DATE=MARCH 6, 1979

SPNAME	COUNT	WEIGHT
CYMATOGASTER AGGREGATA	29	0.57
HYPERPROSOPON ARGENTEUM	25	0.68
PHANERODON FURCATUS	5	0.45
SCORPAENA GUTTATA	2	0.11
SERIPHUS POLITUS	377	5.56
TORPEDO CALIFORNICA	1	23.59
XENISTIUS CALIFORNIENSIS	1	0.11
TOTAL SPECIES	440	31.07

PLANT=SAN ONOFRE UNIT=1 DATE=MARCH 13, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	2	0.11
ANISOTREMUS DAVIDSONI	1	0.11
ATHERINOPS AFFINIS	5	0.57
CYMATOGASTER AGGREGATA	97	2.15
CYNOSCION NOBILIS	2	0.23
DAMALICHTHYS VACCA	1	0.45
EMBIOTOCA JACKSONI	7	1.47
ENGRAULIS MORDAX	2	0.11
GENYONEMUS LINEATUS	39	4.08
GIRELLA NIGRICANS	1	0.91
HYPERPROSOPON ARGENTEUM	91	2.61
HYPSOBLENNIUS JENKINSI	1	0.11
HYPSOPSETTA GUTTULATA	1	0.23
MENTICIRRHUS UNDULATUS	1	0.23
PARALICHTHYS CALIFORNICUS	2	1.13
PEPRILUS SIMILLIMUS	14	0.23
PHANERODON FURCATUS	41	1.25
RHINOBATOS PRODUCTUS	1	10.32
SCORPAENA GUTTATA	1	0.34
SERIPHUS POLITUS	4873	120.88
TORPEDO CALIFORNICA	2	16.90
UROLOPHUS HALLERI	1	0.57
XENISTIUS CALIFORNIENSIS	11	0.68
TOTAL SPECIES	5197	165.67

PLANT=SAN ONOFRE UNIT=1 DATE=MARCH 15, 1979

SPNAME	COUNT	WEIGHT
ATHERINOPS AFFINIS	2	0.23
CYMATOGASTER AGGREGATA	6	0.11
CYNOSCION NOBILIS	1	0.11
EMBIOTOCA JACKSONI	5	3.40
GENYONEMUS LINEATUS	3	1.59
HYPERPROSOPON ARGENTEUM	15	0.34
MEDIALUNA CALIFORNIENSIS	2	0.11
PARALICHTHYS CALIFORNICUS	1	1.36
PHANERODON FURCATUS	4	0.34
SCORPAENA GUTTATA	2	0.23
SERIPHUS POLITUS	605	12.36
TORPEDO CALIFORNICA	1	12.25
UROLOPHUS HALLERI	1	0.23
XENISTIUS CALIFORNIENSIS	1	0.11
TOTAL SPECIES	649	32.77

PLANT=SAN ONOFRE UNIT=1 DATE=MARCH 20, 1979

SPNAME	COUNT	WEIGHT
ATHERINOPS AFFINIS	1	0.11
ATHERINOPSIS CALIFORNIENSIS	4	0.23
CYMATOGASTER AGGREGATA	5	0.11
ENGRAULIS MORDAX	7	0.11
GENYONEMUS LINEATUS	1	0.23
HYPERPROSOPON ARGENTEUM	22	0.34
PEPRILUS SIMILLIMUS	1	0.11
PHANERODON FURCATUS	2	0.11
SERIPHUS POLITUS	1203	11.45
TORPEDO CALIFORNICA	1	3.97
UROLOPHUS HALLERI	3	1.13
XENISTIUS CALIFORNIENSIS	1	0.11
TOTAL SPECIES	1251	18.01

PLANT=SAN ONOFRE UNIT=1 DATE=MARCH 22, 1979

SPNAME	COUNT	WEIGHT
ATHERINOPS AFFINIS	3	0.23
ATHERINOPSIS CALIFORNIENSIS	3	0.11
CITHARICHTHYS STIGMAEUS	1	0.11
CYMATOGASTER AGGREGATA	3	0.11
EMBIOTOCA JACKSONI	1	0.23
GENYONEMUS LINEATUS	4	0.11
HYPERPROSOPON ARGENTEUM	22	0.68
MEDIALUNA CALIFORNIENSIS	1	0.34
PEPRILUS SIMILLIMUS	10	0.23
PHANERODON FURCATUS	2	0.23
SERIPHUS POLITUS	853	19.73
UROLOPHUS HALLERI	13	5.78
XENISTIUS CALIFORNIENSIS	1	0.11
TOTAL SPECIES	917	28.00

PLANT=SAN ONOFRE UNIT=1 DATE=MARCH 27, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	1	0.11
ATHERINOPS AFFINIS	3	0.11
ATHERINOPSIS CALIFORNIENSIS	3	0.11
CHEILOTREMA SATURNUM	1	0.23
CYMATOGASTER AGGREGATA	4	0.11
CYNOSCION NOBILIS	1	0.23
EMBIOTOCA JACKSONI	6	1.02
GENYONEMUS LINEATUS	3	0.23
HYPERPROSOPON ARGENTEUM	25	0.68
PARALABRAX NEBULIFER	1	0.11
PARALICHTHYS CALIFORNICUS	1	0.23
PEPRILUS SIMILLIMUS	1	0.11
PHANERODON FURCATUS	5	0.45
SERIPHUS POLITUS	1089	22.45
TORPEDO CALIFORNICA	1	6.92
UROLOPHUS HALLERI	4	1.13
XENISTIUS CALIFORNIENSIS	1	0.11
TOTAL SPECIES	1150	34.34

PLANT=SAN ONOFRE UNIT=1 DATE=MARCH 29, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	49	0.11
ANISOTREMUS DAVIDSONI	4	0.23
ATHERINOPS AFFINIS	49	1.25
ATHERINOPSIS CALIFORNIENSIS	272	31.64
CITHARICHTHYS STIGMAEUS	4	0.11
CYMATOGASTER AGGREGATA	18	0.45
DAMALICHTHYS VACCA	5	1.70
EMBIOTOCA JACKSONI	12	2.95
ENGRAULIS MORDAX	8	0.11
GENYONEMUS LINEATUS	112	5.90
GYMNURA MARMORATA	2	7.71
HETEROSTICHUS ROSTRATUS	5	0.34
HYPERPROSOPON ARGENTEUM	154	5.22
HYPSOBLENNIUS JENKINSI	4	0.11
HYPSOPSETTA GUTTULATA	4	0.57
LEURESTHES TENUIS	67	0.68
MEDIALUNA CALIFORNIENSIS	9	2.84
MENTICIRRHUS UNDULATUS	33	4.31
MYLIOBATIS CALIFORNICA	4	12.59
OTOPHIDIUM SCRIPPSI	5	0.57
PARALABRAX CLATHRATUS	1	0.11
PARALABRAX NEBULIFER	1	0.45
PARALICHTHYS CALIFORNICUS	2	0.23
PEPRILUS SIMILLIMUS	10	0.34
PHANERODON FURCATUS	32	2.27
PLATYRHINOIDIS TRISERIATA	2	1.59
PLEURONICHTHYS COENOSUS	1	0.11
PLEURONICHTHYS VERTICALIS	1	0.23
SCORPAENA GUTTATA	7	0.45
SCORPAENICHTHYS MARMORATUS	1	0.23
SERIPHUS POLITUS	7366	143.68
SPHYRAENA ARGENTEA	1	0.34
SQUALUS ACANTHIAS	4	5.33
SYNGNATHUS	52	0.11
TORPEDO CALIFORNICA	5	68.61
UROLOPHUS HALLERI	40	14.74
XENISTIUS CALIFORNIENSIS	2	0.11
TOTAL SPECIES	8348	318.32

PLANT=SAN ONOFRE UNIT=1 DATE=APRIL 3, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	1	0.11
ATHERINOPSIS CALIFORNIENSIS	5	0.45
CYMATOGASTER AGGREGATA	6	0.11
EMBIOTOCA JACKSONI	1	0.11
ENGRAULIS MORDAX	1	0.11
GENYONEMUS LINEATUS	1	0.11
HYPERPROSOPON ARGENTEUM	25	0.68
MENTICIRRHUS UNDULATUS	1	0.23
PHANERODON FURCATUS	25	2.38
SCORPAENA GUTTATA	1	0.11
SERIPHUS POLITUS	1035	31.64
TORPEDO CALIFORNICA	2	18.48
TRIAKIS SEMIFASCIATA	1	0.57
UROLOPHUS HALLERI	15	6.12
TOTAL SPECIES	1120	61.21

PLANT=SAN ONOFRE UNIT=1 DATE=APRIL 5, 1979

SPNAME	COUNT	WEIGHT
CYMATOGASTER AGGREGATA	3	0.11
EMBIOTOCA JACKSONI	1	0.23
HETEROSTICHUS ROSTRATUS	2	0.34
HYPERPROSOPON ARGENTEUM	3	0.11
PEPRILUS SIMILLIMUS	1	0.11
PHANERODON FURCATUS	6	0.57
SERIPHUS POLITUS	52	0.79
TORPEDO CALIFORNICA	3	20.53
UROLOPHUS HALLERI	4	1.47
XENISTIUS CALIFORNIENSIS	1	0.11
TOTAL SPECIES	76	24.37

PLANT=SAN ONOFRE UNIT=1 DATE=APRIL 11, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	3	0.11
ATHERINOPS AFFINIS	8	0.11
CHEILOTREMA SATURNUM	1	0.11
CITHARICHTHYS STIGMAEUS	1	0.11
CYMATOGASTER AGGREGATA	10	0.11
EMBIOTOCA JACKSONI	2	0.11
ENGRAULIS MORDAX	1	0.11
GENYONEMUS LINEATUS	2	0.11
HETEROSTICHUS ROSTRATUS	3	0.34
HYPERPROSOPON ARGENTEUM	47	1.70
HYPSOBLENNIUS JENKINSI	1	0.11
PARALABRAX NEBULIFER	1	0.11
PEPRILUS SIMILLIMUS	4	0.11
PORICHTHYS NOTATUS	1	0.11
SCORPAENA GUTTATA	1	0.11
SERIPHUS POLITUS	208	3.40
SYNGNATHUS	1	0.11
TORPEDO CALIFORNICA	5	35.61
UROLOPHUS HALLERI	11	2.49
TOTAL SPECIES	311	45.08

PLANT=SAN ONOFRE UNIT=1 DATE=APRIL 12, 1979

SPNAME	COUNT	WEIGHT
ATHERINOPS AFFINIS	4	0.11
ATHERINOPSIS CALIFORNIENSIS	3	0.23
CHEILOTREMA SATURNUM	1	0.11
CYMATOGASTER AGGREGATA	2	0.11
DAMALICHTHYS VACCA	1	0.34
EMBIOTOCA JACKSONI	1	0.11
ENGRAULIS MORDAX	4	0.11
GENYONEMUS LINEATUS	2	0.23
HETERODONTUS FRANCISCI	1	0.23
HETEROSTICHUS ROSTRATUS	1	0.11
HYPERPROSOPON ARGENTEUM	3	0.11
MENTICIRRHUS UNDULATUS	2	0.11
PARALABRAX NEBULIFER	1	0.11
PEPRILUS SIMILLIMUS	8	0.11
PHANERODON FURCATUS	1	0.11
PLATYRHINOIDIS TRISERIATA	1	0.79
SCORPAENA GUTTATA	1	0.11
SERIPHUS POLITUS	182	3.29
UROLOPHUS HALLERI	4	0.79
TOTAL SPECIES	223	7.22

PLANT=SAN ONOFRE UNIT=1 DATE=APRIL 17, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	1	0.11
ATHERINOPS AFFINIS	1	0.11
ATHERINOPSIS CALIFORNIENSIS	1	0.11
CHEILOTREMA SATURNUM	1	0.11
CYNOSCION NOBILIS	1	0.11
EMBIOTOCA JACKSONI	2	0.11
ENGRAULIS MORDAX	1	0.11
HYPERPROSOPON ARGENTEUM	10	0.68
PHANERODON FURCATUS	1	0.11
PORICHTHYS NOTATUS	1	0.11
SEBASTES RASTRELLIGER	1	0.11
SERIPHUS POLITUS	872	13.72
UROLOPHUS HALLERI	10	2.38
TOTAL SPECIES	903	17.88

PLANT=SAN ONOFRE UNIT=1 DATE=APRIL 19, 1979

SPNAME	COUNT	WEIGHT
AMPHISTICHUS ARGENTEUS	1	0.11
ANCHOA COMPRESSA	1	0.11
ATHERINOPS AFFINIS	1	0.11
ATHERINOPSIS CALIFORNIENSIS	1	0.11
CITHARICHTHYS STIGMAEUS	1	0.11
CYMATOGASTER AGGREGATA	1	0.11
EMBIOTOCA JACKSONI	1	0.11
ENGRAULIS MORDAX	2	0.11
GENYONEMUS LINEATUS	4	0.11
HYPERPROSOPON ARGENTEUM	5	0.11
HYPSOPSETTA GUTTULATA	1	0.23
MICROMETRUS MINIMUS	1	0.11
PEPRILUS SIMILLIMUS	2	0.11
PHANERODON FURCATUS	5	0.11
PORICHTHYS MYRIASTER	1	0.23
PORICHTHYS NOTATUS	7	0.23
SCORPAENA GUTTATA	3	0.11
SERIPHUS POLITUS	1145	23.36
TORPEDO CALIFORNICA	4	26.54
UROLOPHUS HALLERI	4	1.36
XENISTIUS CALIFORNIENSIS	1	0.11
TOTAL SPECIES	1192	53.60

PLANT=SAN ONOFRE UNIT=1 DATE=APRIL 24, 1979

SPNAME	COUNT	WEIGHT
ATHERINOPSIS CALIFORNIENSIS	21	3.18
BRACHYISTIUS FRENATUS	1	0.11
CITHARICHTHYS STIGMAEUS	1	0.11
CYMATOGASTER AGGREGATA	60	1.13
DAMALICHTHYS VACCA	1	0.34
EMBIOTOCA JACKSONI	4	0.34
ENGRAULIS MORDAX	9	0.11
GENYONEMUS LINEATUS	103	2.38
HYPERPROSOPON ARGENTEUM	37	1.47
HYPSOBLENNIUS JENKINSI	1	0.11
PARALABRAX NEBULIFER	1	0.11
PEPRILUS SIMILLIMUS	20	0.57
PHANERODON FURCATUS	12	0.23
PLEURONICHTHYS RITTERI	1	0.11
PORICHTHYS MYRIASTER	1	0.11
PORICHTHYS NOTATUS	33	1.81
SCORPAENA GUTTATA	1	0.23
SERIPHUS POLITUS	2822	26.65
SYNGNATHUS	1	0.11
TORPEDO CALIFORNICA	3	33.79
UROLOPHUS HALLERI	3	0.57
XYSTREURYS LIOLEPIS	1	0.11
TOTAL SPECIES	3137	73.68

PLANT=SAN ONOFRE UNIT=1 DATE=MAY 1, 1979

SPNAME	COUNT	WEIGHT
ATHERINOPSIS CALIFORNIENSIS	2	0.34
CYMATOGASTER AGGREGATA	6	0.11
EMBIOTOCA JACKSONI	1	0.11
GENYONEMUS LINEATUS	14	0.45
HETEROSTICHUS ROSTRATUS	1	0.11
PEPRILUS SIMILLIMUS	1	0.11
PLATYRHINOIDIS TRISERIATA	1	0.23
SCORPAENA GUTTATA	2	0.11
SERIPHUS POLITUS	265	4.99
SYNGNATHUS	1	0.11
TORPEDO CALIFORNICA	2	13.95
TOTAL SPECIES	296	20.62

PLANT=SAN ONOFRE UNIT=1 DATE=MAY 8, 1979

SPNAME	COUNT	WEIGHT
CITHARICHTHYS STIGMAEUS	1	0.11
CYMATOGASTER AGGREGATA	67	1.02
EMBIOTOCA JACKSONI	4	0.23
ENGRAULIS MORDAX	1	0.11
GENYONEMUS LINEATUS	40	1.13
GIRELLA NIGRICANS	1	0.45
HYPERPROSOPON ARGENTEUM	19	0.91
PARALICHTHYS CALIFORNICUS	1	0.11
PHANERODON FURCATUS	5	0.11
PLATYRHINOIDIS TRISERIATA	5	1.59
PORICHTHYS NOTATUS	24	1.25
SCORPAENA GUTTATA	1	0.11
SERIPHUS POLITUS	612	17.80
TORPEDO CALIFORNICA	2	17.58
UROLOPHUS HALLERI	2	0.68
TOTAL SPECIES	785	43.19

PLANT=SAN ONOFRE UNIT=1 DATE=MAY 10, 1979

SPNAME	COUNT	WEIGHT
CYMATOGASTER AGGREGATA	7	0.23
EMBIOTOCA JACKSONI	1	0.23
ENGRAULIS MORDAX	4	0.11
GENYONEMUS LINEATUS	3	0.23
PLEURONICHTHYS RITTERI	1	0.23
PORICHTHYS NOTATUS	1	0.11
SERIPHUS POLITUS	51	0.91
TORPEDO CALIFORNICA	1	19.50
TOTAL SPECIES	69	21.55

PLANT=SAN ONOFRE UNIT=1 DATE=MAY 16, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	1	0.11
ATHERINOPSIS CALIFORNIENSIS	1	0.11
CYMATOGASTER AGGREGATA	13	0.23
EMBIOTOCA JACKSONI	12	0.34
ENGRAULIS MORDAX	1	0.11
GENYONEMUS LINEATUS	11	0.23
HYPERPROSOPON ARGENTEUM	26	0.34
OTOPHIDIUM SCRIPPSI	1	0.11
PEPRILUS SIMILLIMUS	1	0.11
PHANERODON FURCATUS	34	1.70
PLATYRHINOIDIS TRISERIATA	1	0.91
PORICHTHYS NOTATUS	17	0.68
RHACOCHILUS TOXOTES	1	0.11
RHINOBATOS PRODUCTUS	2	0.11
SERIPHUS POLITUS	1392	25.40
SYNGNATHUS	1	0.11
TORPEDO CALIFORNICA	3	34.93
UROLOPHUS HALLERI	3	1.13
TOTAL SPECIES	1521	66.77

PLANT=SAN ONOFRE UNIT=1 DATE=MAY 17, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	3	0.11
ANISOTREMUS DAVIDSONI	2	0.79
CITHARICHTHYS STIGMAEUS	1	0.11
CYMATOGASTER AGGREGATA	27	0.68
DAMALICHTHYS VACCA	2	1.02
EMBIOTOCA JACKSONI	26	1.02
ENGRAULIS MORDAX	8	0.11
GENYONEMUS LINEATUS	23	1.02
HYPERPROSOPON ARGENTEUM	58	1.93
MENTICIRRHUS UNDULATUS	1	0.11
PEPRILUS SIMILLIMUS	1	0.11
PHANERODON FURCATUS	105	4.20
PORICHTHYS MYRIASTER	1	0.11
PORICHTHYS NOTATUS	19	0.57
RHACOCHILUS TOXOTES	3	0.11
SEBASTES PAUCISPINIS	1	0.11
SERIPHUS POLITUS	2780	41.62
TORPEDO CALIFORNICA	4	46.49
UROLOPHUS HALLERI	10	4.42
TOTAL SPECIES	3075	104.64

PLANT=SAN ONOFRE UNIT=1 DATE=MAY 22, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	1	0.11
CYMATOGASTER AGGREGATA	7	0.23
DAMALICHTHYS VACCA	2	0.68
EMBIOTOCA JACKSONI	6	0.23
ENGRAULIS MORDAX	8	0.11
HYPERPROSOPON ARGENTEUM	8	0.23
PEPRILUS SIMILLIMUS	2	0.11
PHANERODON FURCATUS	39	1.81
PLATYRHINOIDIS TRISERIATA	1	0.23
PLEURONICHTHYS VERTICALIS	1	0.11
PORICHTHYS NOTATUS	67	3.29
RHINOBATOS PRODUCTUS	1	10.21
SCORPAENA GUTTATA	1	0.11
SEBASTES PAUCISPINIS	1	0.11
SERIPHUS POLITUS	1418	43.09
UROLOPHUS HALLERI	3	1.70
XENISTIUS CALIFORNIENSIS	2	0.11
TOTAL SPECIES	1568	62.47

PLANT=SAN ONOFRE UNIT=1 DATE=MAY 24, 1979

SPNAME	COUNT	WEIGHT
CYMATOGASTER AGGREGATA	1	0.11
DOROSOMA PETENENSE	1	0.11
EMBIOTOCA JACKSONI	2	0.23
HETEROSTICHUS ROSTRATUS	1	0.23
PHANERODON FURCATUS	3	0.23
PORICHTHYS MYRIASTER	1	0.23
PORICHTHYS NOTATUS	2	0.68
RHACOCHILUS TOXOTES	1	0.11
SERIPHUS POLITUS	400	5.44
TORPEDO CALIFORNICA	2	22.57
UROLOPHUS HALLERI	3	0.68
TOTAL SPECIES	417	30.62

PLANT=SAN ONOFRE UNIT=1 DATE=MAY 29, 1979

SPNAME	COUNT	WEIGHT
HYPERPROSOPON ARGENTEUM	2	0.11
PHANERODON FURCATUS	1	0.11
SCORPAENA GUTTATA	1	0.11
SERIPHUS POLITUS	28	0.23
TORPEDO CALIFORNICA	1	4.42
UROLOPHUS HALLERI	2	0.34
TOTAL SPECIES	35	5.32

PLANT=SAN ONOFRE UNIT=1 DATE=JUNE 1, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	3	0.11
CYMATOGASTER AGGREGATA	5	0.34
DAMALICHTHYS VACCA	5	0.45
EMBIOTOCA JACKSONI	34	2.84
ENGRAULIS MORDAX	1	0.11
GENYONEMUS LINEATUS	6	0.23
GYMNURA MARMORATA	1	1.25
HETEROSTICHUS ROSTRATUS	1	0.11
HYPERPROSOPON ARGENTEUM	29	0.45
MENTICIRRHUS UNDULATUS	2	0.79
OTOPHIDIUM SCRIPPSI	1	0.11
PARALABRAX CLATHRATUS	3	0.68
PHANERODON FURCATUS	35	1.70
PLATYRHINOIDIS TRISERIATA	1	0.23
RHACOCHILUS TOXOTES	2	0.11
RHINOBATOS PRODUCTUS	2	4.88
SCORPAENA GUTTATA	5	0.45
SERIPHUS POLITUS	279	3.63
SQUATINA CALIFORNICA	1	11.00
TORPEDO CALIFORNICA	2	13.83
UROLOPHUS HALLERI	7	2.84
TOTAL SPECIES	425	46.14

PLANT=SAN ONOFRE UNIT=1 DATE=JUNE 15, 1979

SPNAME	COUNT	WEIGHT
CYMATOGASTER AGGREGATA	7	0.23
DAMALICHTHYS VACCA	6	0.11
EMBIOTOCA JACKSONI	25	0.11
ENGRAULIS MORDAX	358	2.27
GENYONEMUS LINEATUS	97	24.95
HYPERPROSOPON ARGENTEUM	101	2.27
HYPSOPSETTA GUTTULATA	1	0.11
MENTICIRRHUS UNDULATUS	1	0.68
MUSTELUS CALIFORNICUS	4	3.63
MYLIOBATIS CALIFORNICA	1	0.34
OTOPHIDIUM SCRIPPSI	1	0.23
PARALABRAX MACULATOFASCIATUS	1	0.23
PARALABRAX NEBULIFER	1	0.11
PARALICHTHYS CALIFORNICUS	2	0.23
PEPRILUS SIMILLIMUS	49	0.79
PHANERODON FURCATUS	59	0.23
PLATYRHINOIDIS TRISERIATA	4	0.91
PLEURONICHTHYS RITTERI	1	0.11
RHACOCHILUS TOXOTES	1	0.11
SCORPAENA GUTTATA	2	0.34
SEBASTES RASTRELLIGER	1	0.34
SERIPHUS POLITUS	1461	27.10
UROLOPHUS HALLERI	5	1.47
TOTAL SPECIES	2189	66.90

PLANT=SAN ONOFRE UNIT=1 DATE=JUNE 21, 1979

SPNAME	COUNT	WEIGHT
ANISOTREMUS DAVIDSONI	1	0.23
ATHERINOPS AFFINIS	1	0.11
CYMATOGASTER AGGREGATA	2	0.11
DAMALICHTHYS VACCA	2	0.11
EMBIOTOCA JACKSONI	1	0.11
ENGRAULIS MORDAX	4	0.11
GENYONEMUS LINEATUS	4	0.23
HYPERPROSOPON ARGENTEUM	25	0.11
MUSTELUS CALIFORNICUS	2	3.97
PEPRILUS SIMILLIMUS	1	0.11
PHANERODON FURCATUS	5	0.11
PLEURONICHTHYS COENOSUS	1	0.34
SCORPAENA GUTTATA	1	0.11
SERIPHUS POLITUS	696	16.10
UROLOPHUS HALLERI	2	0.45
TOTAL SPECIES	748	22.31

PLANT=SAN ONOFRE UNIT=1 DATE=JUNE 27, 1979

SPNAME	COUNT	WEIGHT
ATHERINOPS AFFINIS	1	0.11
CHEILOTREMA SATURNUM	1	0.23
CYMATOGASTER AGGREGATA	27	0.23
EMBIOTOCA JACKSONI	2	0.11
ENGRAULIS MORDAX	175	1.36
GENYONEMUS LINEATUS	201	3.18
HYPERPROSOPON ARGENTEUM	131	2.04
HYPSOPSETTA GUTTULATA	1	0.11
MENTICIRRHUS UNDULATUS	1	0.23
PEPRILUS SIMILLIMUS	182	3.52
PHANERODON FURCATUS	338	1.59
PORICHTHYS NOTATUS	2	0.11
RHACOCHILUS TOXOTES	7	0.11
SCORPAENA GUTTATA	1	0.23
SEBASTES PAUCISPINIS	1	0.11
SERIPHUS POLITUS	1600	25.40
SYNGNATHUS	3	0.11
XENISTIUS CALIFORNIENSIS	1	0.11
TOTAL SPECIES	2675	38.89

PLANT=SAN ONOFRE UNIT=1 DATE=JUNE 28, 1979

SPNAME	COUNT	WEIGHT
ATHERINOPS AFFINIS	2	0.11
CYMATOGASTER AGGREGATA	43	0.91
DAMALICHTHYS VACCA	4	0.23
EMBIOTOCA JACKSONI	1	0.11
ENGRAULIS MORDAX	388	1.47
GENYONEMUS LINEATUS	106	3.52
HYPERPROSOPON ARGENTEUM	249	1.70
MEDIALUNA CALIFORNIENSIS	1	0.11
MENTICIRRHUS UNDULATUS	3	0.57
MUSTELUS CALIFORNICUS	1	1.70
PARALABRAX CLATHRATUS	3	0.34
PEPRILUS SIMILLIMUS	55	1.25
PHANERODON FURCATUS	100	1.25
RHACOCHILUS TOXOTES	1	0.11
SERIPHUS POLITUS	2476	47.17
TORPEDO CALIFORNICA	1	8.16
XENISTIUS CALIFORNIENSIS	12	0.68
TOTAL SPECIES	3446	69.39

PLANT=SAN ONOFRE UNIT=1 DATE=JULY 3, 1979

SPNAME	COUNT	WEIGHT
CYMATOGASTER AGGREGATA	2	0.11
DAMALICHTHYS VACCA	2	0.11
EMBIOTOCA JACKSONI	1	0.11
ENGRAULIS MORDAX	18	0.11
GENYONEMUS LINEATUS	19	0.68
GYMNURA MARMORATA	1	0.57
HETERODONTUS FRANCISCI	1	1.02
HETEROSTICHUS ROSTRATUS	1	0.11
HYPERPROSOPON ARGENTEUM	118	1.36
MENTICIRRHUS UNDULATUS	4	1.36
MUSTELUS CALIFORNICUS	3	2.38
MYLIOBATIS CALIFORNICA	2	10.21
PARALICHTHYS CALIFORNICUS	1	0.23
PEPRILUS SIMILLIMUS	4	0.11
PHANERODON FURCATUS	44	0.45
PLATYRHINOIDIS TRISERIATA	1	0.91
RHINOBATOS PRODUCTUS	2	2.84
SCORPAENA GUTTATA	2	0.23
SEBASTES PAUCISPINIS	1	0.11
SERIPHUS POLITUS	1613	39.35
TORPEDO CALIFORNICA	1	4.31
XENISTIUS CALIFORNIENSIS	1	0.11
TOTAL SPECIES	1842	66.78

PLANT=SAN ONOFRE UNIT=1 DATE=JULY 6, 1979

SPNAME	COUNT	WEIGHT
CYMATOGASTER AGGREGATA	7	0.11
EMBIOTOCA JACKSONI	2	0.11
ENGRAULIS MORDAX	4	0.11
GENYONEMUS LINEATUS	24	0.45
HETEROSTICHUS ROSTRATUS	1	0.11
HYPERPROSOPON ARGENTEUM	203	1.70
HYPSOBLENNIUS JENKINSI	1	0.11
MENTICIRRHUS UNDULATUS	3	1.02
PARALABRAX NEBULIFER	1	0.11
PEPRILUS SIMILLIMUS	3	0.11
PHANERODON FURCATUS	12	0.23
PIMELOMETOPON PULCHRUM	1	0.11
PORICHTHYS MYRIASTER	1	0.11
RHINOBATOS PRODUCTUS	1	0.91
SCORPAENA GUTTATA	1	0.11
SERIPHUS POLITUS	1261	26.88
UMBRINA RONCADOR	1	0.11
UROLOPHUS HALLERI	4	1.36
XENISTIUS CALIFORNIENSIS	2	0.11
TOTAL SPECIES	1533	33.87

PLANT=SAN ONOFRE UNIT=1 DATE=JULY 10, 1979

SPNAME	COUNT	WEIGHT
CHEILOTREMA SATURNUM	1	0.11
CYMATOGASTER AGGREGATA	3	0.11
DAMALICHTHYS VACCA	4	0.11
ENGRAULIS MORDAX	15	0.11
GENYONEMUS LINEATUS	22	1.02
HETERODONTUS FRANCISCI	1	0.68
HYPERPROSOPON ARGENTEUM	99	0.79
MUSTELUS CALIFORNICUS	1	0.68
PEPRILUS SIMILLIMUS	3	0.11
PHANERODON FURCATUS	6	0.23
SCORPAENA GUTTATA	1	0.11
SERIPHUS POLITUS	400	9.98
SYNGNATHUS	2	0.11
UROLOPHUS HALLERI	2	0.68
TOTAL SPECIES	560	14.83

PLANT=SAN ONOFRE UNIT=1 DATE=JULY 17, 1979

SPNAME	COUNT	WEIGHT
CYMATOGASTER AGGREGATA	6	0.11
DAMALICHTHYS VACCA	4	0.11
EMBIOTOCA JACKSONI	2	0.11
ENGRAULIS MORDAX	125	0.91
GENYONEMUS LINEATUS	48	0.57
GIRELLA NIGRICANS	1	0.79
HYPERPROSOPON ARGENTEUM	201	1.47
HYPSOPSETTA GUTTULATA	1	0.23
PARALICHTHYS CALIFORNICUS	1	0.11
PEPRILUS SIMILLIMUS	10	0.11
PHANERODON FURCATUS	104	0.57
PORICHTHYS MYRIASTER	3	0.79
PORICHTHYS NOTATUS	1	0.11
RHINOBATOS PRODUCTUS	2	5.44
SEBASTES RASTRELLIGER	1	0.11
SERIPHUS POLITUS	1167	22.23
SQUATINA CALIFORNICA	1	10.09
UROLOPHUS HALLERI	4	2.04
XENISTIUS CALIFORNIENSIS	4	0.11
XYSTREURYS LIOLEPIS	1	0.11
TOTAL SPECIES	1687	46.12

PLANT=SAN ONOFRE UNIT=1 DATE=JULY 18, 1979

SPNAME	COUNT	WEIGHT
ATHERINOPSIS CALIFORNIENSIS	1	0.23
BRACHYISTIUS FRENATUS	2	0.11
CHEILOTREMA SATURNUM	1	0.11
CHROMIS PUNCTIPINNIS	2	0.11
CYMATOGASTER AGGREGATA	42	0.23
DAMALICHTHYS VACCA	1	0.11
EMBIOTOCA JACKSONI	16	0.11
ENGRAULIS MORDAX	2000	9.07
GENYONEMUS LINEATUS	600	7.82
GIRELLA NIGRICANS	1	0.79
GYMNURA MARMORATA	4	2.49
HETERODONTUS FRANCISCI	1	0.11
HETEROSTICHUS ROSTRATUS	1	0.11
HYPERPROSOPON ARGENTEUM	395	3.06
LEPTOCOTTUS ARMATUS	1	0.11
MENTICIRRHUS UNDULATUS	6	2.49
MUSTELUS CALIFORNICUS	2	0.11
MYLIOBATIS CALIFORNICA	5	44.23
PARALABRAX CLATHRATUS	2	0.23
PARALABRAX MACULATOFASCIATUS	1	0.11
PARALABRAX NEBULIFER	1	0.11
PARALICHTHYS CALIFORNICUS	24	6.01
PEPRILUS SIMILLIMUS	54	0.91
PHANERODON FURCATUS	532	3.86
PLATYRHINOIDIS TRISERIATA	3	1.93
PORICHTHYS MYRIASTER	4	1.59
RHACOCHILUS TOXOTES	5	0.11
RHINOBATOS PRODUCTUS	8	14.74
SCORPAENA GUTTATA	6	0.34
SEBASTES PAUCISPINIS	8	0.11
SERIPHUS POLITUS	2972	54.32
TORPEDO CALIFORNICA	2	28.01
TRIAKIS SEMIFASCIATA	1	0.11
UROLOPHUS HALLERI	16	8.39
XENISTIUS CALIFORNIENSIS	11	0.23
TOTAL SPECIES	6731	192.51

PLANT=SAN ONOFRE UNIT=1 DATE=JULY 20, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	2	0.11
ANISOTREMUS DAVIDSONI	4	0.91
ATHERINOPS AFFINIS	1	0.11
CYMATOGASTER AGGREGATA	6	0.11
CYNOSCION NOBILIS	1	0.11
EMBIOTOCA JACKSONI	4	0.11
ENGRAULIS MORDAX	580	5.33
GENYONEMUS LINEATUS	263	4.54
GYMNURA MARMORATA	4	8.85
HETEROSTICHUS ROSTRATUS	1	0.11
HYPERPROSOPON ARGENTEUM	801	6.80
MEDIALUNA CALIFORNIENSIS	2	0.23
MENTICIRRHUS UNDULATUS	10	3.74
MUSTELUS CALIFORNICUS	5	0.68
MYLIOBATIS CALIFORNICA	1	6.35
PARALABRAX NEBULIFER	2	0.34
PARALICHTHYS CALIFORNICUS	7	0.68
PEPRILUS SIMILLIMUS	60	1.02
PHANERODON FURCATUS	142	0.79
PLATYRHINOIDIS TRISERIATA	1	0.45
PLEURONICHTHYS VERTICALIS	1	0.23
PORICHTHYS MYRIASTER	2	0.57
PORICHTHYS NOTATUS	4	0.79
RHACOCHILUS TOXOTES	2	0.11
RHINOBATOS PRODUCTUS	4	13.38
SCORPAENA GUTTATA	9	0.57
SCORPAENICHTHYS MARMORATUS	1	0.34
SEBASTES PAUCISPINIS	2	0.11
SERIPHUS POLITUS	2306	44.91
SQUATINA CALIFORNICA	1	9.98
TRIAKIS SEMIFASCIATA	2	0.45
UMBRINA RONCADOR	3	0.34
UROLOPHUS HALLERI	15	5.33
XENISTIUS CALIFORNIENSIS	8	0.23
TOTAL SPECIES	4257	118.71

PLANT=SAN ONOFRE UNIT=1 DATE=JULY 24, 1979

SPNAME	COUNT	WEIGHT
AMPHISTICHUS ARGENTEUS	3	1.02
AMPHISTICHUS KOELZI	1	0.11
ANCHOA COMPRESSA	9	0.11
ANISOTREMUS DAVIDSONI	5	2.27
CHEILOTREMA SATURNUM	1	0.23
CHROMIS PUNCTIPINNIS	1	0.11
CITHARICHTHYS STIGMAEUS	1	0.11
CYNOSCION NOBILIS	2	0.11
DAMALICHTHYS VACCA	5	1.25
EMBIOTOCA JACKSONI	13	0.11
ENGRAULIS MORDAX	124	1.13
GENYONEMUS LINEATUS	619	13.15
GYMNURA MARMORATA	5	2.04
HETERODONTUS FRANCISCI	1	0.34
HETEROSTICHUS ROSTRATUS	2	0.11
HYPERPROSOPON ARGENTEUM	795	7.94
HYPSOBLENNIUS GILBERTI	2	0.11
MEDIALUNA CALIFORNIENSIS	3	0.91
MENTICIRRHUS UNDULATUS	20	3.18
MUSTELUS CALIFORNICUS	4	0.68
PARALABRAX CLATHRATUS	2	0.23
PARALABRAX NEBULIFER	6	0.68
PARALICHTHYS CALIFORNICUS	28	4.99
PEPRILUS SIMILLIMUS	12	0.23
PHANERODON FURCATUS	20	0.23
PIMELOMETOPON PULCHRUM	2	0.34
PLATYRHINOIDIS TRISERIATA	2	0.45
PORICHTHYS MYRIASTER	4	0.34
RHINOBATOS PRODUCTUS	24	36.17
RONCADOR STEARNSI	7	5.67
SCORPAENA GUTTATA	7	0.45
SEBASTES PAUCISPINIS	2	0.45
SEBASTES RASTRELLIGER	1	0.79
SERIPHUS POLITUS	3050	55.34
SPHYRAENA ARGENTEA	1	0.23
SYNGNATHUS	3	0.11
TORPEDO CALIFORNICA	3	20.19
UMBRINA RONCADOR	7	1.47
UROLOPHUS HALLERI	36	15.20
XENISTIUS CALIFORNIENSIS	4	0.11
XYSTREURYS LIOLEPIS	1	0.11
TOTAL SPECIES	4838	178.80

PLANT=SAN ONOFRE UNIT=1 DATE=JULY 27, 1979

SPNAME	COUNT	WEIGHT
AMPHISTICHUS ARGENTEUS	1	0.11
ANISOTREMUS DAVIDSONI	1	0.45
CHROMIS PUNCTIPINNIS	1	0.11
EMBIOTOCA JACKSONI	1	0.11
ENGRAULIS MORDAX	47	0.45
GENYONEMUS LINEATUS	30	0.45
HYPERPROSOPON ARGENTEUM	113	0.91
MENTICIRRHUS UNDULATUS	1	0.57
PARALABRAX CLATHRATUS	2	0.23
PARALABRAX NEBULIFER	1	0.45
PHANERODON FURCATUS	17	0.11
PIMELOMETOPON PULCHRUM	1	0.23
PLATYRHINOIDIS TRISERIATA	2	0.79
RHINOBATOS PRODUCTUS	1	3.40
RONCADOR STEARNSI	4	3.63
SEBASTES RASTRELLIGER	1	0.23
SEBASTES SERRANOIDES	1	0.11
SERIPHUS POLITUS	169	4.20
UMBRINA RONCADOR	1	1.02
UROLOPHUS HALLERI	1	0.68
XENISTIUS CALIFORNIENSIS	1	0.11
TOTAL SPECIES	397	18.35

PLANT=SAN ONOFRE UNIT=1 DATE=JULY 31, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	3	0.11
ATHERINOPSIS CALIFORNIENSIS	2	0.23
BRACHYISTIUS FRENATUS	2	0.11
CYMATOGASTER AGGREGATA	4	0.11
CYNOSCION NOBILIS	1	0.34
EMBIOTOCA JACKSONI	1	0.11
ENGRAULIS MORDAX	1044	5.33
GENYONEMUS LINEATUS	72	0.57
GYMNURA MARMORATA	2	7.03
HETERODONTUS FRANCISCI	1	0.91
HETEROSTICHUS ROSTRATUS	1	0.11
HYPERPROSOPON ARGENTEUM	453	3.18
HYPSOPSETTA GUTTULATA	1	0.11
MEDIALUNA CALIFORNIENSIS	1	0.11
MENTICIRRHUS UNDULATUS	3	0.57
MUSTELUS CALIFORNICUS	1	0.23
MYLIOBATIS CALIFORNICA	1	17.80
PARALABRAX CLATHRATUS	1	0.11
PARALICHTHYS CALIFORNICUS	3	0.23
PEPRILUS SIMILLIMUS	18	0.34
PHANERODON FURCATUS	66	0.34
PLATYRHINOIDIS TRISERIATA	1	0.45
PORICHTHYS MYRIASTER	3	0.45
RHACOCHILUS TOXOTES	1	0.11
RONCADOR STEARNSI	1	0.57
SCORPAENA GUTTATA	3	0.11
SEBASTES SERRANOIDES	1	0.11
SERIPHUS POLITUS	3783	77.23
SPHYRAENA ARGENTEA	2	0.34
XENISTIUS CALIFORNIENSIS	5	0.11
TOTAL SPECIES	5481	117.46

PLANT=SAN ONOFRE UNIT=1 DATE=AUGUST 3, 1979

SPNAME	COUNT	WEIGHT
CHROMIS PUNCTIPINNIS	1	0.11
CYMATOGASTER AGGREGATA	5	0.11
CYNOSCION NOBILIS	1	1.02
DAMALICHTHYS VACCA	3	0.11
ENGRAULIS MORDAX	150	1.36
GENYONEMUS LINEATUS	209	5.25
HYPERPROSOPON ARGENTEUM	277	2.72
MUSTELUS CALIFORNICUS	2	0.23
PARALABRAX NEBULIFER	1	0.11
PARALICHTHYS CALIFORNICUS	5	0.45
PEPRILUS SIMILLIMUS	29	0.45
PHANERODON FURCATUS	105	0.91
PLATYRHINOIDIS TRISERIATA	1	0.23
PLEURONICHTHYS RITTERI	2	0.11
PORICHTHYS MYRIASTER	6	1.25
PORICHTHYS NOTATUS	1	0.11
RHACOCHILUS TOXOTES	1	0.11
RHINOBATOS PRODUCTUS	5	12.81
SCORPAENA GUTTATA	1	0.11
SEBASTES SERRANOIDES	4	0.11
SERIPHUS POLITUS	2250	29.60
UROLOPHUS HALLERI	13	6.12
XENISTIUS CALIFORNIENSIS	3	0.11
TOTAL SPECIES	3075	63.50

PLANT=SAN ONOFRE UNIT=1 DATE=AUGUST 7, 1979

SPNAME	COUNT	WEIGHT
ATHERINOPS AFFINIS	3	0.11
ATHERINOPSIS CALIFORNIENSIS	2	0.11
CYMATOGASTER AGGREGATA	3	0.11
CYNOSCION NOBILIS	3	1.36
EMBIOTOCA JACKSONI	1	0.11
ENGRAULIS MORDAX	36	0.23
GENYONEMUS LINEATUS	1647	77.91
HYPERPROSOPON ARGENTEUM	279	9.75
HYPSOPSETTA GUTTULATA	1	0.23
MUSTELUS CALIFORNICUS	1	0.91
PARALICHTHYS CALIFORNICUS	3	0.57
PEPRILUS SIMILLIMUS	2	0.11
PHANERODON FURCATUS	8	0.11
PORICHTHYS MYRIASTER	1	0.34
RHINOBATOS PRODUCTUS	2	2.84
RONCADOR STEARNSI	2	1.36
SCORPAENA GUTTATA	1	0.11
SERIPHUS POLITUS	1608	46.49
SYNGNATHUS	1	0.11
UMBRINA RONCADOR	6	0.91
XENISTIUS CALIFORNIENSIS	6	0.45
TOTAL SPECIES	3616	144.23

PLANT=SAN ONOFRE UNIT=1 DATE=AUGUST 14, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	1	0.11
BRACHYISTIUS FRENATUS	2	0.11
CHEILOTREMA SATURNUM	1	0.11
CYMATOGASTER AGGREGATA	1	0.11
EMBIOTOCA JACKSONI	1	0.11
ENGRAULIS MORDAX	4	0.11
GENYONEMUS LINEATUS	5	0.11
HYPERPROSOPON ARGENTEUM	22	0.23
MENTICIRRHUS UNDULATUS	1	0.34
PHANERODON FURCATUS	14	0.11
RHINOBATOS PRODUCTUS	1	2.27
RONCADOR STEARNSI	1	0.79
SCORPAENA GUTTATA	1	0.11
SEBASTES SERRANOIDES	1	0.11
SERIPHUS POLITUS	568	11.34
UROLOPHUS HALLERI	3	1.81
TOTAL SPECIES	627	17.88

PLANT=SAN ONOFRE UNIT=1 DATE=AUGUST 17, 1979

SPNAME	COUNT	WEIGHT
ENGRAULIS MORDAX	11	0.11
HETEROSTICHUS ROSTRATUS	1	0.11
HYPERPROSOPON ARGENTEUM	10	0.11
HYPSURUS CARYI	1	0.11
PHANERODON FURCATUS	2	0.11
RONCADOR STEARNSI	1	0.91
SEBASTES SERRANOIDES	1	0.11
SERIPHUS POLITUS	599	10.21
UROLOPHUS HALLERI	2	0.57
TOTAL SPECIES	628	12.35

PLANT=SAN ONOFRE UNIT=1 DATE=AUGUST 21, 1979

SPNAME	COUNT	WEIGHT
CYMATOGASTER AGGREGATA	2	0.11
ENGRAULIS MORDAX	102	0.11
HYPERPROSOPON ARGENTEUM	19	0.57
MEDIALUNA CALIFORNIENSIS	5	1.02
PARALABRAX CLATHRATUS	1	0.11
PHANERODON FURCATUS	5	0.11
SCORPAENA GUTTATA	1	0.68
SERIPHUS POLITUS	2265	42.64
UMBRINA RONCADOR	2	0.34
XENISTIUS CALIFORNIENSIS	11	0.11
TOTAL SPECIES	2413	45.80

PLANT=SAN ONOFRE UNIT=1 DATE=AUGUST 24, 1979

SPNAME	COUNT	WEIGHT
CYMATOGASTER AGGREGATA	267	2.04
DAMALICHTHYS VACCA	5	0.11
EMBIOTOCA JACKSONI	5	0.11
ENGRAULIS MORDAX	66	0.11
GENYONEMUS LINEATUS	367	3.63
HYPERPROSOPON ARGENTEUM	336	1.81
LEURESTHES TENUIS	1	0.11
MENTICIRRHUS UNDULATUS	1	0.23
OTOPHIDIUM SCRIPPSI	1	0.11
PARALABRAX CLATHRATUS	1	0.11
PARALABRAX NEBULIFER	2	0.23
PARALICHTHYS CALIFORNICUS	1	0.11
PEPRILUS SIMILLIMUS	15	0.34
PHANERODON FURCATUS	124	0.91
PLEURONICHTHYS RITTERI	1	0.11
RHINOBATOS PRODUCTUS	3	9.87
SEBASTES PAUCISPINIS	1	0.11
SEBASTES SERRANOIDES	1	0.11
SERIPHUS POLITUS	2314	40.94
SYNODUS LUCIOCEPS	1	0.11
TORPEDO CALIFORNICA	1	11.11
TOTAL SPECIES	3514	72.32

PLANT=SAN ONOFRE UNIT=1 DATE=AUGUST 29, 1979

SPNAME	COUNT	WEIGHT
CYMATOGASTER AGGREGATA	2	0.11
DAMALICHTHYS VACCA	1	0.57
EMBIOTOCA JACKSONI	3	0.23
ENGRAULIS MORDAX	1	0.11
GENYONEMUS LINEATUS	5	0.34
HETERODONTUS FRANCISCI	1	2.27
HYPERPROSOPON ARGENTEUM	16	0.23
MEDIALUNA CALIFORNIENSIS	4	1.02
PARALICHTHYS CALIFORNICUS	2	0.34
PHANERODON FURCATUS	4	0.34
PORICHTHYS MYRIASTER	2	0.57
RHACOCHILUS TOXOTES	1	0.11
RHINOBATOS PRODUCTUS	5	11.68
SCORPAENA GUTTATA	2	0.11
SERIPHUS POLITUS	60	1.70
UROLOPHUS HALLERI	1	0.23
TOTAL SPECIES	110	19.96

PLANT=SAN ONOFRE UNIT=1 DATE=AUGUST 31, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	1	0.11
ANISOTREMUS DAVIDSONI	1	0.11
ATHERINOPS AFFINIS	1	0.11
BRACHYISTIUS FRENATUS	1	0.11
CYMATOGASTER AGGREGATA	3	0.11
ENGRAULIS MORDAX	44	0.11
GENYONEMUS LINEATUS	17	0.57
HYPERPROSOPON ARGENTEUM	18	0.23
PARALABRAX CLATHRATUS	1	0.11
PHANERODON FURCATUS	7	0.11
PLEURONICHTHYS RITTERI	1	0.11
RHINOBATOS PRODUCTUS	4	4.99
SCORPAENA GUTTATA	2	0.34
SERIPHUS POLITUS	1500	34.36
UMBRINA RONCADOR	1	0.23
XENISTIUS CALIFORNIENSIS	3	0.11
TOTAL SPECIES	1605	41.82

PLANT=SAN ONOFRE UNIT=1 DATE=SEPTEMBER 5, 1979

SPNAME	COUNT	WEIGHT
ANISOTREMUS DAVIDSONI	4	1.36
ATHERINOPS AFFINIS	15	0.57
ATHERINOPSIS CALIFORNIENSIS	1	0.45
CYMATOGASTER AGGREGATA	14	0.23
DAMALICHTHYS VACCA	1	0.11
ENGRAULIS MORDAX	1	0.11
GENYONEMUS LINEATUS	91	1.93
HYPERPROSOPON ARGENTEUM	21	0.45
MEDIALUNA CALIFORNIENSIS	2	0.23
PEPRILUS SIMILLIMUS	4	0.11
PHANERODON FURCATUS	1	0.11
PLATYRHINOIDIS TRISERIATA	1	0.23
PORICHTHYS MYRIASTER	1	0.23
SEBASTES RASTRELLIGER	1	0.23
SERIPHUS POLITUS	423	7.94
XENISTIUS CALIFORNIENSIS	1	0.11
TOTAL SPECIES	582	14.40

PLANT=SAN ONOFRE UNIT=1 DATE=SEPTEMBER 6, 1979

SPNAME	COUNT	WEIGHT
ANISOTREMUS DAVIDSONI	6	1.70
ATHERINOPS AFFINIS	14	0.57
CHEILOTREMA SATURNUM	1	0.45
CYMATOGASTER AGGREGATA	5	0.11
EMBIOTOCA JACKSONI	1	0.23
GENYONEMUS LINEATUS	56	1.81
HYPERPROSOPON ARGENTEUM	12	0.23
HYPSOBLENNIUS GILBERTI	1	0.11
MEDIALUNA CALIFORNIENSIS	1	0.23
PORICHTHYS MYRIASTER	1	0.34
RONCADOR STEARNSI	1	0.34
SERIPHUS POLITUS	194	5.44
UMBRINA RONCADOR	1	0.23
UROLOPHUS HALLERI	1	0.91
TOTAL SPECIES	295	12.70

PLANT=SAN ONOFRE UNIT=1 DATE=SEPTEMBER 7, 1979

SPNAME	COUNT	WEIGHT
ANISOTREMUS DAVIDSONI	25	5.10
ATHERINOPS AFFINIS	6	0.11
ATHERINOPSIS CALIFORNIENSIS	1	0.11
CHEILOTREMA SATURNUM	5	0.91
CYMATOGASTER AGGREGATA	14	0.23
DAMALICHTHYS VACCA	1	0.34
EMBIOTOCA JACKSONI	2	0.79
ENGRAULIS MORDAX	2	0.11
GENYONEMUS LINEATUS	36	1.25
HETEROSTICHUS ROSTRATUS	1	0.11
HYPERPROSOPON ARGENTEUM	17	0.23
MEDIALUNA CALIFORNIENSIS	3	0.34
MENTICIRRHUS UNDULATUS	1	0.79
MUSTELUS CALIFORNICUS	4	1.70
PARALABRAX CLATHRATUS	3	0.45
PHANERODON FURCATUS	4	0.11
PORICHTHYS MYRIASTER	2	1.25
SCORPAENA GUTTATA	1	0.11
SERIPHUS POLITUS	500	11.00
XENISTIUS CALIFORNIENSIS	2	0.23
TOTAL SPECIES	630	25.27

PLANT=SAN ONOFRE UNIT=1 DATE=SEPTEMBER 11, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	4	0.11
ANISOTREMUS DAVIDSONI	1	0.23
ATHERINOPS AFFINIS	3	0.11
CYMATOGASTER AGGREGATA	44	0.45
CYNOSCION NOBILIS	3	1.02
EMBIOTOCA JACKSONI	1	0.11
ENGRAULIS MORDAX	4	0.11
GENYONEMUS LINEATUS	169	4.20
HETEROSTICHUS ROSTRATUS	1	0.11
HYPERPROSOPON ARGENTEUM	494	13.72
MEDIALUNA CALIFORNIENSIS	2	0.23
PEPRILUS SIMILLIMUS	5	0.11
PHANERODON FURCATUS	22	0.34
PLATYRHINOIDIS TRISERIATA	1	0.23
PORICHTHYS MYRIASTER	1	0.45
RONCADOR STEARNSI	1	0.23
SCORPAENA GUTTATA	1	0.11
SERIPHUS POLITUS	1285	31.07
TORPEDO CALIFORNICA	2	22.34
XENISTIUS CALIFORNIENSIS	1	0.11
XYSTREURYS LIOLEPIS	1	0.11
TOTAL SPECIES	2046	75.50

PLANT=SAN ONOFRE UNIT=1 DATE=SEPTEMBER 14, 1979

SPNAME	COUNT	WEIGHT
AMPHISTICHUS ARGENTEUS	1	0.11
ANCHOA COMPRESSA	4	0.11
ATHERINOPS AFFINIS	4	0.11
CYMATOGASTER AGGREGATA	16	0.11
EMBIOTOCA JACKSONI	1	0.23
ENGRAULIS MORDAX	13	0.11
GENYONEMUS LINEATUS	2	0.11
HYPERPROSOPON ARGENTEUM	32	0.45
LEURESTHES TENUIS	31	0.57
PARALICHTHYS CALIFORNICUS	1	0.23
PEPRILUS SIMILLIMUS	1	0.11
PHANERODON FURCATUS	6	0.11
RHACOCHILUS TOXOTES	1	0.11
SERIPHUS POLITUS	1332	29.14
SPHYRAENA ARGENTEA	1	0.11
TORPEDO CALIFORNICA	1	13.95
TOTAL SPECIES	1447	45.67

PLANT=SAN ONOFRE UNIT=1 DATE=SEPTEMBER 18, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	1	0.11
ATHERINOPS AFFINIS	5	0.11
BRACHYISTIUS FRENATUS	6	0.11
CHEILOTREMA SATURNUM	1	0.11
CITHARICHTHYS STIGMAEUS	1	0.11
CYMATOGASTER AGGREGATA	11	0.11
CYNOSCION NOBILIS	2	0.45
ENGRAULIS MORDAX	83	0.11
GENYONEMUS LINEATUS	33	0.34
HYPERPROSOPON ARGENTEUM	47	0.57
LEURESTHES TENUIS	3	0.11
MENTICIRRHUS UNDULATUS	2	0.57
PARALABRAX CLATHRATUS	1	0.23
PEPRILUS SIMILLIMUS	3	0.11
PHANERODON FURCATUS	15	0.23
SERIPHUS POLITUS	2985	69.70
SPHYRAENA ARGENTEA	2	0.11
XENISTIUS CALIFORNIENSIS	5	0.11
TOTAL SPECIES	3206	73.30

PLANT=SAN ONOFRE UNIT=1 DATE=SEPTEMBER 21, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	3	0.11
ATHERINOPS AFFINIS	9	0.23
CYMATOGASTER AGGREGATA	19	0.11
EMBIOTOCA JACKSONI	2	0.11
ENGRAULIS MORDAX	31	0.11
GENYONEMUS LINEATUS	26	0.79
HETEROSTICHUS ROSTRATUS	2	0.23
HYPERPROSOPON ARGENTEUM	27	0.57
MEDIALUNA CALIFORNIENSIS	1	0.23
PARALABRAX NEBULIFER	1	0.11
PARALICHTHYS CALIFORNICUS	1	0.23
PEPRILUS SIMILLIMUS	3	0.11
PHANERODON FURCATUS	7	0.11
PORICHTHYS MYRIASTER	1	0.57
RONCADOR STEARNSI	1	0.34
SERIPHUS POLITUS	1978	40.37
TORPEDO CALIFORNICA	1	9.87
TRIAKIS SEMIFASCIATA	1	0.34
TOTAL SPECIES	2114	54.54

PLANT=SAN ONOFRE UNIT=1 DATE=SEPTEMBER 25, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	2	0.11
ANISOTREMUS DAVIDSONI	6	1.25
ATHERINOPS AFFINIS	24	0.45
CYMATOGASTER AGGREGATA	14	0.11
EMBIOTOCA JACKSONI	3	0.23
ENGRAULIS MORDAX	90	0.34
GENYONEMUS LINEATUS	42	0.57
HYPERPROSOPON ARGENTEUM	219	3.29
LEURESTHES TENUIS	2	0.11
MENTICIRRHUS UNDULATUS	2	0.57
MUSTELUS CALIFORNICUS	1	1.25
PARALABRAX CLATHRATUS	1	0.34
PARALABRAX NEBULIFER	5	0.23
PEPRILUS SIMILLIMUS	21	0.68
PHANERODON FURCATUS	25	1.13
SCORPAENA GUTTATA	2	0.23
SERIPHUS POLITUS	1601	24.72
UROLOPHUS HALLERI	1	0.45
XENISTIUS CALIFORNIENSIS	2	0.11
TOTAL SPECIES	2063	36.17

PLANT=SAN ONOFRE UNIT=1 DATE=SEPTEMBER 28, 1979

SPNAME	COUNT	WEIGHT
CYMATOGASTER AGGREGATA	7	0.11
DAMALICHTHYS VACCA	1	0.11
ENGRAULIS MORDAX	623	1.13
GENYONEMUS LINEATUS	44	0.68
HETEROSTICHUS ROSTRATUS	1	0.11
HYPERPROSOPON ARGENTEUM	112	1.81
MEDIALUNA CALIFORNIENSIS	1	0.23
PARALABRAX CLATHRATUS	1	0.11
PARALABRAX NEBULIFER	5	0.34
PARALICHTHYS CALIFORNICUS	1	0.11
PEPRILUS SIMILLIMUS	6	0.23
PHANERODON FURCATUS	6	0.23
PLEURONICHTHYS VERTICALIS	1	0.11
PORICHTHYS MYRIASTER	1	0.11
SCORPAENA GUTTATA	3	0.57
SERIPHUS POLITUS	1864	14.29
TOTAL SPECIES	2677	20.28

PLANT=SAN ONOFRE UNIT=1 DATE=OCTOBER 2, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	2	0.11
ATHERINOPS AFFINIS	30	0.57
CYMATOGASTER AGGREGATA	3	0.11
ENGRAULIS MORDAX	1	0.11
GENYONEMUS LINEATUS	205	4.65
HYPERPROSOPON ARGENTEUM	20	0.34
PEPRILUS SIMILLIMUS	2	0.11
PHANERODON FURCATUS	2	0.11
SCORPAENA GUTTATA	2	0.11
SERIPHUS POLITUS	1454	46.83
SYNGNATHUS	1	0.11
TORPEDO CALIFORNICA	1	5.44
TOTAL SPECIES	1723	58.60

PLANT=SAN ONOFRE UNIT=1 DATE=OCTOBER 5, 1979

SPNAME	COUNT	WEIGHT
ATHERINOPS AFFINIS	2	0.11
GENYONEMUS LINEATUS	32	1.13
HYPERPROSOPON ARGENTEUM	1	0.11
PARALABRAX CLATHRATUS	1	0.11
SERIPHUS POLITUS	53	1.81
TORPEDO CALIFORNICA	1	11.00
UROLOPHUS HALLERI	1	0.23
TOTAL SPECIES	91	14.50

PLANT=SAN ONOFRE UNIT=1 DATE=OCTOBER 10, 1979

SPNAME	COUNT	WEIGHT
CYMATOGASTER AGGREGATA	2	0.11
EMBIOTOCA JACKSONI	1	0.11
ENGRAULIS MORDAX	1	0.11
GENYONEMUS LINEATUS	43	0.57
HYPERPROSOPON ARGENTEUM	6	0.11
HYPSOPSETTA GUTTULATA	1	0.34
PHANERODON FURCATUS	1	0.11
SCORPAENA GUTTATA	1	0.11
SERIPHUS POLITUS	320	4.65
SYNGNATHUS	1	0.11
TORPEDO CALIFORNICA	1	5.67
TOTAL SPECIES	378	12.00

PLANT=SAN ONOFRE UNIT=1 DATE=OCTOBER 12, 1979

SPNAME	COUNT	WEIGHT
ATHERINOPS AFFINIS	2	0.11
CYMATOGASTER AGGREGATA	2	0.11
EMBIOTOCA JACKSONI	3	0.23
ENGRAULIS MORDAX	6	0.11
GENYONEMUS LINEATUS	64	1.70
HETEROSTICHUS ROSTRATUS	1	0.11
HYPERPROSOPON ARGENTEUM	90	1.36
PEPRILUS SIMILLIMUS	1	0.11
PHANERODON FURCATUS	2	0.11
SERIPHUS POLITUS	480	8.28
TOTAL SPECIES	651	12.23

PLANT=SAN ONOFRE UNIT=1 DATE=OCTOBER 16, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	1	0.11
ATHERINOPS AFFINIS	1	0.11
CYMATOGASTER AGGREGATA	23	0.34
EMBIOTOCA JACKSONI	1	0.11
ENGRAULIS MORDAX	12	0.11
GENYONEMUS LINEATUS	87	1.02
HYPERPROSOPON ARGENTEUM	21	0.45
PEPRILUS SIMILLIMUS	1	0.11
PHANERODON FURCATUS	3	0.34
SERIPHUS POLITUS	2349	40.48
TORPEDO CALIFORNICA	1	17.01
TOTAL SPECIES	2500	60.19

PLANT=SAN ONOFRE UNIT=1 DATE=OCTOBER 19, 1979

SPNAME	COUNT	WEIGHT
ANISOTREMUS DAVIDSONI	1	0.34
ATHERINOPS AFFINIS	1	0.11
CYMATOGASTER AGGREGATA	32	0.45
EMBIOTOCA JACKSONI	2	0.11
GENYONEMUS LINEATUS	36	0.79
HETEROSTICHUS ROSTRATUS	1	0.23
HYPERPROSOPON ARGENTEUM	55	0.91
PHANERODON FURCATUS	9	0.34
PLATYRHINOIDIS TRISERIATA	8	1.36
SCORPAENA GUTTATA	1	0.11
SERIPHUS POLITUS	1038	24.49
TORPEDO CALIFORNICA	2	13.72
TOTAL SPECIES	1186	42.96

PLANT=SAN ONOFRE UNIT=1 DATE=OCTOBER 23, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	1	0.11
ATHERINOPS AFFINIS	1	0.11
CYMATOGASTER AGGREGATA	2	0.11
ENGRAULIS MORDAX	12	0.11
GENYONEMUS LINEATUS	10	0.11
HETEROSTICHUS ROSTRATUS	1	0.11
HYPERPROSOPON ARGENTEUM	59	0.91
HYPSOBLENNIUS GILBERTI	1	0.11
LEURESTHES TENUIS	1	0.11
MENTICIRRHUS UNDULATUS	1	0.11
PARALABRAX CLATHRATUS	1	0.11
PARALABRAX NEBULIFER	1	0.11
PHANERODON FURCATUS	3	0.11
SERIPHUS POLITUS	1097	15.42
TORPEDO CALIFORNICA	2	19.28
UROLOPHUS HALLERI	1	0.65
TOTAL SPECIES	1194	37.58

PLANT=SAN ONOFRE UNIT=1 DATE=OCTOBER 26, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	2	0.11
ATHERINOPS AFFINIS	5	0.11
CYMATOGASTER AGGREGATA	6	0.11
ENGRAULIS MORDAX	18	0.11
GENYONEMUS LINEATUS	10	0.23
HYPERPROSOPON ARGENTEUM	64	1.02
LEURESTHES TENUIS	1	0.11
PARALABRAX CLATHRATUS	1	0.11
PHANERODON FURCATUS	4	0.11
SERIPHUS POLITUS	2669	48.42
TORPEDO CALIFORNICA	3	18.26
TOTAL SPECIES	2783	68.70

PLANT=SAN ONOFRE UNIT=1 DATE=OCTOBER 30, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	1	0.11
CHEILOTREMA SATURNUM	1	0.11
DAMALICHTHYS VACCA	1	0.11
EMBIOTOCA JACKSONI	1	0.23
ENGRAULIS MORDAX	107	0.45
GENYONEMUS LINEATUS	8	0.34
HYPERPROSOPON ARGENTEUM	22	0.45
MENTICIRRHUS UNDULATUS	1	0.23
PARALABRAX NEBULIFER	2	0.11
PHANERODON FURCATUS	3	0.23
PLEURONICHTHYS RITTERI	1	0.34
SERIPHUS POLITUS	616	4.54
TORPEDO CALIFORNICA	1	9.53
TOTAL SPECIES	765	16.78

PLANT=SAN ONOFRE UNIT=1 DATE=NOVEMBER 2, 1979

SPNAME	COUNT	WEIGHT
CHEILOTREMA SATURNUM	2	0.11
ENGRAULIS MORDAX	2	0.11
GENYONEMUS LINEATUS	1	0.11
PARALICHTHYS CALIFORNICUS	1	0.11
PHANERODON FURCATUS	2	0.34
SERIPHUS POLITUS	150	0.79
TORPEDO CALIFORNICA	2	21.21
TOTAL SPECIES	160	22.78

PLANT=SAN ONOFRE UNIT=1 DATE=NOVEMBER 6, 1979

SPNAME	COUNT	WEIGHT
ENGRAULIS MORDAX	13	0.11
GENYONEMUS LINEATUS	4	0.11
GIRELLA NIGRICANS	1	0.11
HETEROSTICHUS ROSTRATUS	2	0.23
HYPERPROSOPON ARGENTEUM	3	0.11
HYPSOBLENNIUS GILBERTI	1	0.11
PEPRILUS SIMILLIMUS	1	0.11
PHANERODON FURCATUS	2	0.23
SERIPHUS POLITUS	433	2.95
TOTAL SPECIES	460	4.07

PLANT=SAN ONOFRE UNIT=1 DATE=NOVEMBER 13, 1979

SPNAME	COUNT	WEIGHT
ENGRAULIS MORDAX	11	0.11
GYMNURA MARMORATA	1	0.23
HETEROSTICHUS ROSTRATUS	1	0.11
PHANERODON FURCATUS	1	0.23
SERIPHUS POLITUS	518	3.29
TOTAL SPECIES	532	3.97

PLANT=SAN ONOFRE UNIT=1 DATE=NOVEMBER 14, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	2	0.11
ANIMALIA CHORDATA	7	1.36
CHEILOTREMA SATURNUM	1	0.11
EMBIOTOCA JACKSONI	2	0.34
ENGRAULIS MORDAX	40	0.23
HYPERPROSOPON ARGENTEUM	51	0.91
PARALICHTHYS CALIFORNICUS	1	0.11
PHANERODON FURCATUS	10	1.25
PLEURONICHTHYS COENOSUS	1	0.45
SERIPHUS POLITUS	838	4.31
TORPEDO CALIFORNICA	1	14.29
TOTAL SPECIES	954	23.47

PLANT=SAN ONOFRE UNIT=1 DATE=NOVEMBER 16, 1979

SPNAME	COUNT	WEIGHT
ENGRAULIS MORDAX	35	0.11
HYPERPROSOPON ARGENTEUM	1	0.11
HYPSOBLENNIUS GILBERTI	1	0.11
PHANERODON FURCATUS	2	0.45
SERIPHUS POLITUS	308	1.47
XENISTIUS CALIFORNIENSIS	1	0.11
TOTAL SPECIES	348	2.36

PLANT=SAN ONOFRE UNIT=1 DATE=NOVEMBER 20, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	6	0.11
ATHERINOPS AFFINIS	1	0.11
ENGRAULIS MORDAX	6	0.11
GENYONEMUS LINEATUS	5	0.11
HETEROSTICHUS ROSTRATUS	1	0.11
HYPERPROSOPON ARGENTEUM	19	0.57
SCORPAENA GUTTATA	1	0.23
SERIPHUS POLITUS	89	6.46
TORPEDO CALIFORNICA	2	13.38
UROLOPHUS HALLERI	1	0.57
TOTAL SPECIES	131	21.76

PLANT=SAN ONOFRE UNIT=1 DATE=NOVEMBER 21, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	3	0.11
ATHERINOPS AFFINIS	1	0.11
ENGRAULIS MORDAX	1	0.11
GENYONEMUS LINEATUS	3	0.11
HETEROSTICHUS ROSTRATUS	1	0.11
HYPERPROSOPON ARGENTEUM	6	0.23
HYPSOBLENNIUS GILBERTI	1	0.11
SERIPHUS POLITUS	518	3.29
TORPEDO CALIFORNICA	1	3.86
TOTAL SPECIES	535	8.04

PLANT=SAN ONOFRE UNIT=1 DATE=NOVEMBER 27, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	16	0.23
ATHERINOPS AFFINIS	4	0.11
CHROMIS PUNCTIPINNIS	2	0.57
CYMATOGASTER AGGREGATA	158	3.40
CYNOSCION NOBILIS	2	0.23
DAMALICHTHYS VACCA	1	0.23
ENGRAULIS MORDAX	14	0.11
GENYONEMUS LINEATUS	26	0.23
GYMNOTHORAX MORDAX	1	3.97
HYPERPROSOPON ARGENTEUM	2402	46.04
PEPRILUS SIMILLIMUS	3	0.11
PHANERODON FURCATUS	30	2.49
SCORPAENA GUTTATA	2	0.57
SERIPHUS POLITUS	1795	17.92
TORPEDO CALIFORNICA	3	14.86
TOTAL SPECIES	4459	91.07

PLANT=SAN ONOFRE UNIT=1 DATE=DECEMBER 4, 1979

SPNAME	COUNT	WEIGHT
CYMATOGASTER AGGREGATA	1	0.11
ENGRAULIS MORDAX	1	0.11
HETEROSTICHUS ROSTRATUS	1	0.11
HYPERPROSOPON ARGENTEUM	14	0.57
PHANERODON FURCATUS	1	0.11
SERIPHUS POLITUS	61	0.34
TORPEDO CALIFORNICA	1	14.40
TOTAL SPECIES	80	15.75

PLANT=SAN ONOFRE UNIT=1 DATE=DECEMBER 7, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	2	0.11
ATHERINOPSIS CALIFORNIENSIS	1	0.23
CYMATOGASTER AGGREGATA	19	1.25
CYNOSCION NOBILIS	1	0.11
EMBIOTOCA JACKSONI	2	0.11
GENYONEMUS LINEATUS	1	0.11
HETEROSTICHUS ROSTRATUS	1	0.11
HYPERPROSOPON ARGENTEUM	21	0.45
PHANERODON FURCATUS	19	1.22
PLEURONICHTHYS COENOSUS	1	0.23
SERIPHUS POLITUS	369	3.52
TORPEDO CALIFORNICA	3	22.45
UROLOPHUS HALLERI	1	0.23
TOTAL SPECIES	441	30.13

PLANT=SAN ONOFRE UNIT=1 DATE=DECEMBER 11, 1979

SPNAME	COUNT	WEIGHT
CYMATOGASTER AGGREGATA	1	0.11
ENGRAULIS MORDAX	6	0.11
GENYONEMUS LINEATUS	3	0.11
HYPERPROSOPON ARGENTEUM	7	0.23
PHANERODON FURCATUS	1	0.11
SERIPHUS POLITUS	207	1.81
TORPEDO CALIFORNICA	6	61.92
TOTAL SPECIES	231	64.40

PLANT=SAN ONOFRE UNIT=1 DATE=DECEMBER 14, 1979

SPNAME	COUNT	WEIGHT
ATHERINOPS AFFINIS	1	0.11
ENGRAULIS MORDAX	1	0.11
GENYONEMUS LINEATUS	5	0.23
HETEROSTICHUS ROSTRATUS	1	0.23
HYPERPROSOPON ARGENTEUM	51	0.91
PHANERODON FURCATUS	10	0.34
SERIPHUS POLITUS	258	3.29
TORPEDO CALIFORNICA	1	4.31
UMBRINA RONCADOR	1	0.11
TOTAL SPECIES	329	9.64

PLANT=SAN ONOFRE UNIT=1 DATE=DECEMBER 19, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	5	0.11
CHEILOTREMA SATURNUM	1	0.11
CYMATOGASTER AGGREGATA	1	0.11
ENGRAULIS MORDAX	62	0.11
GENYONEMUS LINEATUS	13	0.11
HYPERPROSOPON ARGENTEUM	8	0.23
PHANERODON FURCATUS	1	0.23
SCORPAENA GUTTATA	1	0.11
SERIPHUS POLITUS	1950	8.85
TORPEDO CALIFORNICA	4	24.61
XENISTIUS CALIFORNIENSIS	3	0.11
TOTAL SPECIES	2049	34.69

PLANT=SAN ONOFRE UNIT=1 DATE=DECEMBER 21, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	4	0.11
BRACHYISTIUS FRENATUS	2	0.11
CYMATOGASTER AGGREGATA	1	0.11
EMBIOTOCA JACKSONI	1	0.11
ENGRAULIS MORDAX	48	0.11
GENYONEMUS LINEATUS	1	0.11
HALICHOERES SEMICINCTUS	1	0.23
HETEROSTICHUS ROSTRATUS	1	0.11
HYPERPROSOPON ARGENTEUM	84	2.04
LEURESTHES TENUIS	1	0.11
PARALABRAX NEBULIFER	1	0.11
PHANERODON FURCATUS	5	0.23
SERIPHUS POLITUS	405	4.31
SYNGNATHUS	1	0.11
TORPEDO CALIFORNICA	4	36.97
UMBRINA RONCADOR	2	0.11
TOTAL SPECIES	562	44.99

PLANT=SAN ONOFRE UNIT=1 DATE=DECEMBER 27, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	5	0.11
ANISOTREMUS DAVIDSONI	1	0.11
ATHERINOPSIS CALIFORNIENSIS	2	0.11
BRACHYISTIUS FRENATUS	1	0.11
DAMALICHTHYS VACCA	1	0.68
ENGRAULIS MORDAX	2	0.11
HETEROSTICHUS ROSTRATUS	1	0.11
HYPERPROSOPON ARGENTEUM	7	0.23
LEPTOCOTTUS ARMATUS	1	0.11
PARALABRAX NEBULIFER	1	0.11
PHANERODON FURCATUS	18	1.13
SERIPHUS POLITUS	64	0.68
SQUALUS ACANTHIAS	1	3.06
TORPEDO CALIFORNICA	1	16.10
TRIAKIS SEMIFASCIATA	1	6.58
UROLOPHUS HALLERI	1	0.11
XENISTIUS CALIFORNIENSIS	1	0.11
TOTAL SPECIES	109	29.56

Species composition, aggregate numbers and weight (kg) of fishes taken during heat treatments in 1979.

PLANT=SAN ONOFRE UNIT=1 DATE=FEBRUARY 15, 1979

SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	39	0.45
ANISOTREMUS DAVIDSONI	12	1.93
ATHERINOPS AFFINIS	174	3.86
ATHERINOPSIS CALIFORNIENSIS	29	4.54
CHEILOTREMA SATURNUM	13	1.36
CHROMIS PUNCTIPINNIS	6	0.23
CYMATOGASTER AGGREGATA	1	0.11
CYNOSCION NOBILIS	1	0.34
DAMALICHTHYS VACCA	10	2.95
EMBIOTOCA JACKSONI	23	4.76
GENYONEMUS LINEATUS	11	1.36
GIRELLA NIGRICANS	5	2.72
HYPERPROSOPON ARGENTEUM	7324	385.33
HYPSOBLENNIUS JENKINSI	6	0.11
HYPSYPOPS RUBICUNDA	1	0.34
MEDIALUNA CALIFORNIENSIS	5	2.49
PARALABRAX MACULATOFASCIATUS	1	0.23
PARALABRAX NEBULIFER	44	4.99
PEPRILUS SIMILLIMUS	14	1.13
PHANERODON FURCATUS	21	2.04
PIMELOMETOPON PULCHRUM	4	2.49
PLATYRHINOIDIS TRISERIATA	2	0.68
RHACOCHILUS TOXOTES	4	1.36
SCORPAENA GUTTATA	4	2.04
SCORPAENICHTHYS MARMORATUS	1	1.02
SEBASTES AURICULATUS	1	0.11
SEBASTES RASTRELLIGER	13	2.38
SERIPHUS POLITUS	428	19.16
UMBRINA RONCADOR	1	0.11
XENISTIUS CALIFORNIENSIS	2	0.11
TOTAL SPECIES	8200	450.73

PLANT=SAN ONOFRE UNIT=1 DATE=APRIL 22, 1979

SPNAME	COUNT	WEIGHT
ANISOTREMUS DAVIDSONI	25	10.66
ATHERINOPS AFFINIS	1	0.11
ATHERINOPSIS CALIFORNIENSIS	10	1.13
CHEILOTREMA SATURNUM	5	0.79
CHROMIS PUNCTIPINNIS	1	0.11
CYMATOGASTER AGGREGATA	8	0.11
DAMALICHTHYS VACCA	20	5.22
EMBIOTOCA JACKSONI	41	9.41
ENGRAULIS MORDAX	1	0.11
GENYONEMUS LINEATUS	2	0.23
GIRELLA NIGRICANS	3	1.59
HYPERPROSOPON ARGENTEUM	294	19.39
HYPSOBLENNIUS JENKINSI	6	0.11
MEDIALUNA CALIFORNIENSIS	25	9.07
PARALABRAX CLATHRATUS	1	0.11
PARALABRAX NEBULIFER	9	1.13
PHANERODON FURCATUS	30	2.49
PIMELOMETOPON PULCHRUM	1	0.50
PORICHTHYS NOTATUS	1	0.11
RHACOCHILUS TOXOTES	1	0.57
RONCADOR STEARNSI	1	0.79
SCORPAENA GUTTATA	15	1.47
SEBASTES RASTRELLIGER	9	0.91
SERIPHUS POLITUS	229	2.72
SYNODUS LUCIOCEPS	1	0.23
UROLOPHUS HALLERI	2	0.57
TOTAL SPECIES	742	69.64

PLANT=SAN ONOFRE UNIT=1 DATE=JUNE 24, 1979

SPNAME	COUNT	WEIGHT
ANISOTREMUS DAVIDSONI	151	68.04
CHEILOTREMA SATURNUM	28	6.12
CHROMIS PUNCTIPINNIS	9	0.57
CYNOSCION NOBILIS	1	0.79
DAMALICHTHYS VACCA	35	10.55
EMBIOTOCA JACKSONI	35	8.28
GIRELLA NIGRICANS	6	3.40
HYPERPROSOPON ARGENTEUM	11	0.34
HYPSOBLENNIUS GILBERTI	1	0.11
HYPSYPOPS RUBICUNDA	1	0.57
MEDIALUNA CALIFORNIENSIS	4	0.79
MENTICIRRHUS UNDULATUS	4	1.36
MUSTELUS CALIFORNICUS	1	3.29
MYLIOBATIS CALIFORNICA	1	12.59
PARALABRAX CLATHRATUS	1	0.11
PARALABRAX MACULATOFASCIATUS	1	0.23
PARALABRAX NEBULIFER	3	2.04
PHANERODON FURCATUS	8	0.45
PIMELOMETOPON PULCHRUM	1	0.34
RHACOCHILUS TOXOTES	3	1.36
RONCADOR STEARNSI	11	15.54
SCORPAENA GUTTATA	5	0.34
SEBASTES RASTRELLIGER	5	0.68
SERIPHUS POLITUS	93	2.61
UMBRINA RONCADOR	11	2.38
UROLOPHUS HALLERI	2	0.91
XENISTIUS CALIFORNIENSIS	2	0.11
TOTAL SPECIES	434	143.90

PLANT=SAN ONOFRE UNIT=1 DATE=SEPTEMBER 4, 1979

SPNAME	COUNT	WEIGHT
AMPHISTICHUS ARGENTEUS	1	0.45
ANISOTREMUS DAVIDSONI	130	78.01
ATHERINOPS AFFINIS	4262	147.42
CHEILOTREMA SATURNUM	34	12.71
DAMALICHTHYS VACCA	21	8.16
EMBIOTOCA JACKSONI	3	0.68
GENYONEMUS LINEATUS	97	5.44
GIRELLA NIGRICANS	1	0.91
HERMOSILLA AZUREA	1	0.45
HYPERPROSOPON ARGENTEUM	676	33.11
MEDIALUNA CALIFORNIENSIS	24	6.80
MENTICIRRHUS UNDULATUS	4	2.49
PARALABRAX CLATHRATUS	2	0.57
PARALABRAX NEBULIFER	9	2.95
PEPRILUS SIMILLIMUS	7	0.11
PIMELOMETOPON PULCHRUM	1	0.34
RHINOBATOS PRODUCTUS	1	5.67
RONCADOR STEARNSI	7	5.67
SCORPAENA GUTTATA	3	0.57
SERIPHUS POLITUS	714	14.97
UMBRINA RONCADOR	37	11.79
UROLOPHUS HALLERI	4	2.72
TOTAL SPECIES	6039	341.99

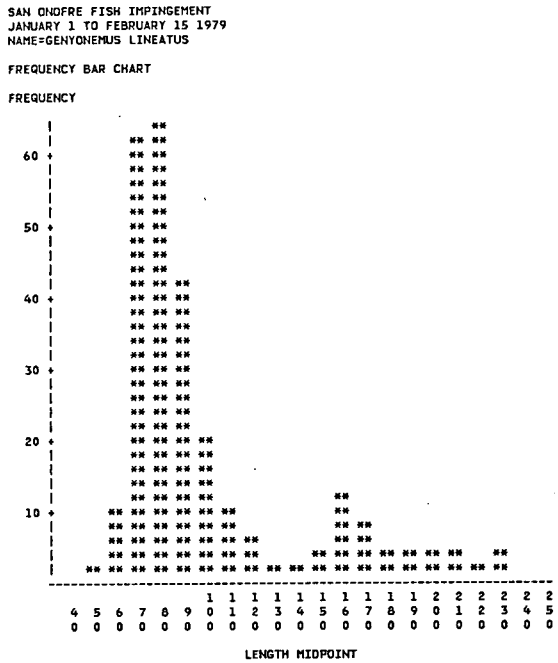
PLANT=SAN ONOFRE UNIT=1 DATE=SEPTEMBER 29, 1979

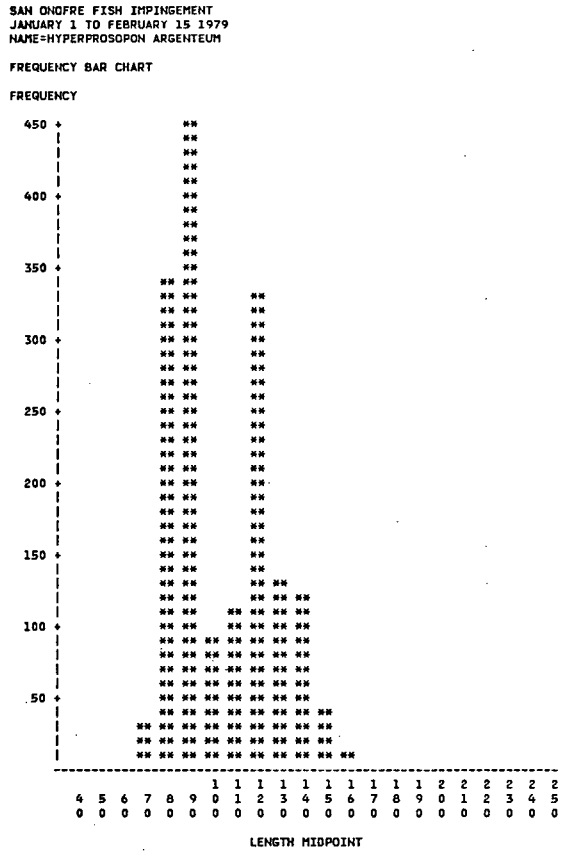
SPNAME	COUNT	WEIGHT
ANCHOA COMPRESSA	60	0.79
ANISOTREMUS DAVIDSONI	312	104.78
ATHERINOPS AFFINIS	19	0.57
CHEILOTREMA SATURNUM	10	0.68
CHROMIS PUNCTIPINNIS	1	0.11
CYMATOGASTER AGGREGATA	24	0.57
CYNOSCION NOBILIS	5	1.70
DAMALICHTHYS VACCA	5	1.70
EMBIOTOCA JACKSONI	15	1.70
ENGRAULIS MORDAX	12	0.11
GENYONEMUS LINEATUS	27	0.57
GIRELLA NIGRICANS	2	1.13
HYPERPROSOPON ARGENTEUM	912	18.71
LEURESTHES TENUIS	101	1.47
MEDIALUNA CALIFORNIENSIS	14	3.52
MENTICIRRHUS UNDULATUS	1	0.11
PARALABRAX CLATHRATUS	12	0.68
PARALABRAX NEBULIFER	53	4.08
PEPRILUS SIMILLIMUS	1	0.11
PHANERODON FURCATUS	23	1.00
RHACOCHILUS TOXOTES	3	1.50
RONCADOR STEARNSI	6	2.84
SCORPAENA GUTTATA	11	1.13
SCORPAENICHTHYS MARMORATUS	3	0.91
SERIPHUS POLITUS	578	15.20
UMBRINA RONCADOR	14	1.36
XENISTIUS CALIFORNIENSIS	14	0.23
TOTAL SPECIES	2238	167.26

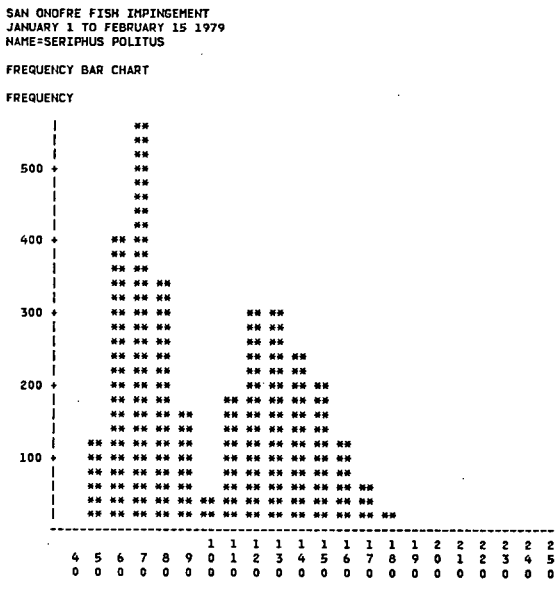
PLANT=SAN ONOFRE UNIT=1 DATE=NOVEMBER 18, 1979

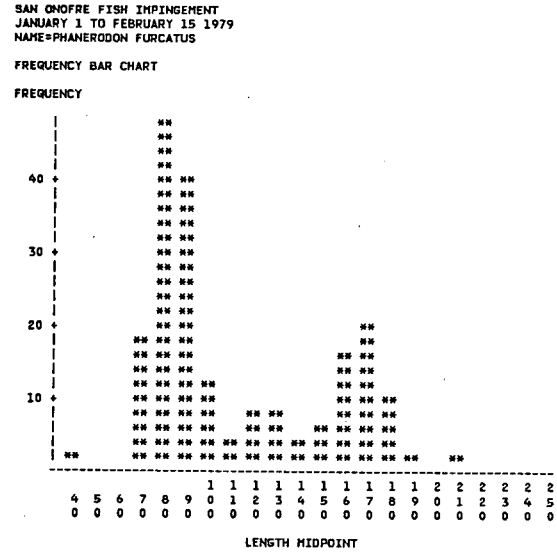
SPNAME	COUNT	WEIGHT
AMPHISTICHUS ARGENTEUS	1	0.34
ANCHOA COMPRESSA	1	0.11
ANISOTREMUS DAVIDSONI	152	57.83
ATHERINOPS AFFINIS	350	11.34
CHEILOTREMA SATURNUM	32	2.61
CHROMIS PUNCTIPINNIS	9	0.68
CYMATOGASTER AGGREGATA	7	0.11
DAMALICHTHYS VACCA	26	10.32
EMBIOTOCA JACKSONI	18	2.95
ENGRAULIS MORDAX	6	0.11
GENYONEMUS LINEATUS	8	0.45
HYPERPROSOPON ARGENTEUM	20	0.91
PARALABRAX CLATHRATUS	4	0.79
PARALABRAX NEBULIFER	47	3.63
PHANERODON FURCATUS	34	4.54
RHACOCHILUS TOXOTES	2	1.13
SCORPAENA GUTTATA	7	0.79
SERIPHUS POLITUS	335	1.93
UMBRINA RONCADOR	1	0.23
TOTAL SPECIES	1060	100.80

Length frequency histograms for select species impinged during normal operations. Data are summarized for periods between heat treatments.





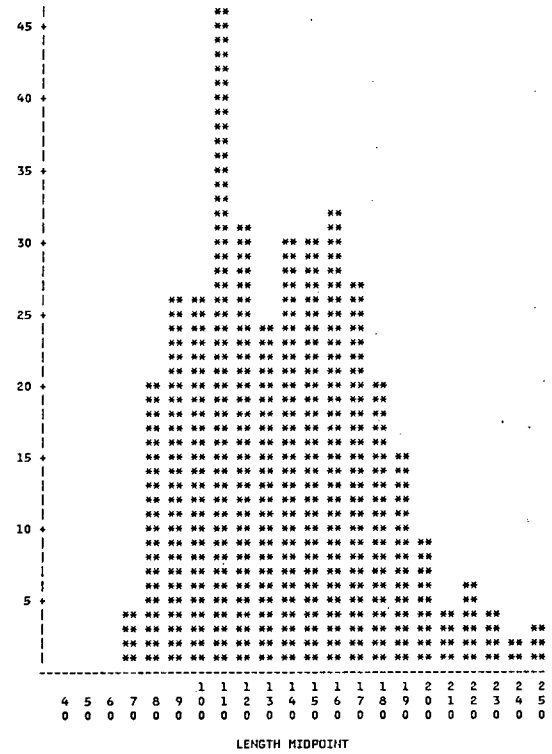




SAN ONOFRE FISH IMPINGEMENT
FEBRUARY 16 TO APRIL 22 1979
NAME=GENYONEMUS LINEATUS

FREQUENCY BAR CHART

FREQUENCY



SAN ONOFRE FISH IMPINGEMENT
FEBRUARY 16 TO APRIL 22 1979
NAME=HYPERPROSOPON ARGENTEUM

FREQUENCY BAR CHART

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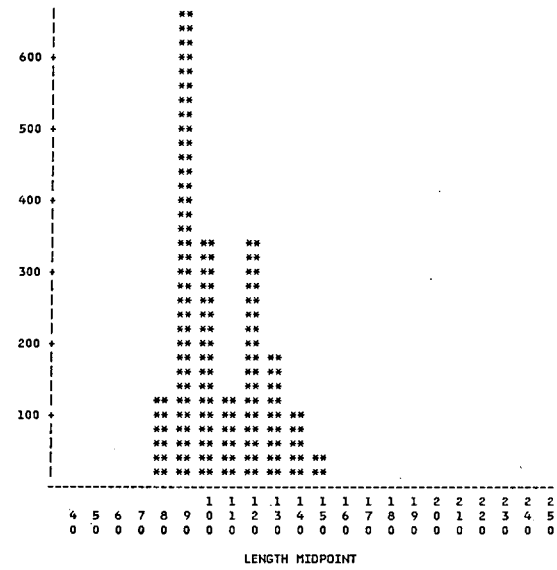
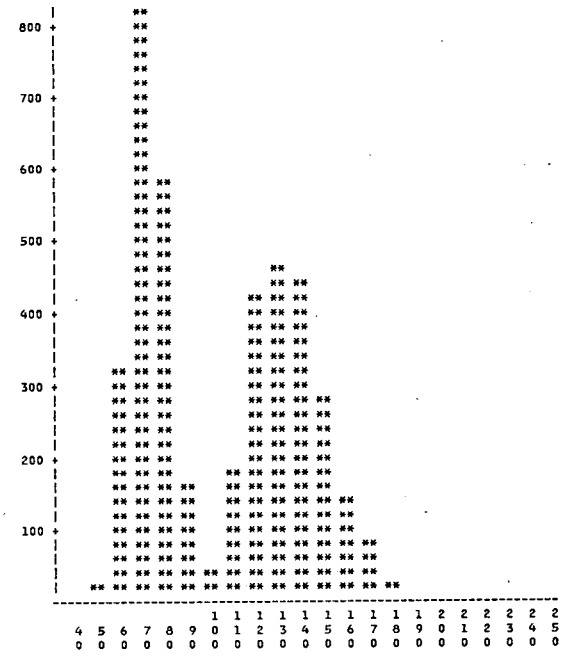


SAN ONOFRE FISH IMPINGEMENT
FEBRUARY 16 TO APRIL 22 1979
NAME=SERIPHUS POLITUS

FREQUENCY BAR CHART

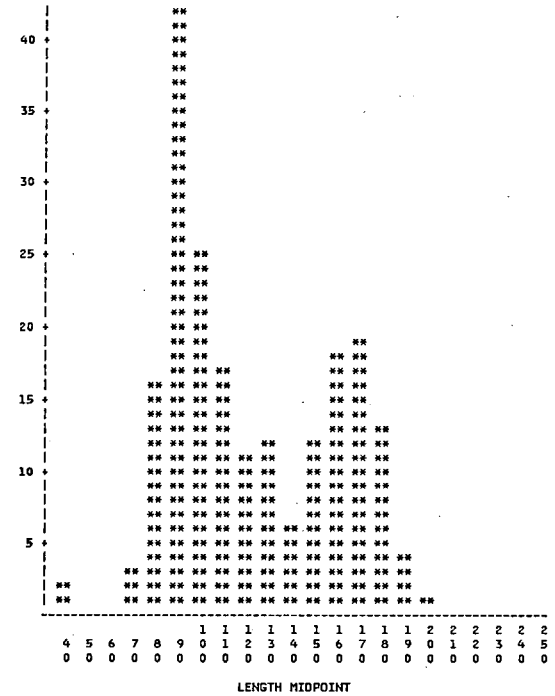
FREQUENCY



SAN ONOFRE FISH IMPINGEMENT
FEBRUARY 16 TO APRIL 22 1979
NAME=PHANERODON FURCATUS

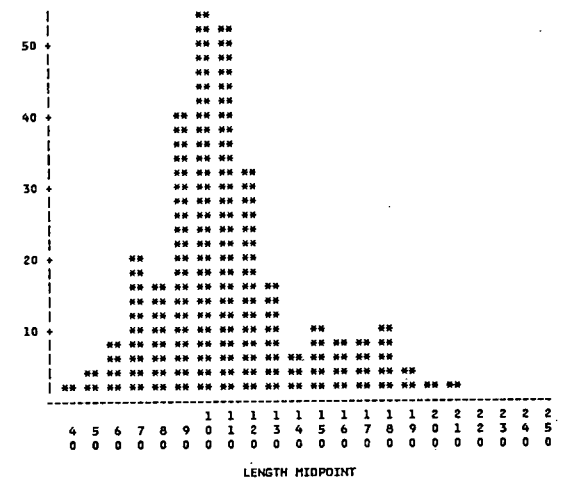
FREQUENCY BAR CHART

FREQUENCY



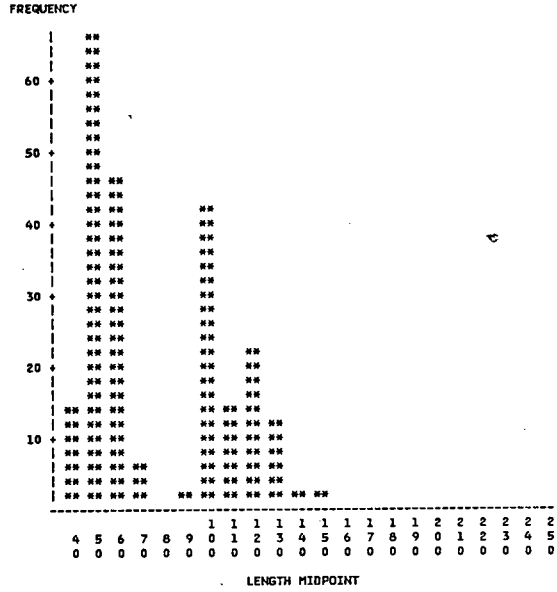
SAN ONOFRE FISH IMPINGEMENT
APRIL 22 TO JUNE 24
NAME=GENYONEMUS LINEATUS

FREQUENCY BAR CHART



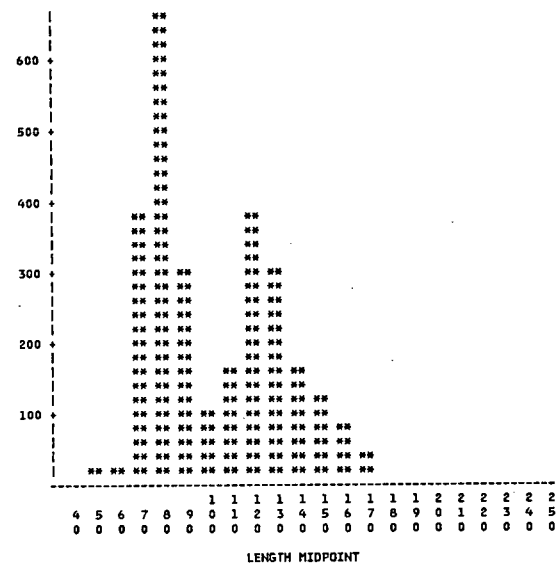
SAN ONOFRE FISH IMPINGEMENT
APRIL 22 TO JUNE 24
NAME=HYPERPROSOPON ARGENTEUM

FREQUENCY BAR CHART



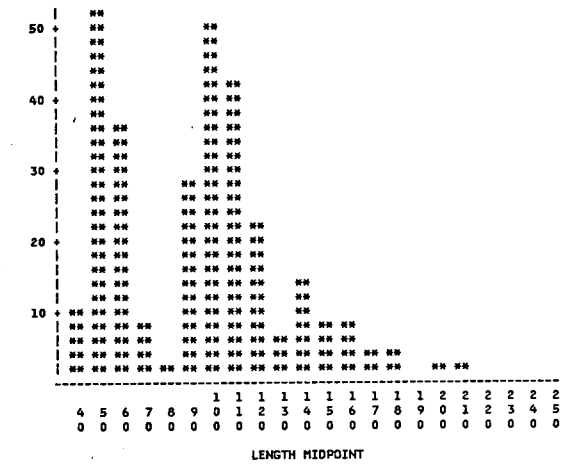
SAN ONOFRE FISH IMPINGEMENT
APRIL 22 TO JUNE 24
NAME=SERIPHUS POLITUS

FREQUENCY BAR CHART



SAN ONOFRE FISH IMPINGEMENT
APRIL 22 TO JUNE 24
NAME=PHANERODON FURCATUS

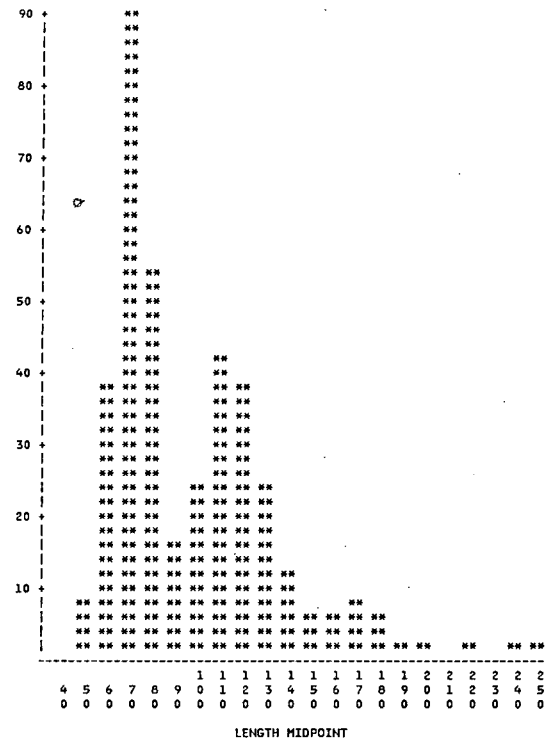
FREQUENCY BAR CHART



SAN ONOFRE FISH IMPINGEMENT
JUNE 25 TO AUGUST 5 1979
NAME=GENYONEMUS LINEATUS

FREQUENCY BAR CHART

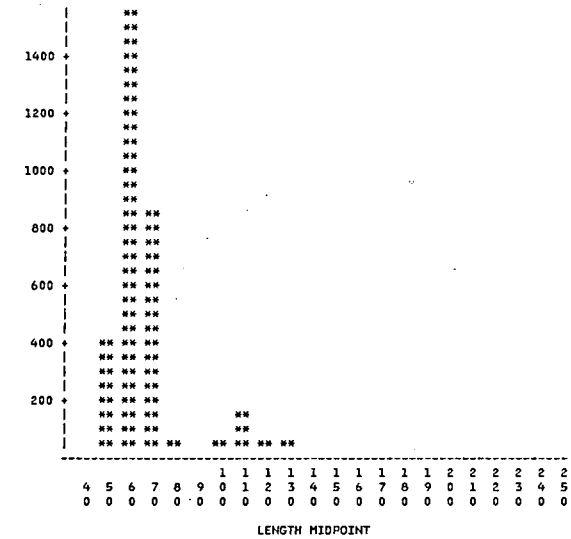
FREQUENCY



SAN ONOFRE FISH IMPINGEMENT
JUNE 25 TO AUGUST 5 1979
NAME=HYPERPROSOPON ARGENTEUM

FREQUENCY BAR CHART

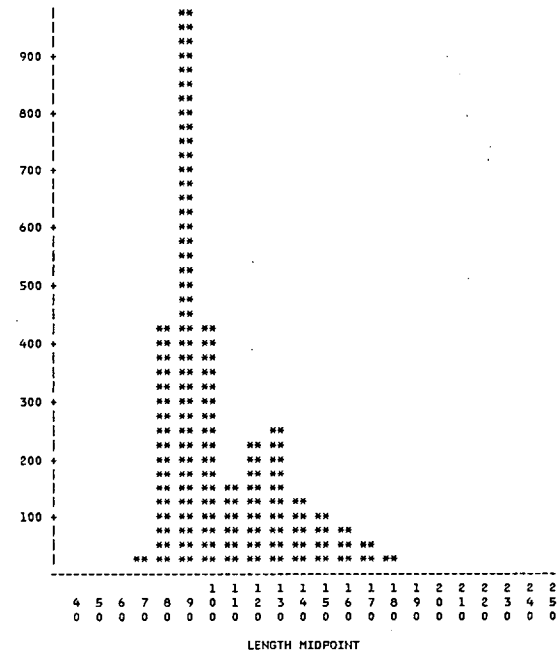
FREQUENCY



SAN ONOFRE FISH IMPINGEMENT
JUNE 25 TO AUGUST 5 1979
NAME=SERIPHUS POLITUS

FREQUENCY BAR CHART

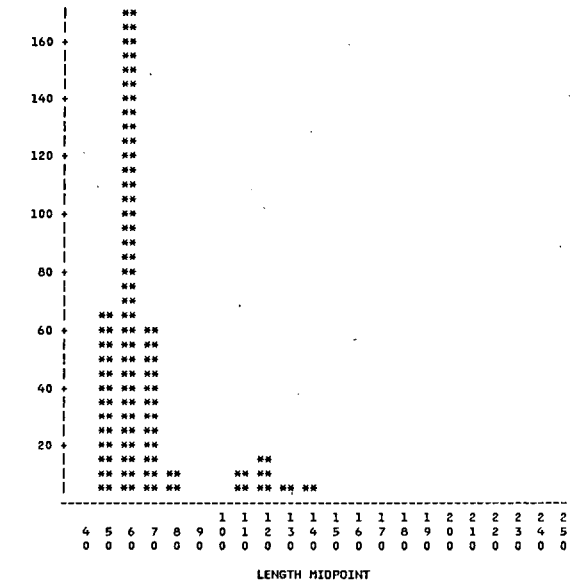
FREQUENCY



SAN ONOFRE FISH IMPINGEMENT
JUNE 25 TO AUGUST 5 1979
NAME=PHANERODON FURCATUS

FREQUENCY BAR CHART

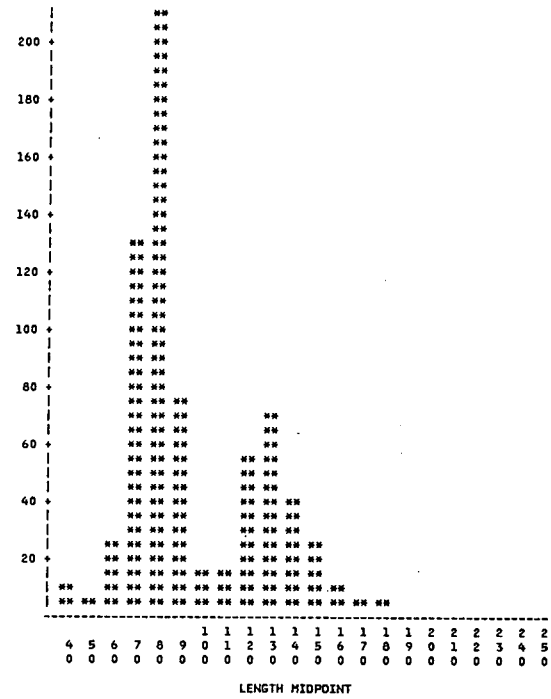
FREQUENCY



SAN ONOFRE FISH IMPINGEMENT
AUGUST 6 TO SEPTEMBER 29 1979
NAME=GENYONEMUS LINEATUS

FREQUENCY BAR CHART

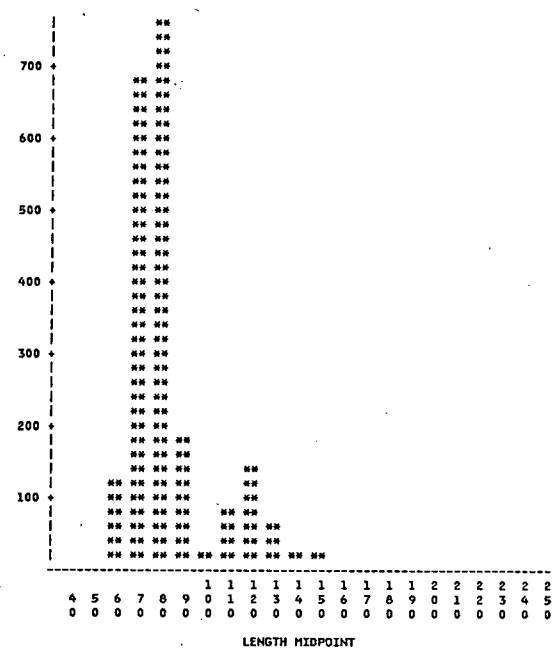
FREQUENCY



SAN ONOFRE FISH IMPINGEMENT
AUGUST 6 TO SEPTEMBER 29 1979
NAME=HYPERPROSOPON ARGENTEUM

FREQUENCY BAR CHART

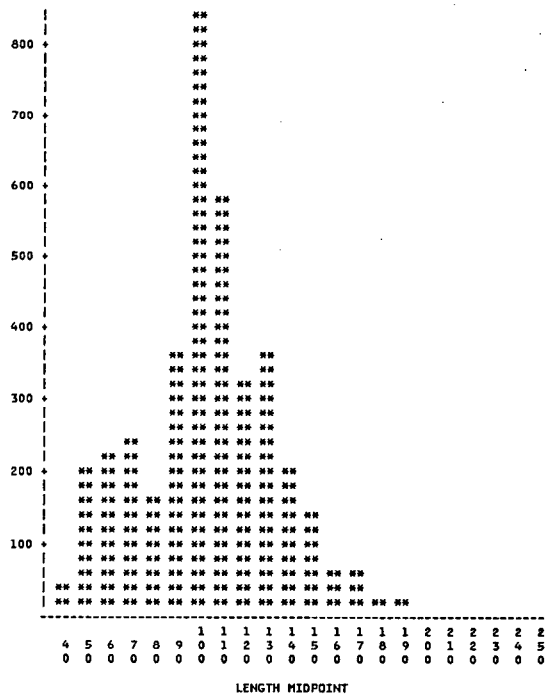
FREQUENCY



SAN ONOFRE FISH IMPINGEMENT
AUGUST 6 TO SEPTEMBER 29 1979
NAME=SERIPHUS POLITUS

FREQUENCY BAR CHART

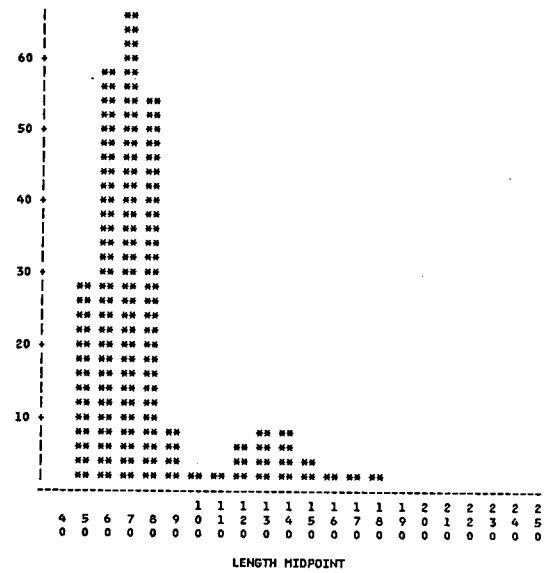
FREQUENCY



SAN ONOFRE FISH IMPINGEMENT
AUGUST 6 TO SEPTEMBER 29 1979
NAME=PHANERODON FURCATUS

FREQUENCY BAR CHART

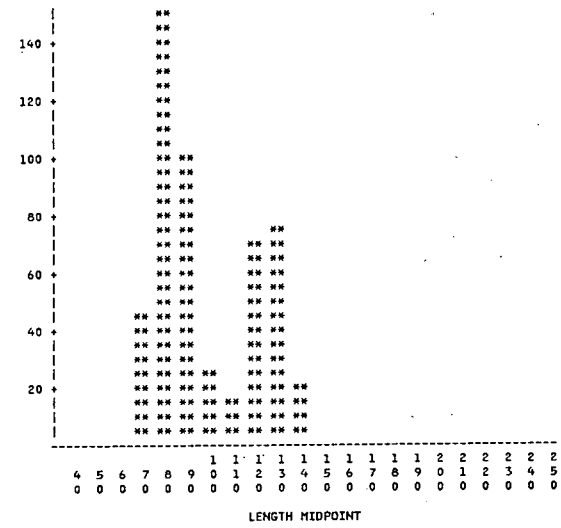
FREQUENCY



SAN ONOFRE FISH IMPINGEMENT
SEPTEMBER 30 TO NOVEMBER 18 1979
NAME=GENYONEMUS LINEATUS

FREQUENCY BAR CHART

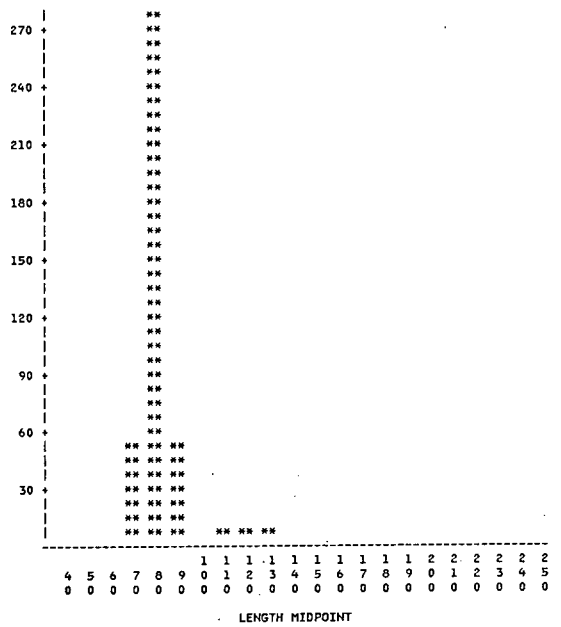
FREQUENCY



SAN ONOFRE FISH IMPINGEMENT
SEPTEMBER 30 TO NOVEMBER 18 1979
NAME=HYPERPROSOPON ARGENTEUM

FREQUENCY BAR CHART

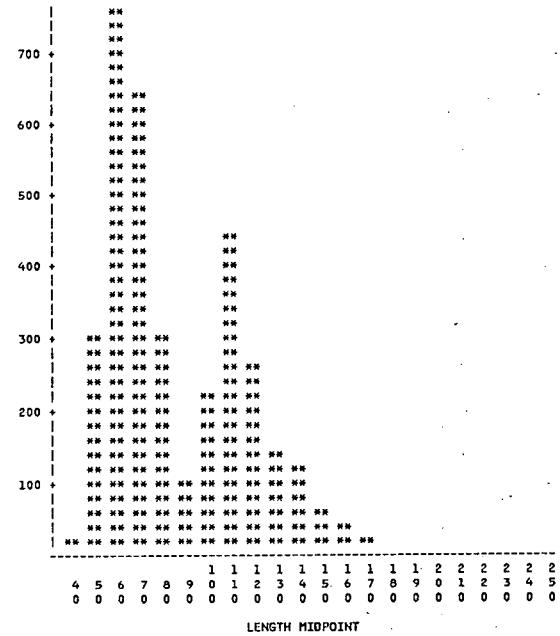
FREQUENCY



SAN ONOFRE FISH IMPINGEMENT
SEPTEMBER 30 TO NOVEMBER 18 1979
NAME=SERIPHUS POLITUS

FREQUENCY BAR CHART

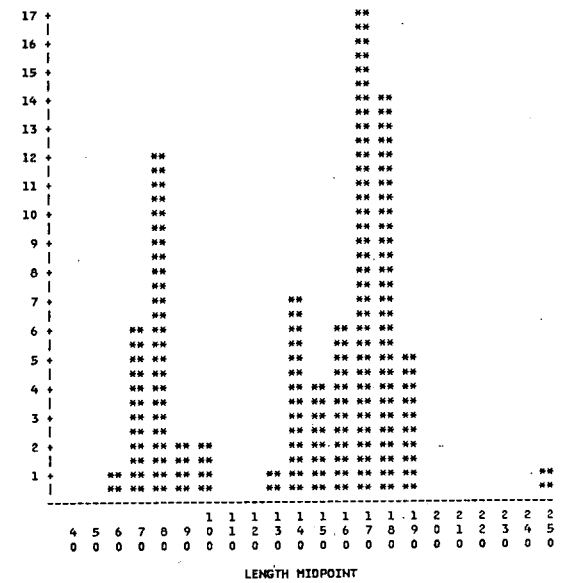
FREQUENCY



SAN ONOFRE FISH IMPINGEMENT
SEPTEMBER 30 TO NOVEMBER 18 1979
NAME=PHANERODON FURCATUS

FREQUENCY BAR CHART

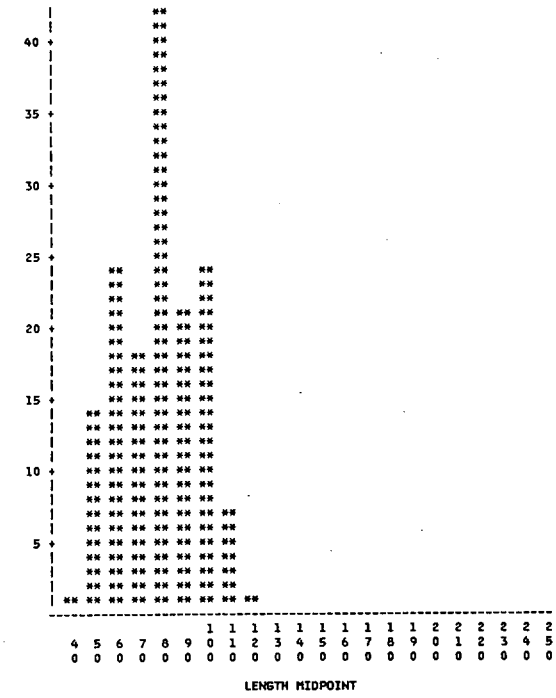
FREQUENCY



SAN ONOFRE FISH IMPINGEMENT
NOVEMBER 19 TO DECEMBER 31 1979
NAME=GENYONEMUS LINEATUS

FREQUENCY BAR CHART

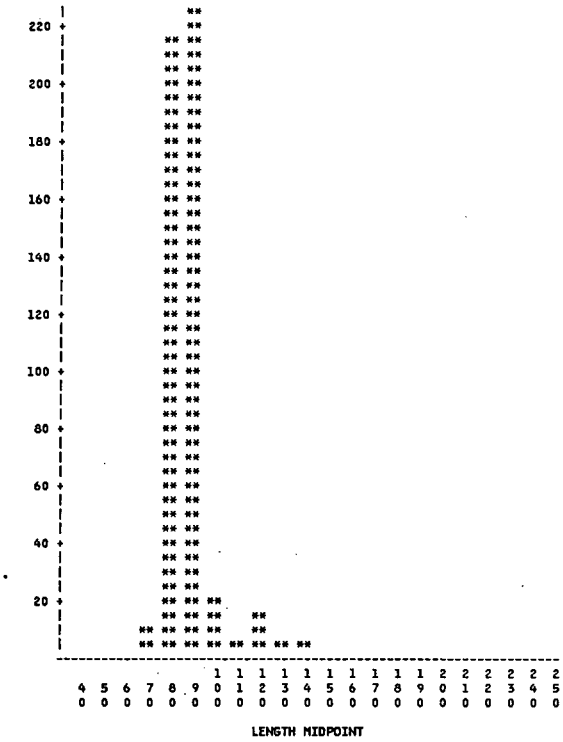
FREQUENCY



SAN ONOFRE FISH IMPINGEMENT
NOVEMBER 19 TO DECEMBER 31 1979
NAME=HYPERPROSOPON ARGENTEUM

FREQUENCY BAR CHART

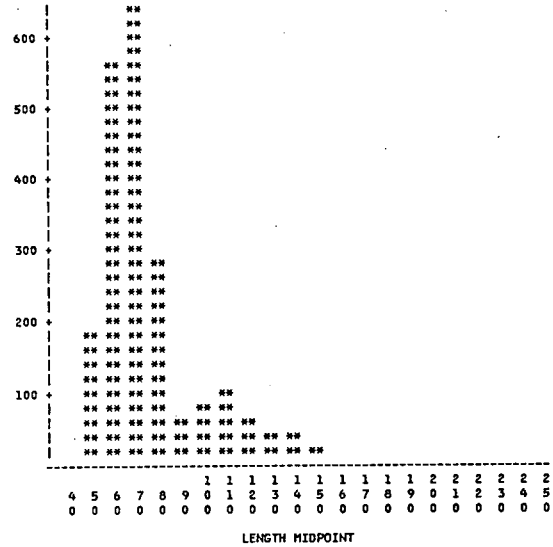
FREQUENCY



SAN ONOFRE FISH IMPINGEMENT
NOVEMBER 19 TO DECEMBER 31 1979
NAME=SERIPHUS POLITUS

FREQUENCY BAR CHART

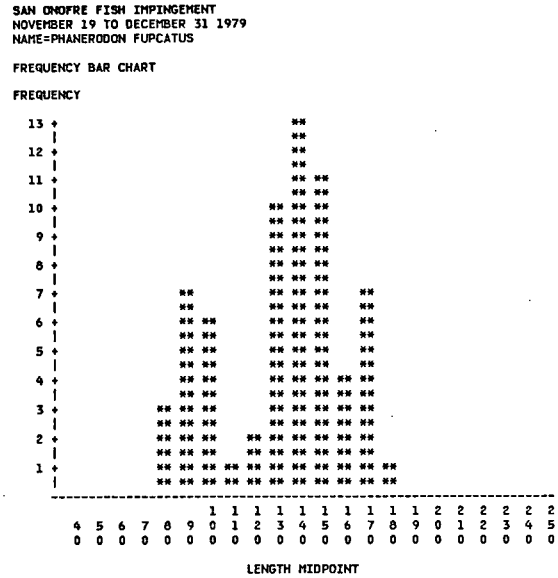
FREQUENCY



SAN ONOFRE FISH IMPINGEMENT
NOVEMBER 19 TO DECEMBER 31 1979
NAME=PHANERODON FURCATUS

FREQUENCY BAR CHART

FREQUENCY



Sex frequency data for select species impinged during normal operations. Data are summarized for periods between heat treatments.

SAN ONOFRE FISH IMPINGEMENT
SEX FREQUENCY DATA FOR JANUARY 1 TO FEBRUARY 15 1979
NAME=GENYONEMUS LINEATUS

SEX	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
FEMALE	28	28	23.529	23.529
IMMATURE	75	103	63.025	86.555
MALE	15	118	12.605	99.160
UNDETERMINED	1	119	0.840	100.000

SAN ONOFRE FISH IMPINGEMENT
SEX FREQUENCY DATA FOR JANUARY 1 TO FEBRUARY 15 1979
NAME=HYPERPROSOPON ARGENTEUM

SEX	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
FEMALE	776	776	49.553	49.553
MALE	790	1566	50.447	100.000

SAN ONOFRE FISH IMPINGEMENT
SEX FREQUENCY DATA FOR JANUARY 1 TO FEBRUARY 15 1979
NAME=SERIPHUS POLITUS

SEX	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
FEMALE	476	476	20.221	20.221
IMMATURE	1269	1745	53.908	74.129
MALE	279	2024	11.852	85.981
UNDETERMINED	330	2354	14.019	100.000

SAN ONOFRE FISH IMPINGEMENT
SEX FREQUENCY DATA FOR JANUARY 1 TO FEBRUARY 15 1979
NAME=PHANERODON FURCATUS

SEX	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
FEMALE	56	56	44.444	44.444
IMMATURE	53	109	42.063	86.508
MALE	17	126	13.492	100.000

SAN ONOFRE FISH IMPINGEMENT
SEX FREQUENCY DATA FOR FEBRUARY 16 TO APRIL 22 1979
NAME=GENYONEMUS LINEATUS

SEX	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
FEMALE	194	194	54.342	54.342
IMMATURE	139	333	38.936	93.277
MALE	24	357	6.723	100.000

SAN ONOFRE FISH IMPINGEMENT
SEX FREQUENCY DATA FOR FEBRUARY 16 TO APRIL 22 1979
NAME=HYPERPROSOPON ARGENTEUM

SEX	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
FEMALE	894	894	47.177	47.177
MALE	1001	1895	52.823	100.000

SAN ONOFRE FISH IMPINGEMENT
SEX FREQUENCY DATA FOR FEBRUARY 16 TO APRIL 22 1979
NAME=SERIPHUS POLITUS

SEX	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
FEMALE	936	936	23.523	23.523
IMMATURE	2000	2936	50.264	73.787
MALE	1010	3946	25.383	99.171
UNDETERMINED	33	3979	0.829	100.000

SAN ONOFRE FISH IMPINGEMENT
SEX FREQUENCY DATA FOR FEBRUARY 16 TO APRIL 22 1979
NAME=PHANERODON FURCATUS

SEX	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
FEMALE	87	87	55.414	55.414
IMMATURE	37	124	23.567	78.981
MALE	32	156	20.382	99.363
UNDETERMINED	1	157	0.637	100.000

SAN ONOFRE FISH IMPINGEMENT
SEX FREQUENCY DATA FOR APRIL 23 TO JUNE 24 1979
NAME=GENYONEMUS LINEATUS

SEX	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
FEMALE	44	44	35.200	35.200
IMMATURE	69	113	55.200	90.400
MALE	9	122	7.200	97.600
UNDETERMINED	3	125	2.400	100.000

SAN ONOFRE FISH IMPINGEMENT
SEX FREQUENCY DATA FOR APRIL 23 TO JUNE 24 1979
NAME=HYPERPROSOPON ARGENTEUM

SEX	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
FEMALE	37	37	16.667	16.667
IMMATURE	131	168	59.009	75.676
MALE	54	222	24.324	100.000

SAN ONOFRE FISH IMPINGEMENT
SEX FREQUENCY DATA FOR APRIL 23 TO JUNE 24 1979
NAME=SERIPHUS POLITUS

SEX	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
FEMALE	954	954	35.164	35.164
IMMATURE	1384	2338	51.014	86.178
MALE	371	2709	13.675	99.853
UNDETERMINED	4	2713	0.147	100.000

SAN ONOFRE FISH IMPINGEMENT
SEX FREQUENCY DATA FOR APRIL 23 TO JUNE 24 1979
NAME=PHANERODON FURCATUS

SEX	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
FEMALE	105	105	52.239	52.239
IMMATURE	82	187	40.796	93.035
MALE	14	201	6.965	100.000

SAN ONOFRE FISH IMPINGEMENT
SEX FREQUENCY DATA FOR JUNE 25 TO AUGUGST 5 1979
NAME=GENYONEMUS LINEATUS

SEX	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
FEMALE	16	16	61.539	61.538
IMMATURE	7	23	26.923	88.462
MALE	3	26	11.538	100.000

SAN ONOFRE FISH IMPINGEMENT
SEX FREQUENCY DATA FOR JUNE 25 TO AUGUGST 5 1979
NAME=HYPERPROSOPON ARGENTEUM

SEX	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
FEMALE	233	233	8.130	8.130
IMMATURE	2539	2772	88.590	96.720
MALE	94	2866	3.280	100.000

SAN ONOFRE FISH IMPINGEMENT
SEX FREQUENCY DATA FOR JUNE 25 TO AUGUGST 5 1979
NAME=SERIPHUS POLITUS

SEX	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
FEMALE	821	821	29.876	29.876
IMMATURE	1635	2456	59.498	89.374
MALE	290	2746	10.553	99.927
UNDETERMINED	2	2748	0.073	100.000

SAN ONOFRE FISH IMPINGEMENT
SEX FREQUENCY DATA FOR JUNE 25 TO AUGUGST 5 1979
NAME=PHANERODON FURCATUS

SEX	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
FEMALE	33	33	44.000	44.000
IMMATURE	38	71	50.667	94.667
MALE	4	75	5.333	100.000

SAN ONOFRE FISH IMPINGEMENT
SEX FREQUENCY DATA FOR AUGUST 6 TO SEPTEMBER 29 1979
NAME=GENYONEMUS LINEATUS

SEX	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
FEMALE	1	1	25.000	25.000
MALE	3	4	75.000	100.000

SAN ONOFRE FISH IMPINGEMENT
SEX FREQUENCY DATA FOR AUGUST 6 TO SEPTEMBER 29 1979
NAME=HYPERPROSOPON ARGENTEUM

SEX	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
FEMALE	506	506	53.207	53.207
MALE	445	951	46.793	100.000

SAN ONOFRE FISH IMPINGEMENT
SEX FREQUENCY DATA FOR AUGUST 6 TO SEPTEMBER 29 1979
NAME=SERIPHUS POLITUS

SEX	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
FEMALE	669	669	74.749	74.749
IMMATURE	1	670	0.112	74.860
MALE	225	895	25.140	100.000

SAN ONOFRE FISH IMPINGEMENT
SEX FREQUENCY DATA FOR AUGUST 6 TO SEPTEMBER 29 1979
NAME=PHANERODON FURCATUS

SEX	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
FEMALE	21	21	75.000	75.000
MALE	7	28	25.000	100.000

SAN ONOFRE FISH IMPINGEMENT
SEX FREQUENCY DATA FOR SEPTEMBER 30 TO NOVEMBER 18 1979
NAME=GENYONEMUS LINEATUS

SEX	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
FEMALE	83	83	58.865	58.865
MALE	58	141	41.135	100.000

SAN ONOFRE FISH IMPINGEMENT
SEX FREQUENCY DATA FOR SEPTEMBER 30 TO NOVEMBER 18 1979
NAME=HYPERPROSOPON ARGENTEUM

SEX	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
FEMALE	234	234	56.796	56.796
MALE	178	412	43.204	100.000

SAN ONOFRE FISH IMPINGEMENT
SEX FREQUENCY DATA FOR SEPTEMBER 30 TO NOVEMBER 18 1979
NAME=SERIPHUS POLITUS

SEX	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
FEMALE	259	259	76.627	76.627
MALE	79	338	23.373	100.000

SAN ONOFRE FISH IMPINGEMENT
SEX FREQUENCY DATA FOR SEPTEMBER 30 TO NOVEMBER 18 1979
NAME=PHANERODON FURCATUS

SEX	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
FEMALE	24	24	44.444	44.444
MALE	30	54	55.556	100.000

SAN ONOFRE FISH IMPINGEMENT
SEX FREQUENCY DATA FOR NOVEMBER 19 TO DECEMBER 31 1979
NAME=GENYONEMUS LINEATUS

SEX	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
FEMALE	3	3	100.000	100.000

SAN ONOFRE FISH IMPINGEMENT
SEX FREQUENCY DATA FOR NOVEMBER 19 TO DECEMBER 31 1979
NAME=HYPERPROSOPON ARGENTEUM

SEX	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
FEMALE	100	100	39.216	39.216
MALE	155	255	60.784	100.000

SAN ONOFRE FISH IMPINGEMENT
SEX FREQUENCY DATA FOR NOVEMBER 19 TO DECEMBER 31 1979
NAME=SERIPHUS POLITUS

SEX	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
FEMALE	63	63	75.904	75.904
MALE	20	83	24.096	100.000

SAN ONOFRE FISH IMPINGEMENT
SEX FREQUENCY DATA FOR NOVEMBER 19 TO DECEMBER 31 1979
NAME=PHANERODON FURCATUS

SEX	FREQUENCY	CUM FREQ	PERCENT	CUM PERCENT
FEMALE	31	31	58.491	58.491
MALE	22	53	41.509	100.000