

State of California
The Resources Agency
DEPARTMENT OF FISH AND GAME

MARINE RECREATIONAL FISHERIES STATISTICS SURVEY
FOR NORTHERN AND CENTRAL CALIFORNIA,
QUARTERLY REPORT NO. 1,
JULY TO SEPTEMBER 1979

by

Konstantin A. Karpov
Gerald S. Kwiecien
and
John J. Mello

MARINE RESOURCES

Administrative Report No. 87-14

1987

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Field intercept Marine Recreational Fisheries Statistics Survey (MRFSS) data for central and northern California, collected in July to September 1979, is presented in a data report format. Data in this quarterly report are subdivided into three categories: primarily by five geographical areas; secondarily by fishing modes and gear types within each area; and finally by catch definition for each area, mode, and gear type. Tables are presented for these categories, each with three sections: sampled effort, ranked catch, and catch-per-unit-effort (CPUE). Also, within each area, length-frequency histograms and tables are presented for select species.

1/ Marine Resources Administrative Report No 87-14

2/ Marine Resources Division, 19160 So. Harbor Drive, Fort Bragg, CA 95437.



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INTRODUCTION

The California Department of Fish and Game under contract to the National Marine Fisheries Service (NMFS) has participated in the Marine Recreational Fisheries Statistics Survey (MRFSS) from mid 1979 to the present. The survey was initiated to gather catch and effort statistics for marine recreational fisheries along the Pacific west coast.

Annual summaries of these statistics are being published elsewhere on a regional basis (Current Fisheries Statistics Numbers 8321, 8323, 8325, 8328 and 8393). In these summaries, California's data is divided into two regions, Del Norte to Monterey counties (northern region) and San Luis Obispo to San Diego counties (southern region).

Quarterly Report No. 1 covers the period of July to September 1979. It supplements the federal annual summary for only the north-central region of California (Del Norte to San Luis Obispo counties). This region is divided into five areas (subregions) corresponding to historical ports.

METHODS

Catch and length data were collected by Department biologists intercepting anglers actively fishing or in the process of leaving a fishing site. Sampling methodology is described in part in Current Fisheries Statistics (8321, 8323, 8325, 8328, 8393).

Data in this quarterly report are subdivided into three categories: primarily by five geographical areas; secondarily by fishing modes and gear types within each area; and finally by catch definition for each area, mode, and gear type. Tables are presented for these categories, each with three

sections: sampled effort, ranked catch, and catch-per-unit-effort (CPUE). Also, within each area, length-frequency histograms and tables are presented for select species.

Study Areas

Study areas range in size from one county in Area 5 to six counties in Area 3 (Figure 1). Adjacent counties are combined whenever similarity of habitat and species composition warrants. Boat modes are segregated by county only if separate grounds were fished (i.e. Sonoma County Bodega Bay fishery, sub-area 097, from Mendocino County, sub-area 045).

Area 1, including Del Norte and Humboldt counties, extends from the Oregon border to Shelter Cove. Both counties are combined in all mode comparisons. Area 2 contains Mendocino County and that part of Sonoma County which is north of Bodega Bay. Both counties are combined for all modes except the boat modes (private/rental boat and CPFV). The San Francisco Area 3 is segregated into ocean and bay. This area includes anglers from six counties; Marin, Contra Costa, Santa Clara, Alameda, San Francisco, and San Mateo. These counties encircle the bay and extend down to Ano Nuevo. Two sets of tables and figures were generated based on whether anglers specified having fished in the ocean or the bay. Bay anglers were predominantly from San Francisco Bay, but also included a small percentage of Halfmoon Bay anglers. Area 4 includes Santa Cruz County and that part of Monterey County which is north of Ragged Point. Area 5, San Luis Obispo County, extends down to Point Sal.

Fishing Modes

Modes of fishing were organized into six categories: (i) pier or dock, (ii) jetty or breakwater, (iii) bridge or causeway, (iv) beach or bank, (v) private or rental boat, and (vi) commercial passenger fishing vessel (CPFV).

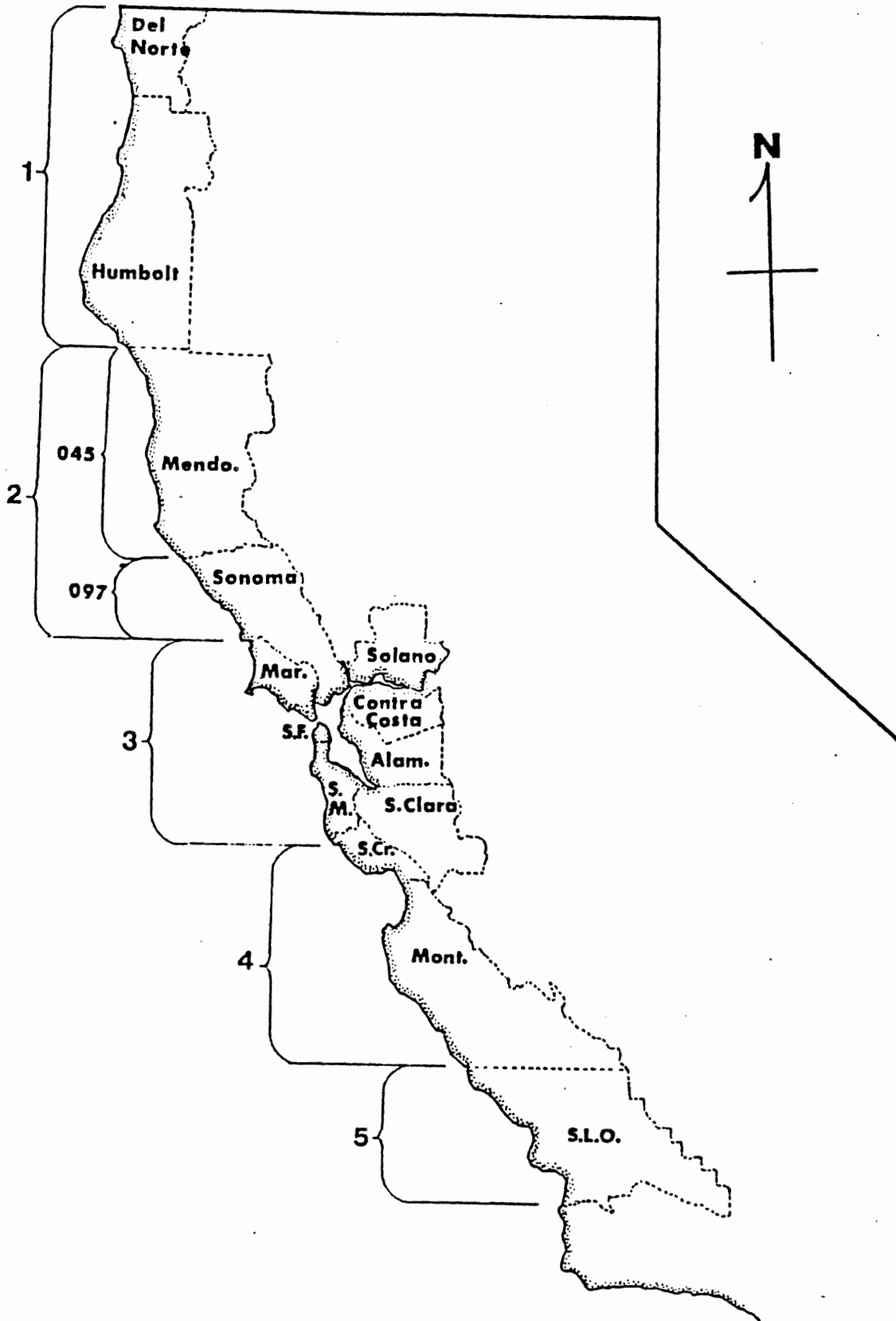


FIGURE 1. Study area counties and sub-areas in northern and central California.

Gear Types

Three types of gear were used; (i) hook-and-line, (ii) spear, or (iii) net. Spears were used only by divers. Dipnet and castnet were the only net gears in active use in northern and central California.

Catch Definition

Catch is defined three different ways: (i) all fish captured, including fish returned dead or alive, those not available at the sampling site (i.e. filleted or given away, etc.), and those available to measure; (ii) landed catch, not including fish returned dead or alive; and (iii) the measured catch only. Fish caught but unavailable to measure were identified to the nearest taxa using the angler's description.

Computer-Generated Tables and Figures

The Microcomputer Program Series (MPS) was developed to generate the tables and figures used in this report. The programs were designed for flexibility and ease of use on area microcomputers. The programs allow the user to generate tables and figures for any combination of area, mode, gear, or definition of catch. Data generated by these programs include: sampled effort, ranked catch, CPUE, and length-frequency data. Documentation of logic and program listings are available (Karpov, 1984).

Sampled Effort

Sampled effort is the same for all three catch definitions for a particular area, mode, or gear. It includes the number of anglers intercepted, the total hours fishing effort, and total hours still to be fished for incomplete trips.

Ranked Catch

Ranked catch includes rank of species caught by number or weight, and other statistics depending on the catch definition. Fish are ranked by

number caught in two of the catch definitions: all fish caught, and landed catch. The measured catch has fish ranked by weight caught. The measured catch tables include average lengths and standard deviation, and derived average weight.

CPUE

CPUE is calculated using two definitions of both "catch" and "effort". Catch is either number or weight (kilograms) caught. Effort is either angler days or total hours fished. CPUE, computed using weight caught as opposed to number landed, is included only for two of the catch definitions: landed catch and measured catch. Average weights incorporated in the landed catch tables are derived either from the respective measured catch table for the same species or, for the more general species groups, by calculating a group average weight. Group average weights of constituent species were calculated from this quarter's data for the same mode, gear, and area. Angler days represent completed fishing days for most areas and modes. Occasional incomplete trips were included for all modes except boat modes.

Length-Frequency Data

Length-frequency histograms and tables were generated for select species. Histograms are included for highly abundant species where at least 10 measured fish occurred in the most frequent size interval. Histograms were summarized in either 5-, 10-, or 20-mm intervals. The criteria for assigning summary intervals was based on the largest recorded size for the species as reported in Miller and Lea (1972). Fish reported from 0 to 12 inches used 5-mm, greater than 12 to 24 inches used 10-mm and greater than 24 inches were assigned 20-mm intervals.

Length-frequency tables (see Appendix A) were generated for all species with at least five measured fish for any given area, mode, and gear. Tables were summarized in 5-mm intervals and include length statistics for possible use in ANOVA computations (Sokal and Rohlf, 1969).

Species Names and Length-Weight Parameters

Total length was recorded for all species except tuna-like fishes with rigid concave caudal fins; for these fork lengths were used. Weights were not actually measured; rather, they were determined, for all major species taken, from precalculated length-weight relationships. The exponential relationship used was $W=aL^b$; where a and b are constants unique to each species (Appendix B).

Throughout this quarter samplers, working from San Mateo through Sonoma counties (area 3 and sub-area 097) inadvertently recorded fork lengths for all species measured. All species with moderately convex to concave caudal fins were converted back to total length using fork-total length relationships from several sources (Echeverria and Lenarz 1986, Karpov In press, and Van Hying 1951). The linear relationship used was $TL=a+b(FL)$; where a and b are constants unique to each species (Appendix C).

Scientific and common names used were standardized using the American Fisheries Society list (1980).

Table 1. Sampled Effort, Ranked Catch and CPUE for Area 1 in 1979 for Quarter 3, by Pier or Dock Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted	=	33
Total Hours Effort for Anglers Intercepted	=	80.0
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Perch, Shiner	1	115	54.5
Rockfishes (unidentified)	2	25	11.8
Surfperches	3	22	10.4
Rockfish, Black	4	18	8.5
Sculpins	5	13	6.2
Surfperch, Walleye	6	10	4.7
Sculpin, Pacific Staghorn	7	4	1.9
Flatfishes	8	3	1.4
Shark, Leopard	9	1	0.5
Total		211	100

C. CPUE

Catch per Angler Day = 6.39 Catch per Angler Hour = 2.64

Table 2. Sampled Effort, Ranked Catch and CPUE for Area 1 in 1979 for Quarter 3, by Pier or Dock Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted	=	33
Total Hours Effort for Anglers Intercepted	=	80.0
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Rockfishes (unidentified)	1	25	33.8	1.06**	26.50
Perch, Shiner	2	19	25.7	0.04	0.70
Rockfish, Black	3	12	16.2	1.06	12.77
Surfperch, Walleye	4	10	13.5	0.12	1.16
Sculpins	5	5	6.8	0.00**	0.00
Surfperches	6	2	2.7	0.06**	0.12
Shark, Leopard	7	1	1.4	22.34	22.34
Total		74	100		63.60

C. CPUE

Catch per Angler Day	=	2.24	Catch per Angler Hour	=	0.93
Kg per Angler Day	=	1.93	Kg per Angler Hour	=	0.80

* Weight estimated from length-to-weight regression if available.

** Mean weight for this group was not calculated or was estimated from other sources (see text).

Table 3. Sampled Effort, Ranked Catch and CPUE for Area 1 in 1979 for Quarter 3, by Pier or Dock Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted = 33
 Total Hours Effort for Anglers Intercepted = 80.0
 Total Hours Still to Fish (Incomplete Trips) = 0.0

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Shark, Leopard	1	22.34	1	1.6	1	22.34	1365	0
Rockfish, Black	2	12.77	12	18.8	10	1.06	410	47
Surfperch, Walleye	3	1.16	10	15.6	10	0.12	191	26
Perch, Shiner	4	0.59	16	25.0	16	0.04	139	12
Rockfishes (unidentified)	5	0.00	25	39.1	0	0.00	0	0
Total		36.87	64	100	37			

C. CPUE***

Catch per Angler Day = 1.94 Catch per Angler Hour = 0.80
 Kg per Angler Day = 1.12 Kg per Angler Hour = 0.46

* Weight estimated from length-to-weight regression if available.

** Total length except for species with tuna-like caudal fins (see text).

*** CPUE is underestimated if all fish taken were not examined (see text).

Table 4. Sampled Effort, Ranked Catch and CPUE for Area 1 in 1979 for Quarter 3, by Jetty or Breakwater Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted	=	84
Total Hours Effort for Anglers Intercepted	=	227.6
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Rockfish, Black	1	161	68.5
Greenling, Kelp	2	22	9.4
Sculpins	3	11	4.7
Surfperches	4	9	3.8
Rockfish, Copper	5	8	3.4
Cabezon	6	5	2.1
Seaperch, Striped	7	4	1.7
Surfperch, Redtail	8	4	1.7
Rockfish, Roughey	9	2	0.9
Lingcod	10	2	0.9
Salmon, Coho (Silver)	11	1	0.4
Rockfish, Brown	12	1	0.4
Rockfish, Darkblotched	13	1	0.4
Rockfish, Blue	14	1	0.4
Sculpin, Bull	15	1	0.4
Surfperch, Walleye	16	1	0.4
Wolf-eel	17	1	0.4
Total		235	100

C. CPUE

Catch per Angler Day = 2.80 Catch per Angler Hour = 1.03

Table 5. Sampled Effort, Ranked Catch and CPUE for Area 1 in 1979 for Quarter 3, by Jetty or Breakwater Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted	=	84
Total Hours Effort for Anglers Intercepted	=	227.6
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Rockfish, Black	1	107	69.0	0.24	26.06
Greenling, Kelp	2	19	12.3	0.19	3.56
Rockfish, Copper	3	8	5.2	0.16	1.25
Cabazon	4	4	2.6	0.30	1.18
Seaperch, Striped	5	4	2.6	0.16	0.66
Surfperch, Redtail	6	3	1.9	0.34	1.03
Rockfish, Rougheye	7	2	1.3	0.00**	0.00
Surfperches	8	2	1.3	0.24**	0.48
Salmon, Coho (Silver)	9	1	0.6	0.41	0.41
Rockfish, Brown	10	1	0.6	0.08	0.08
Rockfish, Blue	11	1	0.6	0.17	0.17
Sculpin, Bull	12	1	0.6	0.00**	0.00
Surfperch, Walleye	13	1	0.6	0.24	0.24
Wolf-eel	14	1	0.6	0.00**	0.00
Total		155	100		35.12

C. CPUE

Catch per Angler Day	=	1.85	Catch per Angler Hour	=	0.68
Kg per Angler Day	=	0.42	Kg per Angler Hour	=	0.15

* Weight estimated from length-to-weight regression if available.

** Mean weight for this group was not calculated or was estimated from other sources (see text).

Table 6. Sampled Effort, Ranked Catch and CPUE for Area 1 in 1979 for Quarter 3, by Jetty or Breakwater Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted	=	84
Total Hours Effort for Anglers Intercepted	=	227.6
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Rockfish, Black	1	21.44	88	72.1	79	0.24	240	54
Greenling, Kelp	2	2.44	13	10.7	13	0.19	227	46
Rockfish, Copper	3	1.25	8	6.6	7	0.16	194	52
Cabezon	4	1.18	4	3.3	4	0.30	250	16
Surfperch, Redtail	5	1.03	3	2.5	3	0.34	272	16
Salmon, Coho (Silver)	6	0.41	1	0.8	1	0.41	350	0
Surfperch, Walleye	7	0.24	1	0.8	1	0.24	236	0
Rockfish, Blue	8	0.17	1	0.8	1	0.17	225	0
Seaperch, Striped	9	0.16	1	0.8	1	0.16	216	0
Rockfish, Brown	10	0.08	1	0.8	1	0.08	164	0
Sculpin, Bull	11	0.00	1	0.8	0	0.00	0	0
Total		28.39	122	100	111			

C. CPUE***

Catch per Angler Day	=	1.45	Catch per Angler Hour	=	0.54
Kg per Angler Day	=	0.34	Kg per Angler Hour	=	0.12

* Weight estimated from length-to-weight regression if available.

** Total length except for species with tuna-like caudal fins (see text).

*** CPUE is underestimated if all fish taken were not examined (see text).

Table 7. Sampled Effort, Ranked Catch and CPUE for Area 1 in 1979 for Quarter 3, by Beach or Bank Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted = 81
 Total Hours Effort for Anglers Intercepted = 192.4
 Total Hours Still to Fish (Incomplete Trips) = 0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Surfperch, Redtail	1	150	78.1
Surfperch, Silver	2	13	6.8
Rockfish, Black	3	9	4.7
Greenling, Kelp	4	9	4.7
Lingcod	5	2	1.0
Cabazon	6	2	1.0
Surfperches	7	2	1.0
Unidentified Fishes	8	1	0.5
Smelt, Surf	9	1	0.5
Rockfish, Canary	10	1	0.5
Greenling, Rock	11	1	0.5
Sculpins	12	1	0.5
Total		192	100

C. CPUE

Catch per Angler Day = 2.37 Catch per Angler Hour = 1.00

Table 8. Sampled Effort, Ranked Catch and CPUE for Area 1 in 1979 for Quarter 3, by Beach or Bank Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted	=	81
Total Hours Effort for Anglers Intercepted	=	192.4
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Surfperch, Redtail	1	129	84.9	0.31	40.60
Greenling, Kelp	2	8	5.3	0.44	3.48
Rockfish, Black	3	5	3.3	0.59	2.97
Surfperch, Silver	4	5	3.3	0.15	0.73
Unidentified Fishes	5	1	0.7	0.00**	0.00
Smelt, Surf	6	1	0.7	0.03	0.03
Rockfish, Canary	7	1	0.7	0.17	0.17
Greenling, Rock	8	1	0.7	0.53	0.53
Cabezon	9	1	0.7	0.00**	0.00
Total		152	100		48.50

C. CPUE

Catch per Angler Day	=	1.88	Catch per Angler Hour	=	0.79
Kg per Angler Day	=	0.60	Kg per Angler Hour	=	0.25

* Weight estimated from length-to-weight regression if available.

** Mean weight for this group was not calculated or was estimated from other sources (see text).

Table 9. Sampled Effort, Ranked Catch and CPUE for Area 1 in 1979 for Quarter 3, by Beach or Bank Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted = 81
 Total Hours Effort for Anglers Intercepted = 192.4
 Total Hours Still to Fish (Incomplete Trips) = 0.0

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Surfperch, Redtail	1	30.84	98	85.2	83	0.31	257	46
Rockfish, Black	2	2.37	4	3.5	4	0.59	326	81
Greenling, Kelp	3	2.18	5	4.3	5	0.44	313	16
Surfperch, Silver	4	0.73	5	4.3	5	0.15	207	26
Greenling, Rock	5	0.53	1	0.9	1	0.53	335	0
Rockfish, Canary	6	0.17	1	0.9	1	0.17	227	0
Smelt, Surf	7	0.03	1	0.9	1	0.03	169	0
Total		36.84	115	100	100			

C. CPUE***

Catch per Angler Day = 1.42 Catch per Angler Hour = 0.60
 Kg per Angler Day = 0.45 Kg per Angler Hour = 0.19

* Weight estimated from length-to-weight regression if available.

** Total length except for species with tuna-like caudal fins (see text).

*** CPUE is underestimated if all fish taken were not examined (see text).

Table 10. Sampled Effort, Ranked Catch and CPUE for Area 1 in 1979 for Quarter 3, by Beach or Bank Anglers Using Shore Net Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted = 27
 Total Hours Effort for Anglers Intercepted = 34.9
 Total Hours Still to Fish (Incomplete Trips) = 0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Smelt, Surf	1	4781	%100.0
Total		4781	100

C. CPUE

Catch per Angler Day = 177.07 Catch per Angler Hour = 137.09

Table 11. Sampled Effort, Ranked Catch and CPUE for Area 1 in 1979 for Quarter 3, by Beach or Bank Anglers Using Shore Net Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted = 27
 Total Hours Effort for Anglers Intercepted = 34.9
 Total Hours Still to Fish (Incomplete Trips) = 0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Smelt, Surf	1	4780	%100.0	0.03	158.97
Total		4780	100		158.97

C. CPUE

Catch per Angler Day = 177.04 Catch per Angler Hour = 137.06
 Kg per Angler Day = 5.89 Kg per Angler Hour = 4.56

* Weight estimated from length-to-weight regression if available.

Table 12. Sampled Effort, Ranked Catch and CPUE for Area 1 in 1979 for Quarter 3, by Beach or Bank Anglers Using Shore Net Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted = 27
 Total Hours Effort for Anglers Intercepted = 34.9
 Total Hours Still to Fish (Incomplete Trips) = 0.0

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Smelt, Surf	1	158.97	4780	%100.0	140	0.03	173	8
Total		158.97	4780	100	140			

C. CPUE***

Catch per Angler Day = 177.04 Catch per Angler Hour = 137.06
 Kg per Angler Day = 5.89 Kg per Angler Hour = 4.56

* Weight estimated from length-to-weight regression if available.
 ** Total length except for species with tuna-like caudal fins (see text).
 *** CPUE is underestimated if all fish taken were not examined (see text).

Table 13. Sampled Effort, Ranked Catch and CPUE for Area 1 in 1979 for Quarter 3, by Private or Rental Boat Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted	=	43
Total Hours Effort for Anglers Intercepted	=	157.1
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Rockfish, Black	1	111	56.6
Rockfish, Blue	2	22	11.2
Lingcod	3	20	10.2
Rockfish, Yellowtail	4	12	6.1
Rockfish, Copper	5	6	3.1
Salmon, Coho (Silver)	6	4	2.0
Rockfish, Canary	7	4	2.0
Rockfishes (unidentified)	8	3	1.5
Rockfish, Yelloweye	9	3	1.5
Sculpins	10	3	1.5
Sharks	11	2	1.0
Rockfish, Rosethorn	12	2	1.0
Rockfish, Tiger	13	2	1.0
Greenling, Kelp	14	1	0.5
Flounder, Starry	15	1	0.5
Total		196	100

C. CPUE

Catch per Angler Day = 4.56 Catch per Angler Hour = 1.25

Table 14. Sampled Effort, Ranked Catch and CPUE for Area 1 in 1979 for Quarter 3, by Private or Rental Boat Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted	=	43
Total Hours Effort for Anglers Intercepted	=	157.1
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Rockfish, Black	1	87	53.4	1.24	108.28
Rockfish, Blue	2	22	13.5	1.00	22.09
Lingcod	3	20	12.3	6.37	127.45
Rockfish, Yellowtail	4	12	7.4	1.39	16.64
Rockfish, Copper	5	6	3.7	1.47	8.83
Salmon, Coho (Silver)	6	4	2.5	3.63	14.51
Rockfish, Canary	7	4	2.5	1.89	7.54
Rockfish, Yelloweye	8	3	1.8	5.07	15.21
Rockfish, Rosethorn	9	2	1.2	0.44	0.89
Rockfish, Tiger	10	2	1.2	2.14	4.28
Flounder, Starry	11	1	0.6	1.49	1.49
Total		163	100		327.21

C. CPUE

Catch per Angler Day	=	3.79	Catch per Angler Hour	=	1.04
Kg per Angler Day	=	7.61	Kg per Angler Hour	=	2.08

* Weight estimated from length-to-weight regression if available.

Table 15. Sampled Effort, Ranked Catch and CPUE for Area 1 in 1979 for Quarter 3, by Private or Rental Boat Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted = 43
 Total Hours Effort for Anglers Intercepted = 157.1
 Total Hours Still to Fish (Incomplete Trips) = 0.0

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Lingcod	1	127.45	20	12.6	20	6.37	786	215
Rockfish, Black	2	103.30	83	52.2	69	1.24	424	79
Rockfish, Blue	3	22.09	22	13.8	12	1.00	397	58
Rockfish, Yellowtail	4	16.64	12	7.5	7	1.39	447	77
Rockfish, Yelloweye	5	15.21	3	1.9	3	5.07	640	71
Salmon, Coho (Silver)	6	14.51	4	2.5	4	3.63	716	105
Rockfish, Copper	7	8.83	6	3.8	6	1.47	412	103
Rockfish, Canary	8	7.54	4	2.5	4	1.89	483	114
Rockfish, Tiger	9	4.28	2	1.3	2	2.14	475	14
Flounder, Starry	10	1.49	1	0.6	1	1.49	482	0
Rockfish, Rosethorn	11	0.89	2	1.3	2	0.44	301	1
Total		322.23	159	100	130			

C. CPUE***

Catch per Angler Day = 3.70 Catch per Angler Hour = 1.01
 Kg per Angler Day = 7.49 Kg per Angler Hour = 2.05

* Weight estimated from length-to-weight regression if available.
 ** Total length except for species with tuna-like caudal fins (see text).
 *** CPUE is underestimated if all fish taken were not examined (see text).

Figure 2. Length-Frequency Histogram for Black Rockfish
 Taken by Jetty or Breakwater Anglers Using Hook-and-Line Gear.
 Area 1, Quarter 3, 1979.

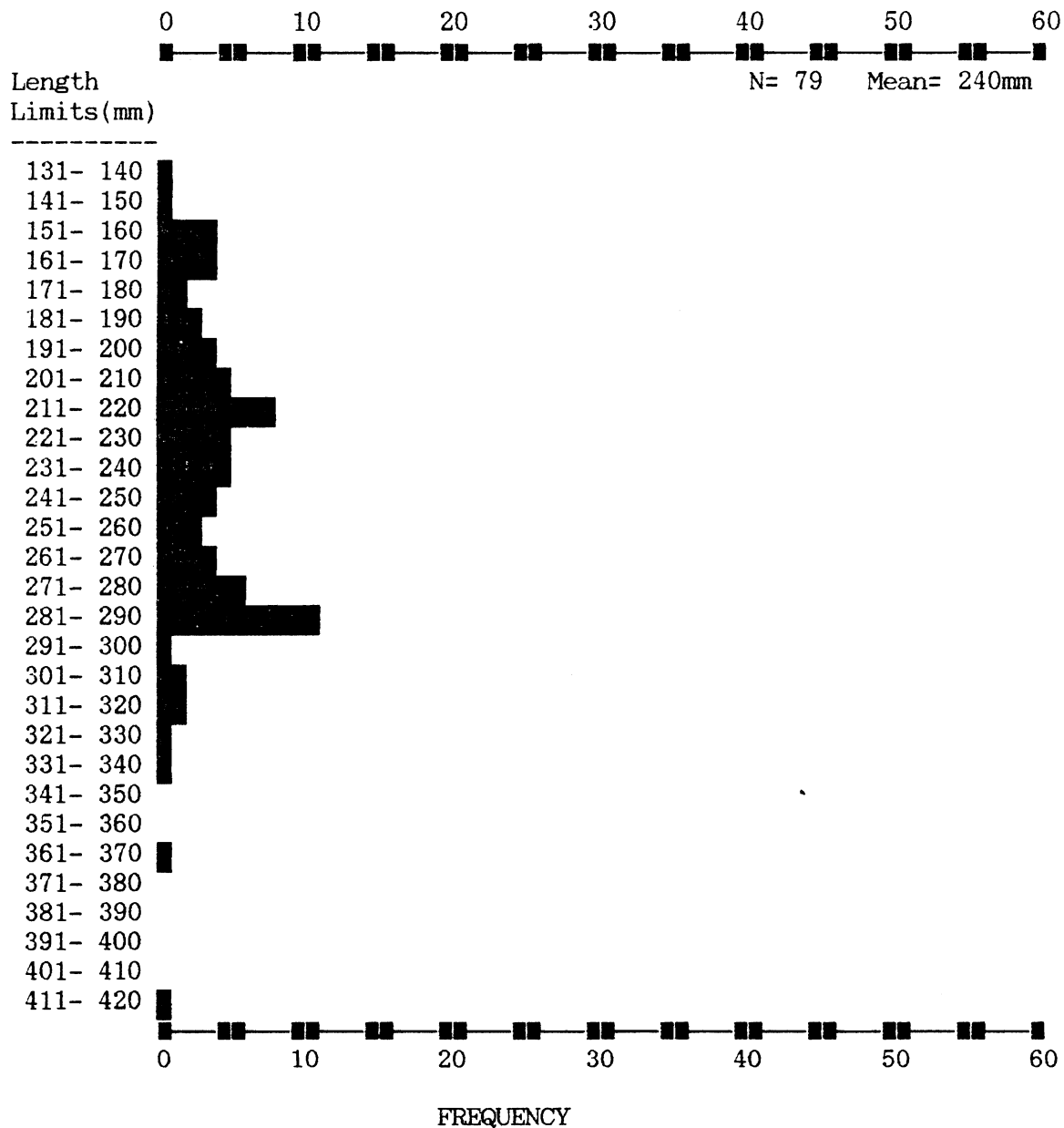


Figure 3. Length-Frequency Histogram for Redtail Surfperch
 Taken by Beach and Bank Anglers Using Hook-and-Line Gear.
 Area 1, Quarter 3, 1979.

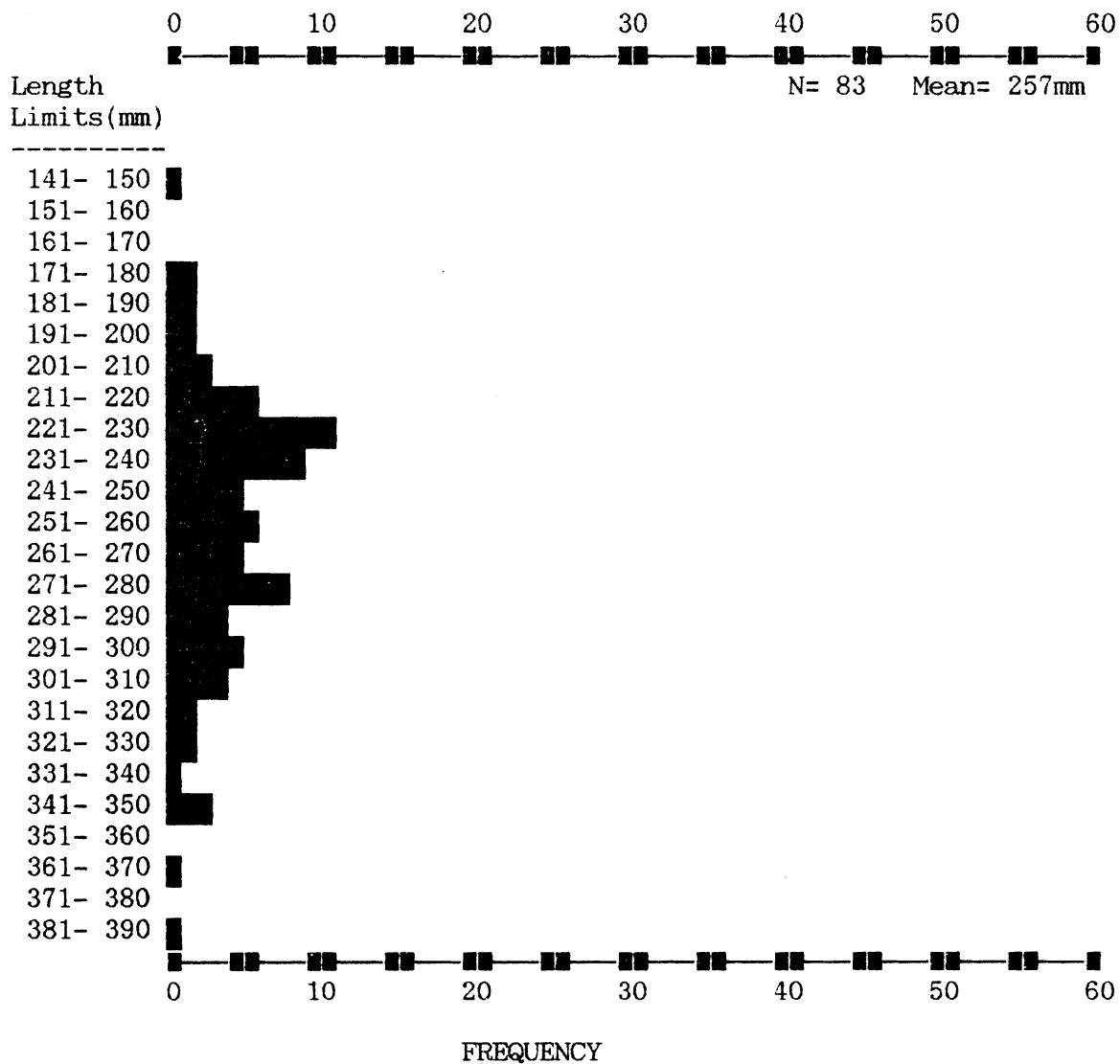


Figure 4. Length-Frequency Histogram for Surf Smelt
 Taken by Beach and Bank Anglers Using Shore Net Gear.
 Area 1, Quarter 3, 1979.

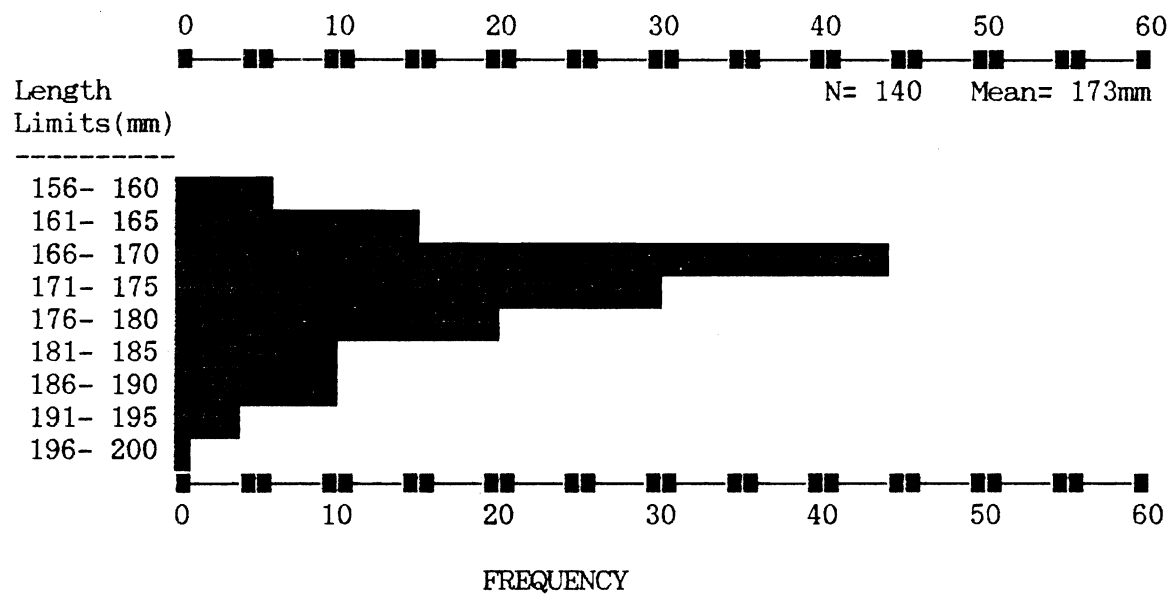


Table 16. Sampled Effort, Ranked Catch and CPUE for Area 2 in 1979 for Quarter 3, by Pier or Dock Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted	=	17
Total Hours Effort for Anglers Intercepted	=	52.0
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Surfperches	1	22	22.9
Rockfish, Blue	2	16	16.7
Sculpin, Pacific Staghorn	3	12	12.5
Perch, Shiner	4	8	8.3
Surfperch, Walleye	5	7	7.3
Sanddab, Pacific	6	7	7.3
Trouts	7	4	4.2
Tomcod, Pacific	8	4	4.2
Rockfish, Greenstriped	9	3	3.1
Rockfish, Black	10	3	3.1
Cabazon	11	3	3.1
Rockfishes (unidentified)	12	2	2.1
Rockfish, Canary	13	2	2.1
Rockfish, Yellowtail	14	1	1.0
Bocaccio	15	1	1.0
Rockfish, Kelp	16	1	1.0
Total		96	100

C. CPUE

Catch per Angler Day = 5.65 Catch per Angler Hour = 1.85

Table 17. Sampled Effort, Ranked Catch and CPUE for Area 2 in 1979 for Quarter 3, by Pier or Dock Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted	=	17
Total Hours Effort for Anglers Intercepted	=	52.0
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Rockfish, Blue	1	16	26.7	0.49	7.92
Perch, Shiner	2	8	13.3	0.05	0.41
Sanddab, Pacific	3	7	11.7	0.07	0.47
Surfperches	4	6	10.0	0.08**	0.48
Tomcod, Pacific	5	4	6.7	0.06	0.25
Rockfish, Greenstriped	6	3	5.0	0.25	0.75
Rockfish, Black	7	3	5.0	0.66	1.98
Sculpin, Pacific Staghorn	8	3	5.0	0.03	0.09
Cabezon	9	3	5.0	0.00**	0.00
Rockfishes (unidentified)	10	2	3.3	0.49**	0.98
Rockfish, Canary	11	2	3.3	0.55	1.09
Rockfish, Yellowtail	12	1	1.7	0.57	0.57
Rockfish, Kelp	13	1	1.7	0.00**	0.00
Surfperch, Walleye	14	1	1.7	0.29	0.29
Total		60	100		15.27

C. CPUE

Catch per Angler Day	=	3.53	Catch per Angler Hour	=	1.15
Kg per Angler Day	=	0.90	Kg per Angler Hour	=	0.29

* Weight estimated from length-to-weight regression if available.

** Mean weight for this group was not calculated or was estimated from other sources (see text).

Table 18. Sampled Effort, Ranked Catch and CPUE for Area 2 in 1979 for Quarter 3, by Pier or Dock Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted = 17
 Total Hours Effort for Anglers Intercepted = 52.0
 Total Hours Still to Fish (Incomplete Trips) = 0.0

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Rockfish, Blue	1	7.92	16	35.6	16	0.49	309	58
Rockfish, Black	2	1.98	3	6.7	3	0.66	344	66
Rockfish, Canary	3	1.09	2	4.4	2	0.55	335	7
Rockfish, Greenstriped	4	0.75	3	6.7	3	0.25	281	7
Rockfish, Yellowtail	5	0.57	1	2.2	1	0.57	342	0
Sanddab, Pacific	6	0.47	7	15.6	7	0.07	188	13
Perch, Shiner	7	0.30	6	13.3	6	0.05	154	9
Surfperch, Walleye	8	0.29	1	2.2	1	0.29	249	0
Tomcod, Pacific	9	0.25	4	8.9	4	0.06	200	14
Sculpin, Pacific Staghorn	10	0.03	1	2.2	1	0.03	140	0
Rockfish, Kelp	11	0.00	1	2.2	0	0.00	0	0
Total		13.65	45	100	44			

C. CPUE***

Catch per Angler Day = 2.65 Catch per Angler Hour = 0.87
 Kg per Angler Day = 0.80 Kg per Angler Hour = 0.26

* Weight estimated from length-to-weight regression if available.

** Total length except for species with tuna-like caudal fins (see text).

*** CPUE is underestimated if all fish taken were not examined (see text).

Table 17. Sampled Effort, Ranked Catch and CPUE for Area 2 in 1979 for Quarter 3, by Pier or Dock Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted	=	17
Total Hours Effort for Anglers Intercepted	=	52.0
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Rockfish, Blue	1	16	26.7	0.49	7.92
Perch, Shiner	2	8	13.3	0.05	0.41
Sanddab, Pacific	3	7	11.7	0.07	0.47
Surfperches	4	6	10.0	0.08**	0.48
Tomcod, Pacific	5	4	6.7	0.06	0.25
Rockfish, Greenstriped	6	3	5.0	0.25	0.75
Rockfish, Black	7	3	5.0	0.66	1.98
Sculpin, Pacific Staghorn	8	3	5.0	0.03	0.09
Cabezon	9	3	5.0	0.00**	0.00
Rockfishes (unidentified)	10	2	3.3	0.49**	0.98
Rockfish, Canary	11	2	3.3	0.55	1.09
Rockfish, Yellowtail	12	1	1.7	0.57	0.57
Rockfish, Kelp	13	1	1.7	0.00**	0.00
Surfperch, Walleye	14	1	1.7	0.29	0.29
Total		60	100		15.27

C. CPUE

Catch per Angler Day	=	3.53	Catch per Angler Hour	=	1.15
Kg per Angler Day	=	0.90	Kg per Angler Hour	=	0.29

* Weight estimated from length-to-weight regression if available.

** Mean weight for this group was not calculated or was estimated from other sources (see text).

Table 18. Sampled Effort, Ranked Catch and CPUE for Area 2 in 1979 for Quarter 3, by Pier or Dock Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted = 17
 Total Hours Effort for Anglers Intercepted = 52.0
 Total Hours Still to Fish (Incomplete Trips) = 0.0

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Rockfish, Blue	1	7.92	16	35.6	16	0.49	309	58
Rockfish, Black	2	1.98	3	6.7	3	0.66	344	66
Rockfish, Canary	3	1.09	2	4.4	2	0.55	335	7
Rockfish, Greenstriped	4	0.75	3	6.7	3	0.25	281	7
Rockfish, Yellowtail	5	0.57	1	2.2	1	0.57	342	0
Sanddab, Pacific	6	0.47	7	15.6	7	0.07	188	13
Perch, Shiner	7	0.30	6	13.3	6	0.05	154	9
Surfperch, Walleye	8	0.29	1	2.2	1	0.29	249	0
Tomcod, Pacific	9	0.25	4	8.9	4	0.06	200	14
Sculpin, Pacific Staghorn	10	0.03	1	2.2	1	0.03	140	0
Rockfish, Kelp	11	0.00	1	2.2	0	0.00	0	0
Total		13.65	45	100	44			

C. CPUE***

Catch per Angler Day = 2.65 Catch per Angler Hour = 0.87
 Kg per Angler Day = 0.80 Kg per Angler Hour = 0.26

* Weight estimated from length-to-weight regression if available.

** Total length except for species with tuna-like caudal fins (see text).

*** CPUE is underestimated if all fish taken were not examined (see text).

Table 19. Sampled Effort, Ranked Catch and CPUE for Area 2 in 1979 for Quarter 3, by Jetty or Breakwater Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted	=	80
Total Hours Effort for Anglers Intercepted	=	206.5
Total Hours Still to Fish (Incomplete Trips)	=	5.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Tomcod, Pacific	1	114	58.2
Sculpin, Pacific Staghorn	2	62	31.6
Surfperches	3	5	2.6
Jacksmelt	4	3	1.5
Bocaccio	5	3	1.5
Flounder, Starry	6	3	1.5
Lingcod	7	2	1.0
Smoothhound, Brown	8	1	0.5
Rockfishes (unidentified)	9	1	0.5
Unidentified Fishes	10	1	0.5
Sanddab, Pacific	11	1	0.5
Total		196	100

C. CPUE

Catch per Angler Day	=	2.45	Catch per Angler Hour	=	0.95
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Table 20. Sampled Effort, Ranked Catch and CPUE for Area 2 in 1979 for Quarter 3, by Jetty or Breakwater Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted	=	80
Total Hours Effort for Anglers Intercepted	=	206.5
Total Hours Still to Fish (Incomplete Trips)	=	5.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Tomcod, Pacific	1	104	92.0	0.08	8.11
Flounder, Starry	2	3	2.7	1.65	4.94
Lingcod	3	2	1.8	3.21	6.42
Rockfishes (unidentified)	4	1	0.9	0.03**	0.03
Unidentified Fishes	5	1	0.9	0.03	0.03
Surfperches	6	1	0.9	0.00**	0.00
Sanddab, Pacific	7	1	0.9	0.00**	0.00
Total		113	100		19.52

C. CPUE

Catch per Angler Day	=	1.41	Catch per Angler Hour	=	0.55
Kg per Angler Day	=	0.24	Kg per Angler Hour	=	0.09

* Weight estimated from length-to-weight regression if available.

** Mean weight for this group was not calculated or was estimated from other sources (see text).

Table 21. Sampled Effort, Ranked Catch and CPUE for Area 2 in 1979 for Quarter 3, by Jetty or Breakwater Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted	=	80
Total Hours Effort for Anglers Intercepted	=	206.5
Total Hours Still to Fish (Incomplete Trips)	=	5.0

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	!---Mean---!		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Lingcod	1	6.42	2	2.4	2	3.21	666	23
Tomcod, Pacific	2	6.00	77	92.8	55	0.08	212	28
Flounder, Starry	3	4.94	3	3.6	3	1.65	492	52
Unidentified Fishes	4	0.03	1	1.2	1	0.03	110	0
Total		17.38	83	100	61			

C. CPUE***

Catch per Angler Day	=	1.04	Catch per Angler Hour	=	0.40
Kg per Angler Day	=	0.22	Kg per Angler Hour	=	0.08

* Weight estimated from length-to-weight regression if available.

** Total length except for species with tuna-like caudal fins (see text).

*** CPUE is underestimated if all fish taken were not examined (see text).

Table 22. Sampled Effort, Ranked Catch and CPUE for Area 2 in 1979 for Quarter 3, by Beach or Bank Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted	=	117
Total Hours Effort for Anglers Intercepted	=	336.4
Total Hours Still to Fish (Incomplete Trips)	=	20.7

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Surfperch, Redtail	1	71	34.3
Seaperch, White	2	18	8.7
Greenling, Rock	3	15	7.2
Cabazon	4	15	7.2
Greenling, Kelp	5	14	6.8
Sculpin, Pacific Staghorn	6	10	4.8
Surfperch, Silver	7	8	3.9
Rockfish, Black	8	7	3.4
Rockfish, Blue	9	6	2.9
Sand & Kelp Basses	10	6	2.9
Surfperches	11	6	2.9
Smelt, Surf	12	5	2.4
Bocaccio	13	5	2.4
Perch, Shiner	14	5	2.4
Rockfishes (unidentified)	15	4	1.9
Bottomfishes (Groundfishes)	16	2	1.0
Tomcod, Pacific	17	2	1.0
Lingcod	18	2	1.0
Smoothhound, Brown	19	1	0.5
Ray, Bat	20	1	0.5
Unidentified Fishes	21	1	0.5
Seaperch, Striped	22	1	0.5
Surfperch, Calico	23	1	0.5
Seaperch, Rainbow	24	1	0.5
Total		207	100

C. CPUE

Catch per Angler Day = 1.77 Catch per Angler Hour = 0.62

Table 23. Sampled Effort, Ranked Catch and CPUE for Area 2 in 1979 for Quarter 3, by Beach or Bank Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted	=	117
Total Hours Effort for Anglers Intercepted	=	336.4
Total Hours Still to Fish (Incomplete Trips)	=	20.7

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Surfperch, Redtail	1	71	42.0	0.22	15.78
Seaperch, White	2	18	10.7	0.13	2.38
Greenling, Kelp	3	13	7.7	0.36	4.67
Greenling, Rock	4	12	7.1	0.25	3.05
Cabezón	5	12	7.1	0.58	6.97
Surfperch, Silver	6	8	4.7	0.20	1.59
Rockfish, Black	7	7	4.1	0.32	2.22
Smelt, Surf	8	5	3.0	0.03	0.16
Perch, Shiner	9	5	3.0	0.00**	0.00
Bocaccio	10	3	1.8	0.03	0.09
Bottomfishes (Groundfishes)	11	2	1.2	0.00**	0.00
Tomcod, Pacific	12	2	1.2	0.09	0.18
Rockfish, Blue	13	2	1.2	0.11	0.21
Lingcod	14	2	1.2	4.38	8.76
Smoothhound, Brown	15	1	0.6	1.59	1.59
Ray, Bat	16	1	0.6	0.00**	0.00
Unidentified Fishes	17	1	0.6	0.00**	0.00
Sculpin, Pacific Staghorn	18	1	0.6	0.07	0.07
Seaperch, Striped	19	1	0.6	0.26	0.26
Surfperch, Calico	20	1	0.6	0.38	0.38
Seaperch, Rainbow	21	1	0.6	0.41	0.41
Total		169	100		48.75

C. CPUE

Catch per Angler Day	=	1.44	Catch per Angler Hour	=	0.50
Kg per Angler Day	=	0.42	Kg per Angler Hour	=	0.14

* Weight estimated from length-to-weight regression if available.

** Mean weight for this group was not calculated or was estimated from other sources (see text).

Table 24. Sampled Effort, Ranked Catch and CPUE for Area 2 in 1979 for Quarter 3, by Beach or Bank Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted	=	117
Total Hours Effort for Anglers Intercepted	=	336.4
Total Hours Still to Fish (Incomplete Trips)	=	20.7

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Surfperch, Redtail	1	15.33	69	45.4	60	0.22	227	50
Lingcod	2	8.76	2	1.3	2	4.38	720	170
Greenling, Kelp	3	4.67	13	8.6	13	0.36	286	52
Greenling, Rock	4	2.80	11	7.2	11	0.25	255	41
Seaperch, White	5	2.38	18	11.8	18	0.13	219	24
Rockfish, Black	6	2.22	7	4.6	7	0.32	266	52
Surfperch, Silver	7	1.59	8	5.3	8	0.20	225	36
Smoothhound, Brown	8	1.59	1	0.7	1	1.59	545	0
Cabezon	9	1.16	2	1.3	2	0.58	320	28
Seaperch, Rainbow	10	0.41	1	0.7	1	0.41	295	0
Surfperch, Calico	11	0.38	1	0.7	1	0.38	282	0
Seaperch, Striped	12	0.26	1	0.7	1	0.26	252	0
Rockfish, Blue	13	0.21	2	1.3	2	0.11	174	79
Tomcod, Pacific	14	0.18	2	1.3	2	0.09	214	74
Smelt, Surf	15	0.16	5	3.3	5	0.03	171	8
Bocaccio	16	0.09	3	2.0	3	0.03	145	18
Sculpin, Pacific Staghorn	17	0.07	1	0.7	1	0.07	184	0
Perch, Shiner	18	0.00	5	3.3	0	0.00	0	0
Total		42.24	152	100	138			

C. CPUE***

Catch per Angler Day	=	1.30	Catch per Angler Hour	=	0.45
Kg per Angler Day	=	0.36	Kg per Angler Hour	=	0.13

* Weight estimated from length-to-weight regression if available.

** Total length except for species with tuna-like caudal fins (see text).

*** CPUE is underestimated if all fish taken were not examined (see text).

Table 25. Sampled Effort, Ranked Catch and CPUE for Area 2 in 1979 for Quarter 3, by Beach or Bank Anglers Using Shore Net Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted	=	53
Total Hours Effort for Anglers Intercepted	=	122.5
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Smelt, Surf	1	1297	98.7
Surface Fishes	2	10	0.8
Surfperch, Redtail	3	5	0.4
Perch, Shiner	4	1	0.1
Prickleback, Rock	5	1	0.1
Total		1314	100

C. CPUE

Catch per Angler Day =	24.79	Catch per Angler Hour =	10.73
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Table 26. Sampled Effort, Ranked Catch and CPUE for Area 2 in 1979 for Quarter 3, by Beach or Bank Anglers Using Shore Net Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted = 53
 Total Hours Effort for Anglers Intercepted = 122.5
 Total Hours Still to Fish (Incomplete Trips) = 0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Smelt, Surf	1	1296	98.7	0.04	48.40
Surface Fishes	2	10	0.8	0.00**	0.00
Surfperch, Redtail	3	5	0.4	0.16	0.79
Perch, Shiner	4	1	0.1	0.00**	0.00
Prickleback, Rock	5	1	0.1	0.00**	0.00
Total		1313	100		49.19

C. CPUE

Catch per Angler Day = 24.77 Catch per Angler Hour = 10.72
 Kg per Angler Day = 0.93 Kg per Angler Hour = 0.40

* Weight estimated from length-to-weight regression if available.

** Mean weight for this group was not calculated or was estimated from other sources (see text).

Table 27. Sampled Effort, Ranked Catch and CPUE for Area 2 in 1979 for Quarter 3, by Beach or Bank Anglers Using Shore Net Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted = 53
 Total Hours Effort for Anglers Intercepted = 122.5
 Total Hours Still to Fish (Incomplete Trips) = 0.0

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Smelt, Surf	1	48.40	1296	98.7	197	0.04	179	12
Surfperch, Redtail	2	0.79	5	0.4	5	0.16	209	40
Surface Fishes	3	0.00	10	0.8	10	0.00	177	9
Perch, Shiner	4	0.00	1	0.1	0	0.00	0	0
Prickleback, Rock	5	0.00	1	0.1	1	0.00	410	0
Total		49.19	1313	100	213			

C. CPUE***

Catch per Angler Day = 24.77 Catch per Angler Hour = 10.72
 Kg per Angler Day = 0.93 Kg per Angler Hour = 0.40

* Weight estimated from length-to-weight regression if available.

** Total length except for species with tuna-like caudal fins (see text).

*** CPUE is underestimated if all fish taken were not examined (see text).

Table 28. Sampled Effort, Ranked Catch and CPUE for Area 2 in 1979 for Quarter 3, by Beach or Bank Anglers Using Spear Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted	=	15
Total Hours Effort for Anglers Intercepted	=	17.5
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Greenling, Kelp	1	9	37.5
Lingcod	2	4	16.7
Rockfish, Black	3	3	12.5
Greenling, Rock	4	3	12.5
Seaperch, Striped	5	3	12.5
Unidentified Fishes	6	1	4.2
Cabezon	7	1	4.2
Total		24	100

C. CPUE

Catch per Angler Day = 1.60 Catch per Angler Hour = 1.37

Table 29. Sampled Effort, Ranked Catch and CPUE for Area 2 in 1979 for Quarter 3, by Beach or Bank Anglers Using Spear Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted = 15
 Total Hours Effort for Anglers Intercepted = 17.5
 Total Hours Still to Fish (Incomplete Trips) = 0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Greenling, Kelp	1	9	40.9	0.53	4.78
Rockfish, Black	2	3	13.6	1.06	3.19
Greenling, Rock	3	3	13.6	0.47	1.41
Seaperch, Striped	4	3	13.6	0.47	1.41
Lingcod	5	2	9.1	3.04	6.08
Unidentified Fishes	6	1	4.5	0.44	0.44
Cabezon	7	1	4.5	1.50	1.50
Total		22	100		18.82

C. CPUE

Catch per Angler Day = 1.47 Catch per Angler Hour = 1.26
 Kg per Angler Day = 1.25 Kg per Angler Hour = 1.08

* Weight estimated from length-to-weight regression if available.

Table 30. Sampled Effort, Ranked Catch and CPUE for Area 2 in 1979 for Quarter 3, by Beach or Bank Anglers Using Spear Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted = 15
 Total Hours Effort for Anglers Intercepted = 17.5
 Total Hours Still to Fish (Incomplete Trips) = 0.0

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Lingcod	1	6.08	2	9.1	2	3.04	648	95
Greenling, Kelp	2	4.78	9	40.9	9	0.53	328	57
Rockfish, Black	3	3.19	3	13.6	3	1.06	413	25
Cabezón	4	1.50	1	4.5	1	1.50	455	0
Seaperch, Striped	5	1.41	3	13.6	3	0.47	307	8
Greenling, Rock	6	1.41	3	13.6	3	0.47	318	45
Unidentified Fishes	7	0.44	1	4.5	1	0.44	280	0
Total		18.82	22	100	22			

C. CPUE***

Catch per Angler Day = 1.47 Catch per Angler Hour = 1.26
 Kg per Angler Day = 1.25 Kg per Angler Hour = 1.08

* Weight estimated from length-to-weight regression if available.
 ** Total length except for species with tuna-like caudal fins (see text).
 *** CPUE is underestimated if all fish taken were not examined (see text).

Figure 5. Length-Frequency Histogram for Redtail Surfperch
 Taken by Beach and Bank Anglers Using Hook-and-Line Gear.
 Area 2, Quarter 3, 1979.

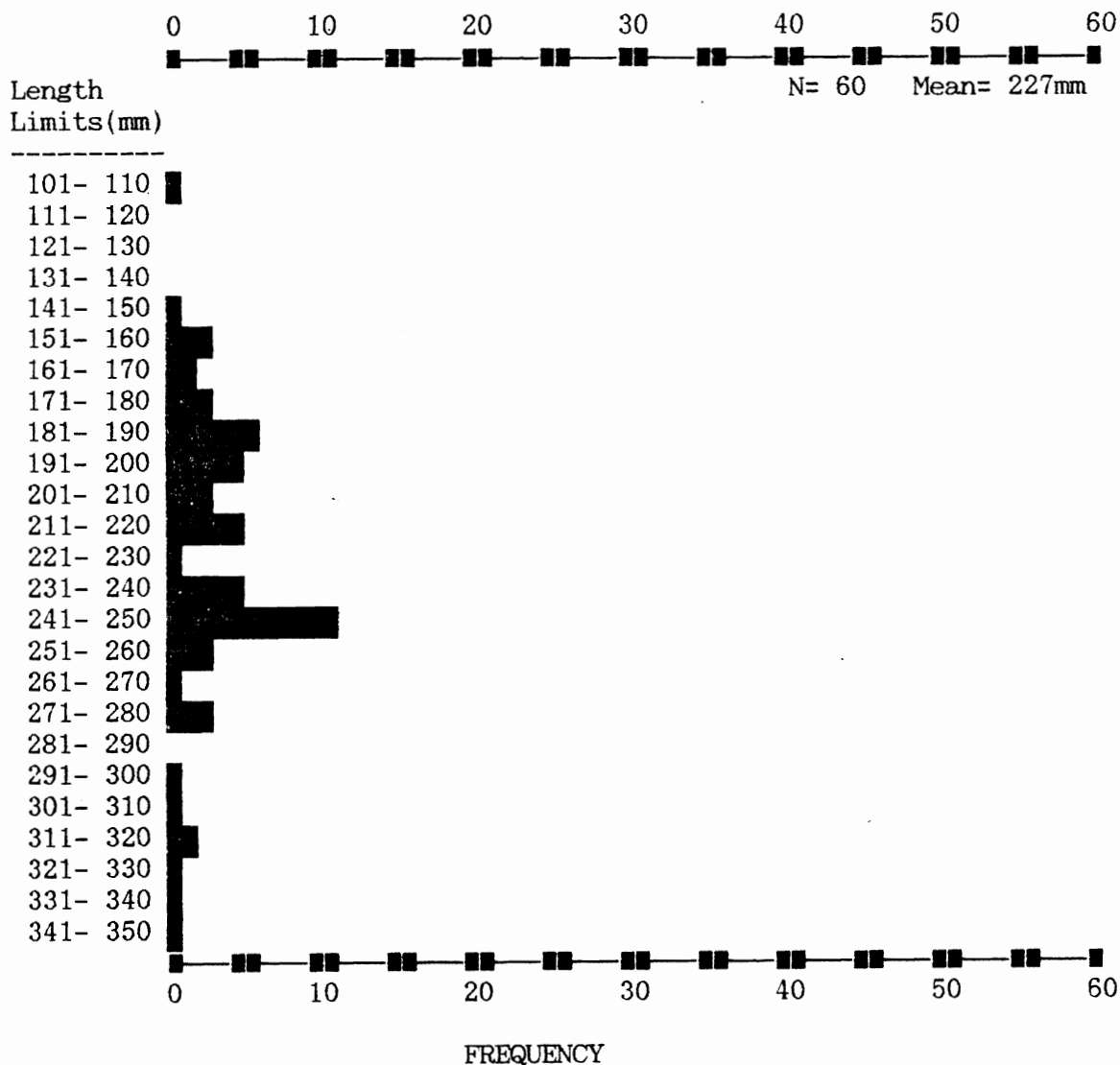


Figure 6. Length-Frequency Histogram for Surf Smelt
 Taken by Beach and Bank Anglers Using Shore Net Gear.
 Area 2, Quarter 3, 1979.

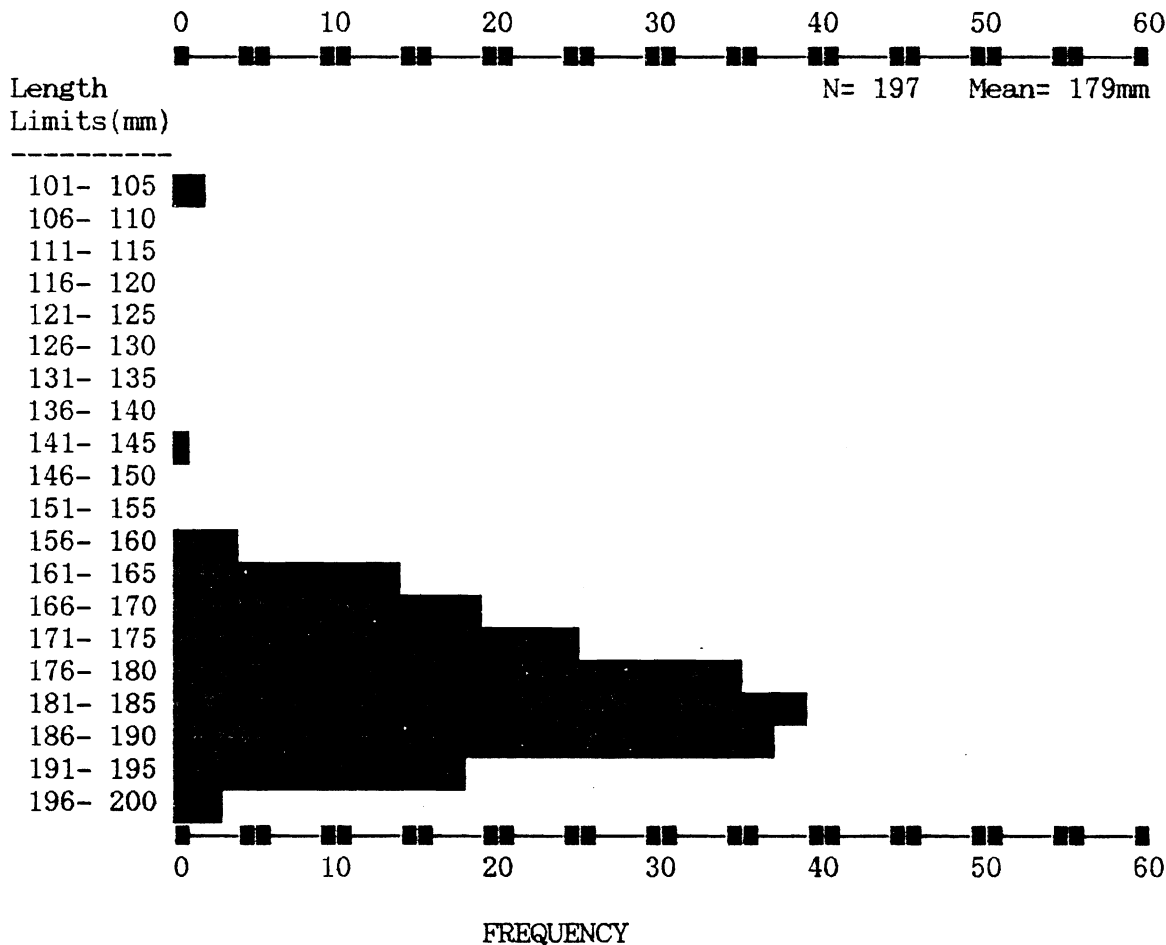


Table 31. Sampled Effort, Ranked Catch and CPUE for Area 045 in 1979 for Quarter 3, by Private or Rental Boat Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted	=	106
Total Hours Effort for Anglers Intercepted	=	449.5
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Rockfish, Blue	1	248	31.8
Sandabs	2	204	26.2
Rockfish, Black	3	118	15.1
Sanddab, Pacific	4	56	7.2
Lingcod	5	43	5.5
Rockfish, Yellowtail	6	19	2.4
Rockfish, Canary	7	17	2.2
Rockfishes (unidentified)	8	13	1.7
Rockfish, China	9	6	0.8
Greenling, Rock	10	5	0.6
Halibut, California	11	5	0.6
Rockfish, Yelloweye	12	4	0.5
Rockfish, Olive	13	4	0.5
Mackerel, Pacific (Chub)	14	4	0.5
Unidentified Fishes	15	3	0.4
Sharks	16	3	0.4
Spiny Dogfish	17	3	0.4
Rockfish, Copper	18	3	0.4
Greenling, Kelp	19	3	0.4
Sanddab, Speckled	20	3	0.4
Sole, Rock	21	3	0.4
Rockfish, Stripetail	22	2	0.3
Cabezon	23	2	0.3
Sole, Petrale	24	2	0.3
Flounder, Starry	25	2	0.3
Shark, Blue	26	1	0.1

(Table 31. - continued)

Common name	Rank by Number	Number Caught	% by Number
Rockfish, Blackgill	27	1	0.1
Rockfish, Kelp	28	1	0.1
Rockfish, Gopher	29	1	0.1
Sand & Kelp Basses	30	1	0.1
Total		780	100

C. CPUE

Catch per Angler Day = 7.36 Catch per Angler Hour = 1.74

Table 32. Sampled Effort, Ranked Catch and CPUE for Area 045 in 1979 for Quarter 3, by Private or Rental Boat Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted	=	106
Total Hours Effort for Anglers Intercepted	=	449.5
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Rockfish, Blue	1	236	45.9	0.60	141.18
Rockfish, Black	2	86	16.7	0.69	59.37
Sanddab, Pacific	3	56	10.9	0.11	5.90
Lingcod	4	42	8.2	3.28	137.66
Rockfish, Yellowtail	5	19	3.7	0.26	4.94
Rockfish, Canary	6	17	3.3	0.95	16.13
Rockfish, China	7	6	1.2	0.96	5.73
Greenling, Rock	8	5	1.0	0.74	3.71
Halibut, California	9	5	1.0	0.00**	0.00
Rockfish, Yelloweye	10	4	0.8	1.85	7.40
Rockfish, Olive	11	4	0.8	0.69	2.75
Mackerel, Pacific (Chub)	12	4	0.8	0.00**	0.00
Sharks	13	3	0.6	7.26**	21.78
Spiny Dogfish	14	3	0.6	1.69	5.06
Rockfish, Copper	15	3	0.6	1.47	4.41
Greenling, Kelp	16	3	0.6	0.53	1.59
Sanddab, Speckled	17	3	0.6	0.00**	0.00
Sole, Rock	18	3	0.6	0.96	2.87
Rockfish, Stripetail	19	2	0.4	0.43	0.86
Cabazon	20	2	0.4	1.97	3.94
Sole, Petrale	21	2	0.4	0.45	0.90
Flounder, Starry	22	2	0.4	2.54	5.07
Shark, Blue	23	1	0.2	23.97	23.97
Rockfish, Blackgill	24	1	0.2	3.42	3.42
Rockfish, Kelp	25	1	0.2	0.00**	0.00
Rockfish, Gopher	26	1	0.2	0.48	0.48
Total		514	100		459.14

C. CPUE

Catch per Angler Day	=	4.85	Catch per Angler Hour	=	1.14
Kg per Angler Day	=	4.33	Kg per Angler Hour	=	1.02

* Weight estimated from length-to-weight regression if available.

** Mean weight for this group was not calculated or was estimated from other sources (see text).

Table 33. Sampled Effort, Ranked Catch and CPUE for Area 045 in 1979 for Quarter 3, by Private or Rental Boat Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted	=	106
Total Hours Effort for Anglers Intercepted	=	449.5
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Rockfish, Blue	1	135.20	226	50.1	226	0.60	330	59
Lingcod	2	114.72	35	7.8	35	3.28	653	112
Rockfish, Black	3	35.90	52	11.5	52	0.69	345	71
Shark, Blue	4	23.97	1	0.2	1	23.97	1860	0
Rockfish, Canary	5	16.13	17	3.8	17	0.95	381	88
Rockfish, Yelloweye	6	7.40	4	0.9	4	1.85	463	23
Sanddab, Pacific	7	5.90	56	12.4	56	0.11	205	45
Rockfish, China	8	5.73	6	1.3	6	0.96	368	27
Flounder, Starry	9	5.07	2	0.4	2	2.54	565	7
Spiny Dogfish	10	5.06	3	0.7	3	1.69	787	32
Rockfish, Yellowtail	11	4.94	19	4.2	19	0.26	261	27
Rockfish, Copper	12	4.41	3	0.7	3	1.47	416	100
Cabezon	13	3.94	2	0.4	2	1.97	503	7
Greenling, Rock	14	3.71	5	1.1	5	0.74	376	32
Rockfish, Blackgill	15	3.42	1	0.2	1	3.42	602	0
Sole, Rock	16	2.87	3	0.7	3	0.96	405	74
Rockfish, Olive	17	2.75	4	0.9	4	0.69	367	62
Greenling, Kelp	18	1.59	3	0.7	3	0.53	336	14
Sole, Petrale	19	0.90	2	0.4	2	0.45	333	1
Rockfish, Stripetail	20	0.86	2	0.4	2	0.43	312	16
Rockfish, Gopher	21	0.48	1	0.2	1	0.48	310	0
Rockfish, Kelp	22	0.00	1	0.2	0	0.00	0	0
Sanddab, Speckled	23	0.00	3	0.7	0	0.00	0	0
Total		384.97	451	100	447			

C. CPUE***

Catch per Angler Day	=	4.25	Catch per Angler Hour	=	1.00
Kg per Angler Day	=	3.63	Kg per Angler Hour	=	0.86

* Weight estimated from length-to-weight regression if available.

** Total length except for species with tuna-like caudal fins (see text).

*** CPUE is underestimated if all fish taken were not examined (see text).

Table 34. Sampled Effort, Ranked Catch and CPUE for Area 045 in 1979 for Quarter 3, by Private or Rental Boat Anglers Using Spear Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted = 10
 Total Hours Effort for Anglers Intercepted = 14.0
 Total Hours Still to Fish (Incomplete Trips) = 0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Lingcod	1	5	35.7
Seaperch, Striped	2	4	28.6
Rockfish, Black	3	2	14.3
Rockfish, Copper	4	1	7.1
Greenling, Kelp	5	1	7.1
Greenling, Rock	6	1	7.1
Total		14	100

C. CPUE

Catch per Angler Day = 1.40 Catch per Angler Hour = 1.00

Table 35. Sampled Effort, Ranked Catch and CPUE for Area 045 in 1979 for Quarter 3, by Private or Rental Boat Anglers Using Spear Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted	=	10
Total Hours Effort for Anglers Intercepted	=	14.0
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Lingcod	1	5	35.7	1.91	9.57
Seaperch, Striped	2	4	28.6	0.46	1.82
Rockfish, Black	3	2	14.3	0.30	0.61
Rockfish, Copper	4	1	7.1	2.04	2.04
Greenling, Kelp	5	1	7.1	0.30	0.30
Greenling, Rock	6	1	7.1	0.50	0.50
Total		14	100		14.84

C. CPUE

Catch per Angler Day	=	1.40	Catch per Angler Hour	=	1.00
Kg per Angler Day	=	1.48	Kg per Angler Hour	=	1.06

* Weight estimated from length-to-weight regression if available.

Table 36. Sampled Effort, Ranked Catch and CPUE for Area 045 in 1979 for Quarter 3, by Private or Rental Boat Anglers Using Spear Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted	=	10
Total Hours Effort for Anglers Intercepted	=	14.0
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Lingcod	1	9.57	5	35.7	5	1.91	544	108
Rockfish, Copper	2	2.04	1	7.1	1	2.04	480	0
Seaperch, Striped	3	1.82	4	28.6	4	0.46	304	2
Rockfish, Black	4	0.61	2	14.3	2	0.30	271	1
Greenling, Rock	5	0.50	1	7.1	1	0.50	330	0
Greenling, Kelp	6	0.30	1	7.1	1	0.30	277	0
Total		14.84	14	100	14			

C. CPUE***

Catch per Angler Day	=	1.40	Catch per Angler Hour	=	1.00
Kg per Angler Day	=	1.48	Kg per Angler Hour	=	1.06

* Weight estimated from length-to-weight regression if available.

** Total length except for species with tuna-like caudal fins (see text).

*** CPUE is underestimated if all fish taken were not examined (see text).

Table 37. Sampled Effort, Ranked Catch and CPUE for Area 045 in 1979 for Quarter 3, by All CPFV Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted = 20
 Total Hours Effort for Anglers Intercepted = 72.5
 Total Hours Still to Fish (Incomplete Trips) = 0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Rockfish, Black	1	64	32.8
Rockfish, Blue	2	55	28.2
Rockfish, Greenstriped	3	28	14.4
Rockfish, Yellowtail	4	22	11.3
Rockfish, Canary	5	9	4.6
Bocaccio	6	3	1.5
Rockfish, Stripetail	7	3	1.5
Rockfish, China	8	2	1.0
Greenling, Kelp	9	2	1.0
Lingcod	10	2	1.0
Sole, Petrale	11	2	1.0
Rockfish, Widow	12	1	0.5
Rockfish, Vermilion	13	1	0.5
Rockfish, Bank	14	1	0.5
Total		195	100

C. CPUE

Catch per Angler Day = 9.75 Catch per Angler Hour = 2.69

Table 38. Sampled Effort, Ranked Catch and CPUE for Area 045 in 1979 for Quarter 3, by All CPFV Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted	=	20
Total Hours Effort for Anglers Intercepted	=	72.5
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Rockfish, Black	1	60	32.1	0.63	37.84
Rockfish, Blue	2	52	27.8	0.75	39.23
Rockfish, Greenstriped	3	28	15.0	0.21	5.99
Rockfish, Yellowtail	4	22	11.8	0.38	8.34
Rockfish, Canary	5	8	4.3	0.85	6.77
Bocaccio	6	3	1.6	2.64	7.92
Rockfish, Stripetail	7	3	1.6	0.30	0.91
Rockfish, China	8	2	1.1	0.74	1.47
Greenling, Kelp	9	2	1.1	0.78	1.56
Lingcod	10	2	1.1	10.28	20.57
Sole, Petrale	11	2	1.1	0.25	0.49
Rockfish, Widow	12	1	0.5	1.47	1.47
Rockfish, Vermilion	13	1	0.5	0.97	0.97
Rockfish, Bank	14	1	0.5	1.33	1.33
Total		187	100		134.86

C. CPUE

Catch per Angler Day	=	9.35	Catch per Angler Hour	=	2.58
Kg per Angler Day	=	6.74	Kg per Angler Hour	=	1.86

* Weight estimated from length-to-weight regression if available.

Table 39. Sampled Effort, Ranked Catch and CPUE for Area 045 in 1979 for Quarter 3, by All CPFV Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted = 20
 Total Hours Effort for Anglers Intercepted = 72.5
 Total Hours Still to Fish (Incomplete Trips) = 0.0

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Rockfish, Blue	1	39.23	52	28.4	52	0.75	358	59
Rockfish, Black	2	37.84	60	32.8	60	0.63	342	44
Lingcod	3	20.57	2	1.1	2	10.28	984	26
Rockfish, Yellowtail	4	7.96	21	11.5	21	0.38	295	34
Rockfish, Canary	5	6.77	8	4.4	8	0.85	379	57
Rockfish, Greenstriped	6	5.56	26	14.2	26	0.21	266	20
Bocaccio	7	5.28	2	1.1	2	2.64	627	21
Greenling, Kelp	8	1.56	2	1.1	2	0.78	382	43
Rockfish, China	9	1.47	2	1.1	2	0.74	337	50
Rockfish, Widow	10	1.47	1	0.5	1	1.47	472	0
Rockfish, Bank	11	1.33	1	0.5	1	1.33	450	0
Rockfish, Vermilion	12	0.97	1	0.5	1	0.97	391	0
Rockfish, Stripetail	13	0.91	3	1.6	3	0.30	278	23
Sole, Petrale	14	0.49	2	1.1	2	0.25	272	47
Total		131.41	183	100	183			

C. CPUE***

Catch per Angler Day = 9.15 Catch per Angler Hour = 2.52
 Kg per Angler Day = 6.57 Kg per Angler Hour = 1.81

* Weight estimated from length-to-weight regression if available.
 ** Total length except for species with tuna-like caudal fins (see text).
 *** CPUE is underestimated if all fish taken were not examined (see text).

Figure 7. Length-Frequency Histogram for Blue Rockfish
 Taken by Private or Rental Boat Anglers Using Hook-and-Line Gear.
 Area 045, Quarter 3, 1979.

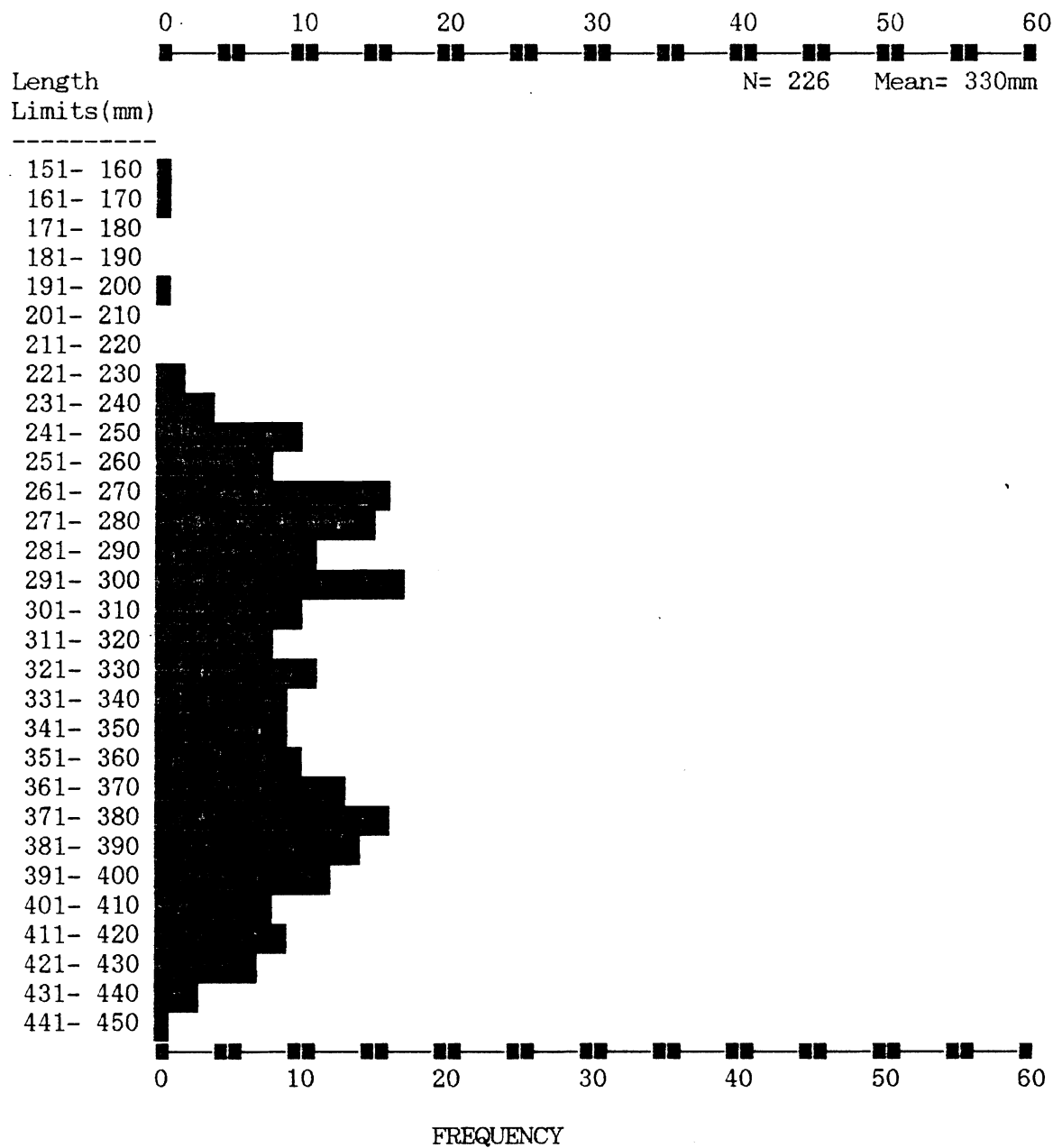


Figure 8. Length-Frequency Histogram for Pacific Sanddab
 Taken by Private or Rental Boat Anglers Using Hook-and-Line Gear.
 Area 045, Quarter 3, 1979.

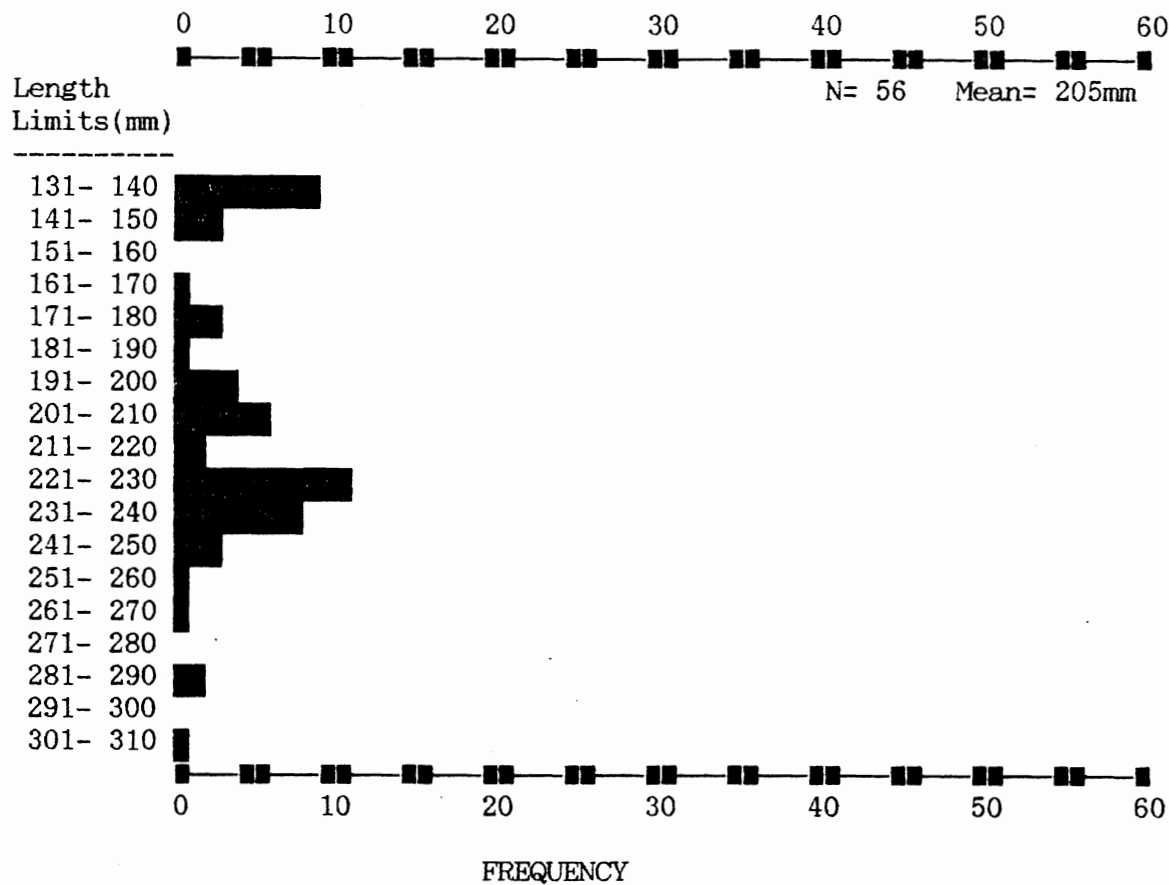


Table 40. Sampled Effort, Ranked Catch and CPUE for Area 097 in 1979 for Quarter 3, by Private or Rental Boat Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted	=	8
Total Hours Effort for Anglers Intercepted	=	40.0
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Salmon, Chinook (King)	1	4	30.8
Salmon	2	3	23.1
Rockfish, Brown	3	3	23.1
Smoothhound, Brown	4	1	7.7
Spiny Dogfish	5	1	7.7
Rockfishes (unidentified)	6	1	7.7
Total		13	100

C. CPUE

Catch per Angler Day = 1.63 Catch per Angler Hour = 0.33

Table 41. Sampled Effort, Ranked Catch and CPUE for Area 097 in 1979 for Quarter 3, by Private or Rental Boat Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted = 8
 Total Hours Effort for Anglers Intercepted = 40.0
 Total Hours Still to Fish (Incomplete Trips) = 0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Salmon, Chinook (King)	1	4	44.4	2.44	9.74
Rockfish, Brown	2	3	33.3	0.94	2.82
Spiny Dogfish	3	1	11.1	2.09	2.09
Rockfishes (unidentified)	4	1	11.1	0.94**	0.94
Total		9	100		15.59

C. CPUE

Catch per Angler Day = 1.13 Catch per Angler Hour = 0.23
 Kg per Angler Day = 1.95 Kg per Angler Hour = 0.39

* Weight estimated from length-to-weight regression if available.

** Mean weight for this group was not calculated or was estimated from other sources (see text).

Table 42. Sampled Effort, Ranked Catch and CPUE for Area 097 in 1979 for Quarter 3, by Private or Rental Boat Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted = 8
 Total Hours Effort for Anglers Intercepted = 40.0
 Total Hours Still to Fish (Incomplete Trips) = 0.0

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Salmon, Chinook (King)	1	9.74	4	50.0	4	2.44	621	120
Rockfish, Brown	2	2.82	3	37.5	3	0.94	373	47
Spiny Dogfish	3	2.09	1	12.5	1	2.09	845	0
Total		14.65	8	100	8			

C. CPUE***

Catch per Angler Day = 1.00 Catch per Angler Hour = 0.20
 Kg per Angler Day = 1.83 Kg per Angler Hour = 0.37

* Weight estimated from length-to-weight regression if available.
 ** Total length except for species with tuna-like caudal fins (see text).
 *** CPUE is underestimated if all fish taken were not examined (see text).

Table 43. Sampled Effort, Ranked Catch and CPUE for Area 097 in 1979 for Quarter 3, by All CPFV Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted = 14
 Total Hours Effort for Anglers Intercepted = 61.3
 Total Hours Still to Fish (Incomplete Trips) = 0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Rockfish, Canary	1	31	25.8
Rockfish, Copper	2	27	22.5
Rockfish, Brown	3	20	16.7
Rockfish, Yellowtail	4	12	10.0
Rockfish, Blue	5	12	10.0
Rockfish, Vermilion	6	4	3.3
Rockfish, Rosy	7	4	3.3
Rockfish, Black	8	2	1.7
Bocaccio	9	2	1.7
Rockfish, China	10	1	0.8
Lingcod	11	1	0.8
Sculpin, Pacific Staghorn	12	1	0.8
Sandabs	13	1	0.8
Sanddab, Pacific	14	1	0.8
Flounders, Righteye	15	1	0.8
Total		120	100

C. CPUE

Catch per Angler Day = 8.57 Catch per Angler Hour = 1.96

Table 44. Sampled Effort, Ranked Catch and CPUE for Area 097 in 1979 for Quarter 3, by All CPFV Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted	=	14
Total Hours Effort for Anglers Intercepted	=	61.3
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Rockfish, Canary	1	31	26.5	1.02	31.67
Rockfish, Copper	2	27	23.1	1.57	42.26
Rockfish, Brown	3	20	17.1	0.84	16.74
Rockfish, Yellowtail	4	12	10.3	0.84	10.05
Rockfish, Blue	5	12	10.3	0.93	11.21
Rockfish, Vermilion	6	4	3.4	2.53	10.10
Rockfish, Rosy	7	4	3.4	0.36	1.46
Rockfish, Black	8	2	1.7	1.84	3.67
Bocaccio	9	2	1.7	1.13	2.26
Rockfish, China	10	1	0.9	0.66	0.66
Lingcod	11	1	0.9	4.46	4.46
Sanddab, Pacific	12	1	0.9	0.01	0.01
Total		117	100		134.55

C. CPUE

Catch per Angler Day	=	8.36	Catch per Angler Hour	=	1.91
Kg per Angler Day	=	9.61	Kg per Angler Hour	=	2.20

* Weight estimated from length-to-weight regression if available.

Table 45. Sampled Effort, Ranked Catch and CPUE for Area 097 in 1979 for Quarter 3, by All CPFV Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted	=	14
Total Hours Effort for Anglers Intercepted	=	61.3
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Rockfish, Copper	1	42.26	27	23.1	26	1.57	439	24
Rockfish, Canary	2	31.67	31	26.5	31	1.02	406	47
Rockfish, Brown	3	16.74	20	17.1	20	0.84	355	52
Rockfish, Blue	4	11.21	12	10.3	12	0.93	378	80
Rockfish, Vermilion	5	10.10	4	3.4	4	2.53	540	45
Rockfish, Yellowtail	6	10.05	12	10.3	12	0.84	372	76
Lingcod	7	4.46	1	0.9	1	4.46	744	0
Rockfish, Black	8	3.67	2	1.7	2	1.84	495	57
Bocaccio	9	2.26	2	1.7	2	1.13	458	132
Rockfish, Rosy	10	1.46	4	3.4	4	0.36	281	16
Rockfish, China	11	0.66	1	0.9	1	0.66	330	0
Sanddab, Pacific	12	0.01	1	0.9	1	0.01	100	0
Total		134.55	117	100	116			

C. CPUE***

Catch per Angler Day	=	8.36	Catch per Angler Hour	=	1.91
Kg per Angler Day	=	9.61	Kg per Angler Hour	=	2.20

* Weight estimated from length-to-weight regression if available.

** Total length except for species with tuna-like caudal fins (see text).

*** CPUE is underestimated if all fish taken were not examined (see text).

Table 46. Sampled Effort, Ranked Catch and CPUE for Area 3 (Ocean) in 1979 for Quarter 3, by Pier or Dock Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted = 37
 Total Hours Effort for Anglers Intercepted = 129.5
 Total Hours Still to Fish (Incomplete Trips) = 14.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Sculpin, Pacific Staghorn	1	411	81.1
Croaker, White	2	21	4.1
Rockfishes (unidentified)	3	19	3.7
Tomcod, Pacific	4	15	3.0
Gobies	5	15	3.0
Surfperches	6	6	1.2
Surfperch, Walleye	7	6	1.2
Perch, Shiner	8	4	0.8
Rockfish, Brown	9	3	0.6
Sculpins	10	3	0.6
Jacksmelt	11	1	0.2
Rockfish, Gopher	12	1	0.2
Surfperch, Redtail	13	1	0.2
Flounders, Lefteye	14	1	0.2
Total		507	100

C. CPUE

Catch per Angler Day = 13.70 Catch per Angler Hour = 3.92

Table 47. Sampled Effort, Ranked Catch and CPUE for Area 3 (Ocean) in 1979 for Quarter 3, by Pier or Dock Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted	=	37
Total Hours Effort for Anglers Intercepted	=	129.5
Total Hours Still to Fish (Incomplete Trips)	=	14.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt.(kg)*	Weight Caught
Croaker, White	1	9	27.3	0.18	1.62
Tomcod, Pacific	2	8	24.2	0.06	0.48
Surfperch, Walleye	3	6	18.2	0.27	1.63
Perch, Shiner	4	4	12.1	0.05	0.19
Sculpin, Pacific Staghorn	5	2	6.1	0.00**	0.00
Jacksmelt	6	1	3.0	0.11	0.11
Rockfishes (unidentified)	7	1	3.0	1.31**	1.31
Rockfish, Gopher	8	1	3.0	1.31	1.31
Surfperch, Redtail	9	1	3.0	0.11	0.11
Total		33	100		6.76

C. CPUE

Catch per Angler Day	=	0.89	Catch per Angler Hour	=	0.25
Kg per Angler Day	=	0.18	Kg per Angler Hour	=	0.05

* Weight estimated from length-to-weight regression if available.

** Mean weight for this group was not calculated or was estimated from other sources (see text).

Table 48. Sampled Effort, Ranked Catch and CPUE for Area 3 (Ocean) in 1979 for Quarter 3, by Pier or Dock Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted = 37
 Total Hours Effort for Anglers Intercepted = 129.5
 Total Hours Still to Fish (Incomplete Trips) = 14.0

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Surfperch, Walleye	1	1.63	6	20.0	6	0.27	239	37
Croaker, White	2	1.62	9	30.0	9	0.18	241	57
Rockfish, Gopher	3	1.31	1	3.3	1	1.31	436	0
Tomcod, Pacific	4	0.48	8	26.7	8	0.06	196	23
Perch, Shiner	5	0.19	4	13.3	3	0.05	151	7
Jacksmelt	6	0.11	1	3.3	1	0.11	253	0
Surfperch, Redtail	7	0.11	1	3.3	1	0.11	192	0
Total		5.45	30	100	29			

C. CPUE***

Catch per Angler Day = 0.81 Catch per Angler Hour = 0.23
 Kg per Angler Day = 0.15 Kg per Angler Hour = 0.04

* Weight estimated from length-to-weight regression if available.
 ** Total length except for species with tuna-like caudal fins (see text).
 *** CPUE is underestimated if all fish taken were not examined (see text).

Table 49. Sampled Effort, Ranked Catch and CPUE for Area 3 (Ocean) in 1979 for Quarter 3, by Jetty or Breakwater Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted	=	42
Total Hours Effort for Anglers Intercepted	=	147.5
Total Hours Still to Fish (Incomplete Trips)	=	24.5

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Croaker, White	1	11	14.7
Anchovy, Northern	2	10	13.3
Flatfishes	3	10	13.3
Rockfishes (unidentified)	4	8	10.7
Surfperch, Silver	5	8	10.7
Sculpin, Pacific Staghorn	6	7	9.3
Bocaccio	7	4	5.3
Surfperches	8	4	5.3
Sanddab, Pacific	9	3	4.0
Anchovies (general)	10	2	2.7
Unidentified Fishes	11	1	1.3
Salmon, Coho (Silver)	12	1	1.3
Tomcod, Pacific	13	1	1.3
Rockfish, Grass	14	1	1.3
Bass, Striped	15	1	1.3
Perch, Shiner	16	1	1.3
Surfperch, Calico	17	1	1.3
Flounder, Starry	18	1	1.3
Total		75	100

C. CPUE

Catch per Angler Day = 1.79 Catch per Angler Hour = 0.51

Table 50. Sampled Effort, Ranked Catch and CPUE for Area 3 (Ocean) in 1979 for Quarter 3, by Jetty or Breakwater Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted	=	42
Total Hours Effort for Anglers Intercepted	=	147.5
Total Hours Still to Fish (Incomplete Trips)	=	24.5

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Anchovy, Northern	1	10	35.7	0.00**	0.00
Surfperch, Silver	2	5	17.9	0.00**	0.00
Croaker, White	3	4	14.3	0.26	1.06
Rockfishes (unidentified)	4	3	10.7	1.44**	4.32
Salmon, Coho (Silver)	5	1	3.6	3.03	3.03
Tomcod, Pacific	6	1	3.6	0.08	0.08
Rockfish, Grass	7	1	3.6	1.44	1.44
Bass, Striped	8	1	3.6	0.00**	0.00
Surfperch, Calico	9	1	3.6	0.16	0.16
Flounder, Starry	10	1	3.6	0.54	0.54
Total		28	100		10.61

C. CPUE

Catch per Angler Day	=	0.67	Catch per Angler Hour	=	0.19
Kg per Angler Day	=	0.25	Kg per Angler Hour	=	0.07

* Weight estimated from length-to-weight regression if available.

** Mean weight for this group was not calculated or was estimated from other sources (see text).

Table 51. Sampled Effort, Ranked Catch and CPUE for Area 3 (Ocean) in 1979 for Quarter 3, by Jetty or Breakwater Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted = 42
 Total Hours Effort for Anglers Intercepted = 147.5
 Total Hours Still to Fish (Incomplete Trips) = 24.5

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Salmon, Coho (Silver)	1	3.03	1	11.1	1	3.03	685	0
Rockfish, Grass	2	1.44	1	11.1	1	1.44	394	0
Croaker, White	3	1.06	4	44.4	4	0.26	283	30
Flounder, Starry	4	0.54	1	11.1	1	0.54	355	0
Surfperch, Calico	5	0.16	1	11.1	1	0.16	214	0
Tomcod, Pacific	6	0.08	1	11.1	1	0.08	215	0
Total		6.29	9	100	9			

C. CPUE***

Catch per Angler Day = 0.21 Catch per Angler Hour = 0.06
 Kg per Angler Day = 0.15 Kg per Angler Hour = 0.04

* Weight estimated from length-to-weight regression if available.

** Total length except for species with tuna-like caudal fins (see text).

*** CPUE is underestimated if all fish taken were not examined (see text).

Table 52. Sampled Effort, Ranked Catch and CPUE for Area 3 (Ocean) in 1979 for Quarter 3, by Beach or Bank Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted = 51
 Total Hours Effort for Anglers Intercepted = 157.0
 Total Hours Still to Fish (Incomplete Trips) = 39.5

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Surfperch, Silver	1	81	42.4
Surfperch, Redtail	2	43	22.5
Sculpin, Pacific Staghorn	3	19	9.9
Surfperches	4	19	9.9
Surfperch, Barred	5	12	6.3
Shark, Leopard	6	4	2.1
Sculpin, Buffalo	7	4	2.1
Rockfishes (unidentified)	8	2	1.0
Surfperch, Calico	9	2	1.0
Greenling, Kelp	10	1	0.5
Cabazon	11	1	0.5
Surfperch, Walleye	12	1	0.5
Flounders, Righteye	13	1	0.5
Sole, Sand	14	1	0.5
Total		191	100

C. CPUE

Catch per Angler Day = 3.75 Catch per Angler Hour = 1.22

Table 53. Sampled Effort, Ranked Catch and CPUE for Area 3 (Ocean) in 1979 for Quarter 3, by Beach or Bank Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted	=	51
Total Hours Effort for Anglers Intercepted	=	157.0
Total Hours Still to Fish (Incomplete Trips)	=	39.5

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Surfperch, Silver	1	81	53.3	0.14	11.40
Surfperch, Redtail	2	42	27.6	0.19	8.08
Surfperch, Barred	3	10	6.6	0.53	5.25
Surfperches	4	9	5.9	0.18**	1.62
Sculpin, Pacific Staghorn	5	4	2.6	0.02	0.09
Shark, Leopard	6	3	2.0	5.24	15.72
Surfperch, Calico	7	2	1.3	0.06	0.12
Sole, Sand	8	1	0.7	0.04	0.04
Total		152	100		42.32

C. CPUE

Catch per Angler Day	=	2.98	Catch per Angler Hour	=	0.97
Kg per Angler Day	=	0.83	Kg per Angler Hour	=	0.27

* Weight estimated from length-to-weight regression if available.

** Mean weight for this group was not calculated or was estimated from other sources (see text).

Table 54. Sampled Effort, Ranked Catch and CPUE for Area 3 (Ocean) in 1979 for Quarter 3, by Beach or Bank Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted = 51
 Total Hours Effort for Anglers Intercepted = 157.0
 Total Hours Still to Fish (Incomplete Trips) = 39.5

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Shark, Leopard	1	15.72	3	2.1	3	5.24	793	202
Surfperch, Silver	2	11.40	81	57.9	42	0.14	203	28
Surfperch, Redtail	3	8.08	42	30.0	42	0.19	217	49
Surfperch, Barred	4	5.25	10	7.1	10	0.53	283	77
Surfperch, Calico	5	0.12	2	1.4	2	0.06	157	11
Sole, Sand	6	0.04	1	0.7	1	0.04	153	0
Sculpin, Pacific Staghorn	7	0.02	1	0.7	1	0.02	127	0
Total		40.64	140	100	101			

C. CPUE***

Catch per Angler Day = 2.75 Catch per Angler Hour = 0.89
 Kg per Angler Day = 0.80 Kg per Angler Hour = 0.26

* Weight estimated from length-to-weight regression if available.

** Total length except for species with tuna-like caudal fins (see text).

*** CPUE is underestimated if all fish taken were not examined (see text).

Table 55. Sampled Effort, Ranked Catch and CPUE for Area 3 (Ocean) in 1979 for Quarter 3, by Private or Rental Boat Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted	=	57
Total Hours Effort for Anglers Intercepted	=	282.0
Total Hours Still to Fish (Incomplete Trips)	=	4.2

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Anchovy, Northern	1	104	27.6
Sanddab, Pacific	2	100	26.5
Rockfish, Yellowtail	3	17	4.5
Rockfish, Blue	4	16	4.2
Croaker, White	5	16	4.2
Bass, Striped	6	15	4.0
Rockfishes (unidentified)	7	14	3.7
Rockfish, Copper	8	13	3.4
Rockfish, Rosy	9	13	3.4
Unidentified Fishes	10	11	2.9
Salmon, Chinook (King)	11	11	2.9
Lingcod	12	9	2.4
Salmon	13	7	1.9
Rockfish, Brown	14	7	1.9
Rockfish, Black	15	7	1.9
Sandabs	16	3	0.8
Flounders, Lefteye	17	2	0.5
Sharks	18	1	0.3
Shark, Blue	19	1	0.3
Shark, Leopard	20	1	0.3
Salmon, Coho (Silver)	21	1	0.3
Rockfish, China	22	1	0.3
Bocaccio	23	1	0.3
Rockfish, Canary	24	1	0.3
Rockfish, Greenspotted	25	1	0.3
Flounders, Righteye	26	1	0.3

(Table 55. - continued)

Common name	Rank by Number	Number Caught	% by Number
Sole, Petrale	27	1	0.3
Sole, Butter	28	1	0.3
Sole, Dover	29	1	0.3
Total		377	100

C. CPUE

Catch per Angler Day = 6.61 Catch per Angler Hour = 1.34

Table 56. Sampled Effort, Ranked Catch and CPUE for Area 3 (Ocean) in 1979 for Quarter 3, by Private or Rental Boat Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted	=	57
Total Hours Effort for Anglers Intercepted	=	282.0
Total Hours Still to Fish (Incomplete Trips)	=	4.2

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Sanddab, Pacific	1	99	31.6	0.13	13.35
Anchovy, Northern	2	74	23.6	0.01	0.67
Rockfish, Yellowtail	3	17	5.4	0.78	13.32
Rockfish, Blue	4	15	4.8	0.49	7.41
Bass, Striped	5	15	4.8	3.42	51.28
Rockfish, Copper	6	13	4.2	1.57	20.38
Rockfish, Rosy	7	13	4.2	0.18	2.40
Rockfishes (unidentified)	8	12	3.8	0.83**	9.96
Croaker, White	9	10	3.2	0.37	3.73
Lingcod	10	9	2.9	4.54	40.85
Salmon, Chinook (King)	11	7	2.2	3.29	23.04
Rockfish, Brown	12	7	2.2	0.93	6.49
Rockfish, Black	13	7	2.2	1.24	8.66
Salmon	14	3	1.0	3.14**	9.42
Sandabs	15	3	1.0	0.13**	0.39
Shark, Blue	16	1	0.3	17.98	17.98
Salmon, Coho (Silver)	17	1	0.3	2.08	2.08
Rockfish, China	18	1	0.3	0.64	0.64
Bocaccio	19	1	0.3	3.02	3.02
Rockfish, Canary	20	1	0.3	0.66	0.66
Rockfish, Greenspotted	21	1	0.3	0.80	0.80
Sole, Petrale	22	1	0.3	0.68	0.68
Sole, Butter	23	1	0.3	0.61	0.61
Sole, Dover	24	1	0.3	0.00**	0.00
Total		313	100		237.82

C. CPUE

Catch per Angler Day	=	5.49	Catch per Angler Hour	=	1.11
Kg per Angler Day	=	4.17	Kg per Angler Hour	=	0.84

* Weight estimated from length-to-weight regression if available.

** Mean weight for this group was not calculated or was estimated from other sources (see text).

Table 57. Sampled Effort, Ranked Catch and CPUE for Area 3 (Ocean) in 1979 for Quarter 3, by Private or Rental Boat Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted = 57
 Total Hours Effort for Anglers Intercepted = 282.0
 Total Hours Still to Fish (Incomplete Trips) = 4.2

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Bass, Striped	1	51.28	15	5.2	14	3.42	830	110
Lingcod	2	36.31	8	2.8	8	4.54	721	155
Salmon, Chinook (King)	3	23.04	7	2.4	6	3.29	701	48
Rockfish, Copper	4	20.38	13	4.5	12	1.57	428	79
Shark, Blue	5	17.98	1	0.3	1	17.98	1700	0
Sanddab, Pacific	6	13.35	99	34.1	46	0.13	230	23
Rockfish, Yellowtail	7	13.32	17	5.9	17	0.78	362	83
Rockfish, Black	8	8.66	7	2.4	7	1.24	424	77
Rockfish, Blue	9	7.41	15	5.2	15	0.49	294	86
Rockfish, Brown	10	6.49	7	2.4	7	0.93	369	53
Croaker, White	11	3.73	10	3.4	10	0.37	317	30
Bocaccio	12	3.02	1	0.3	1	3.02	655	0
Rockfish, Rosy	13	2.40	13	4.5	13	0.18	223	22
Salmon, Coho (Silver)	14	2.08	1	0.3	1	2.08	604	0
Rockfish, Greenspotted	15	0.80	1	0.3	1	0.80	369	0
Sole, Petrale	16	0.68	1	0.3	1	0.68	378	0
Rockfish, Canary	17	0.66	1	0.3	1	0.66	356	0
Rockfish, China	18	0.64	1	0.3	1	0.64	326	0
Anchovy, Northern	19	0.63	70	24.1	10	0.01	118	11
Sole, Butter	20	0.61	1	0.3	1	0.61	360	0
Sole, Dover	21	0.00	1	0.3	1	0.00	320	0
Total		213.47	290	100	174			

C. CPUE***

Catch per Angler Day = 5.09 Catch per Angler Hour = 1.03
 Kg per Angler Day = 3.75 Kg per Angler Hour = 0.76

* Weight estimated from length-to-weight regression if available.

** Total length except for species with tuna-like caudal fins (see text).

*** CPUE is underestimated if all fish taken were not examined (see text).

Table 58. Sampled Effort, Ranked Catch and CPUE for Area 3 (Ocean) in 1979 for Quarter 3, by All CPFV Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted	=	49
Total Hours Effort for Anglers Intercepted	=	203.2
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Rockfish, Yellowtail	1	177	35.3
Rockfish, Greenspotted	2	64	12.8
Rockfish, Rosy	3	50	10.0
Rockfish, Canary	4	36	7.2
Lingcod	5	33	6.6
Rockfish, Starry	6	22	4.4
Bocaccio	7	20	4.0
Rockfish, Copper	8	19	3.8
Jack Mackerel	9	15	3.0
Rockfish, Blue	10	14	2.8
Sanddab, Pacific	11	14	2.8
Rockfishes (unidentified)	12	13	2.6
Rockfish, Yelloweye	13	8	1.6
Rockfish, Vermilion	14	4	0.8
Rockfish, Widow	15	3	0.6
Jacksmelt	16	2	0.4
Rockfish, Flag	17	2	0.4
Rockfish, Olive	18	2	0.4
Salmon, Chinook (King)	19	1	0.2
Rockfish, Greenstriped	20	1	0.2
Sanddab, Speckled	21	1	0.2
Total		501	100

C. CPUE

Catch per Angler Day = 10.22 Catch per Angler Hour = 2.47

Table 59. Sampled Effort, Ranked Catch and CPUE for Area 3 (Ocean) in 1979 for Quarter 3, by All CPFV Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted	=	49
Total Hours Effort for Anglers Intercepted	=	203.2
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Rockfish, Yellowtail	1	175	35.4	1.18	206.45
Rockfish, Greenspotted	2	64	12.9	0.86	55.01
Rockfish, Rosy	3	50	10.1	0.28	14.10
Rockfish, Canary	4	36	7.3	1.43	51.41
Lingcod	5	33	6.7	5.59	184.39
Rockfish, Starry	6	22	4.4	0.92	20.21
Bocaccio	7	20	4.0	2.89	57.80
Rockfish, Copper	8	19	3.8	1.77	33.63
Rockfish, Blue	9	14	2.8	0.76	10.62
Sanddab, Pacific	10	14	2.8	0.00**	0.00
Jack Mackerel	11	13	2.6	2.47	32.09
Rockfishes (unidentified)	12	11	2.2	1.18**	12.98
Rockfish, Yelloweye	13	8	1.6	3.61	28.87
Rockfish, Vermilion	14	4	0.8	2.85	11.41
Rockfish, Widow	15	3	0.6	0.78	2.35
Jacksmelt	16	2	0.4	0.00**	0.00
Rockfish, Flag	17	2	0.4	1.18	2.36
Rockfish, Olive	18	2	0.4	1.05	2.11
Salmon, Chinook (King)	19	1	0.2	5.88	5.88
Rockfish, Greenstriped	20	1	0.2	0.36	0.36
Sanddab, Speckled	21	1	0.2	0.00**	0.00
Total		495	100		732.04

C. CPUE

Catch per Angler Day	=	10.10	Catch per Angler Hour	=	2.44
Kg per Angler Day	=	14.94	Kg per Angler Hour	=	3.60

* Weight estimated from length-to-weight regression if available.

** Mean weight for this group was not calculated or was estimated from other sources (see text).

Table 60. Sampled Effort, Ranked Catch and CPUE for Area 3 (Ocean) in 1979 for Quarter 3, by All CPFV Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted = 49
 Total Hours Effort for Anglers Intercepted = 203.2
 Total Hours Still to Fish (Incomplete Trips) = 0.0

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Rockfish, Yellowtail	1	206.45	175	38.5	174	1.18	427	56
Lingcod	2	184.39	33	7.3	32	5.59	773	158
Rockfish, Greenspotted	3	55.01	64	14.1	61	0.86	371	53
Bocaccio	4	54.91	19	4.2	19	2.89	613	155
Rockfish, Canary	5	51.41	36	7.9	36	1.43	452	54
Rockfish, Copper	6	33.64	19	4.2	19	1.77	451	58
Rockfish, Yelloweye	7	28.87	8	1.8	8	3.61	569	75
Rockfish, Starry	8	20.21	22	4.8	22	0.92	376	31
Jack Mackerel	9	17.28	7	1.5	7	2.47	565	21
Rockfish, Rosy	10	11.57	41	9.0	41	0.28	257	21
Rockfish, Vermilion	11	11.41	4	0.9	4	2.85	563	48
Rockfish, Blue	12	10.62	14	3.1	14	0.76	342	100
Salmon, Chinook (King)	13	5.88	1	0.2	1	5.88	854	0
Rockfish, Flag	14	2.36	2	0.4	2	1.18	414	8
Rockfish, Widow	15	2.35	3	0.7	3	0.78	385	47
Rockfish, Olive	16	2.11	2	0.4	2	1.05	424	69
Rockfish, Greenstriped	17	0.36	1	0.2	1	0.36	314	0
Jacksmelt	18	0.00	2	0.4	0	0.00	0	0
Sanddab, Speckled	19	0.00	1	0.2	0	0.00	0	0
Total		698.82	454	100	446			

C. CPUE***

Catch per Angler Day = 9.27 Catch per Angler Hour = 2.23
 Kg per Angler Day = 14.26 Kg per Angler Hour = 3.44

* Weight estimated from length-to-weight regression if available.

** Total length except for species with tuna-like caudal fins (see text).

*** CPUE is underestimated if all fish taken were not examined (see text).

Figure 9. Length-Frequency Histogram for Redtail Surfperch
 Taken by Beach and Bank Anglers Using Hook-and-Line Gear.
 Area 3 (Ocean), Quarter 3, 1979.

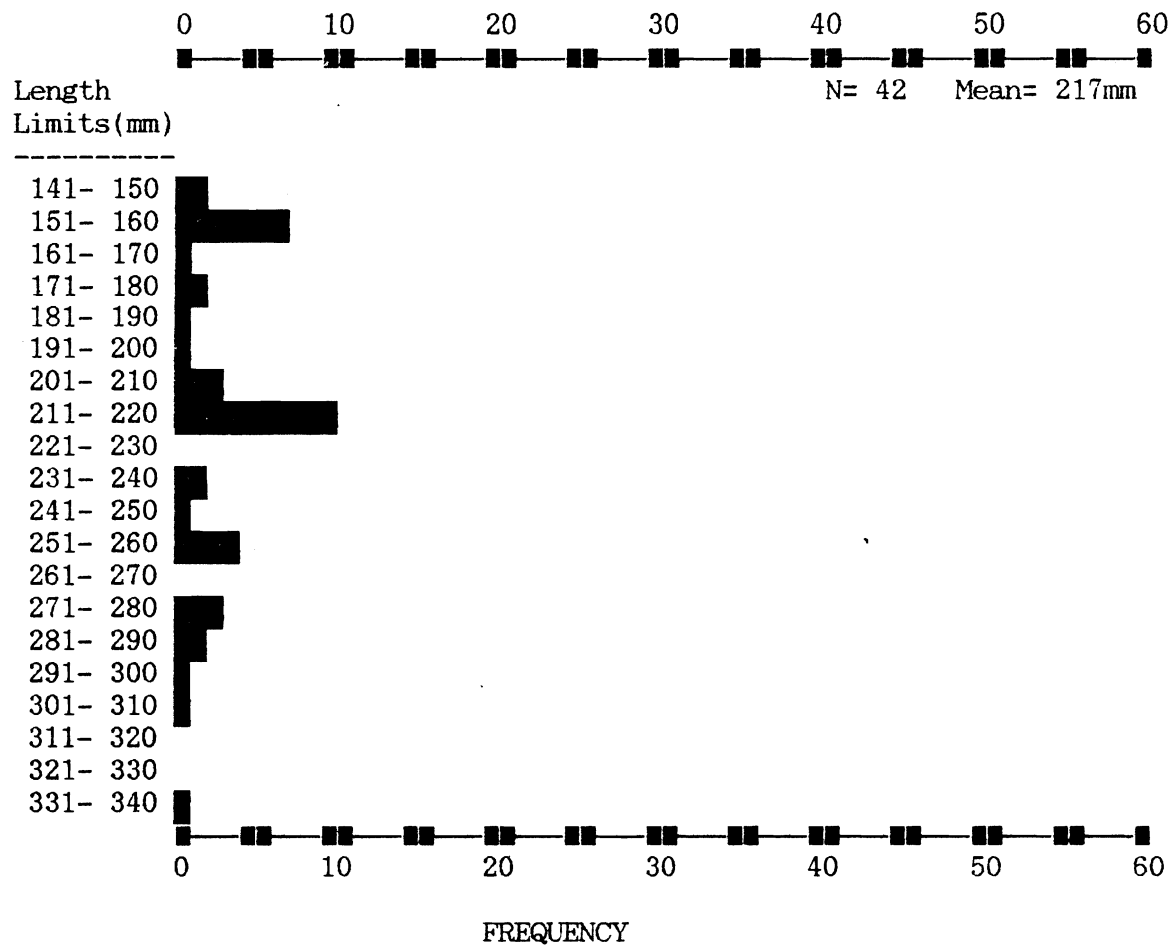


Figure 10. Length-Frequency Histogram for Pacific Sanddab
 Taken by Private or Rental Boat Anglers Using Hook-and-Line Gear.
 Area 3 (Ocean), Quarter 3, 1979.

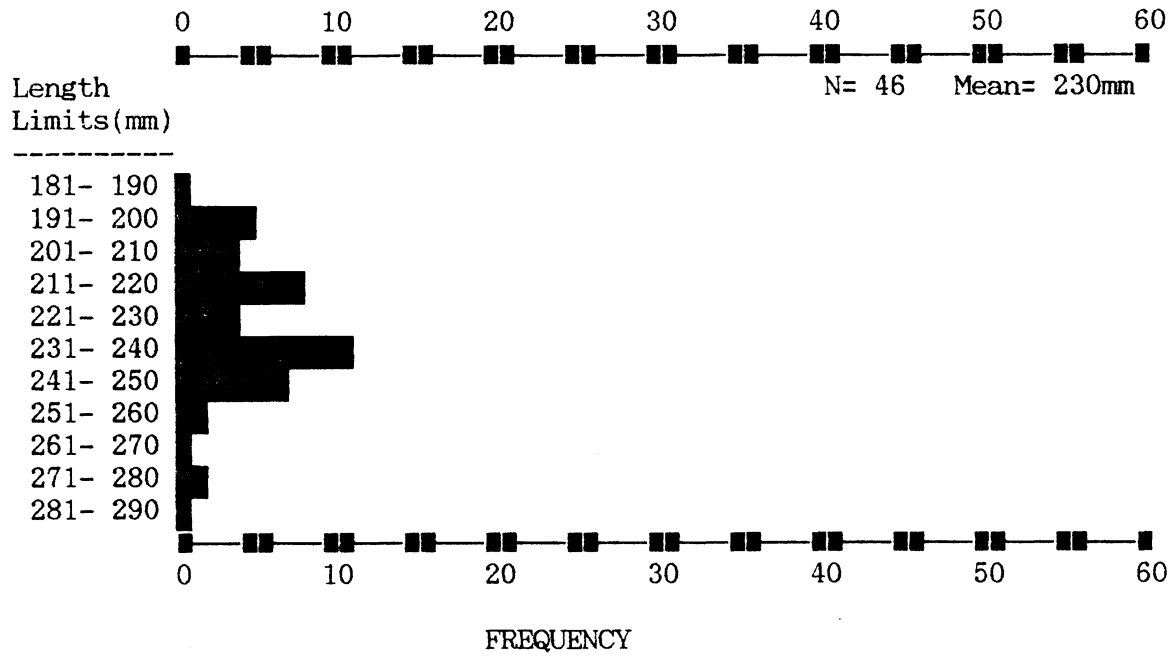


Figure 11. Length-Frequency Histogram for Rosy Rockfish
 Taken by All CPFV Anglers Using Hook-and-Line Gear.
 Area 3 (Ocean), Quarter 3, 1979.

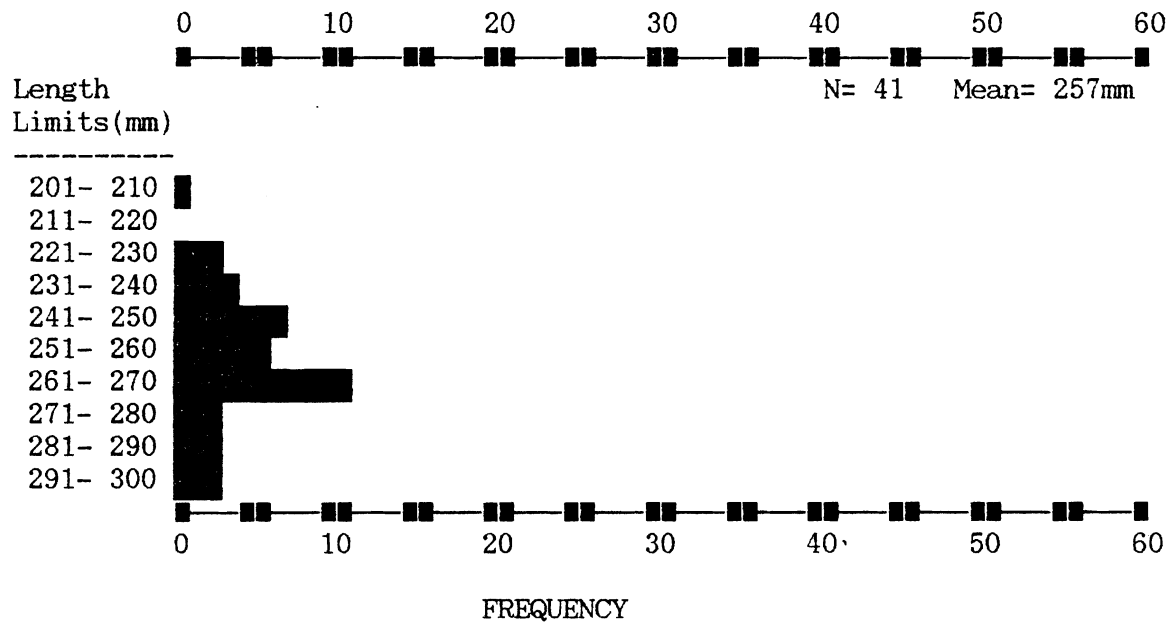


Figure 12. Length-Frequency Histogram for Yellowtail Rockfish
 Taken by All CPFV Anglers Using Hook-and-Line Gear.
 Area 3 (Ocean), Quarter 3, 1979.

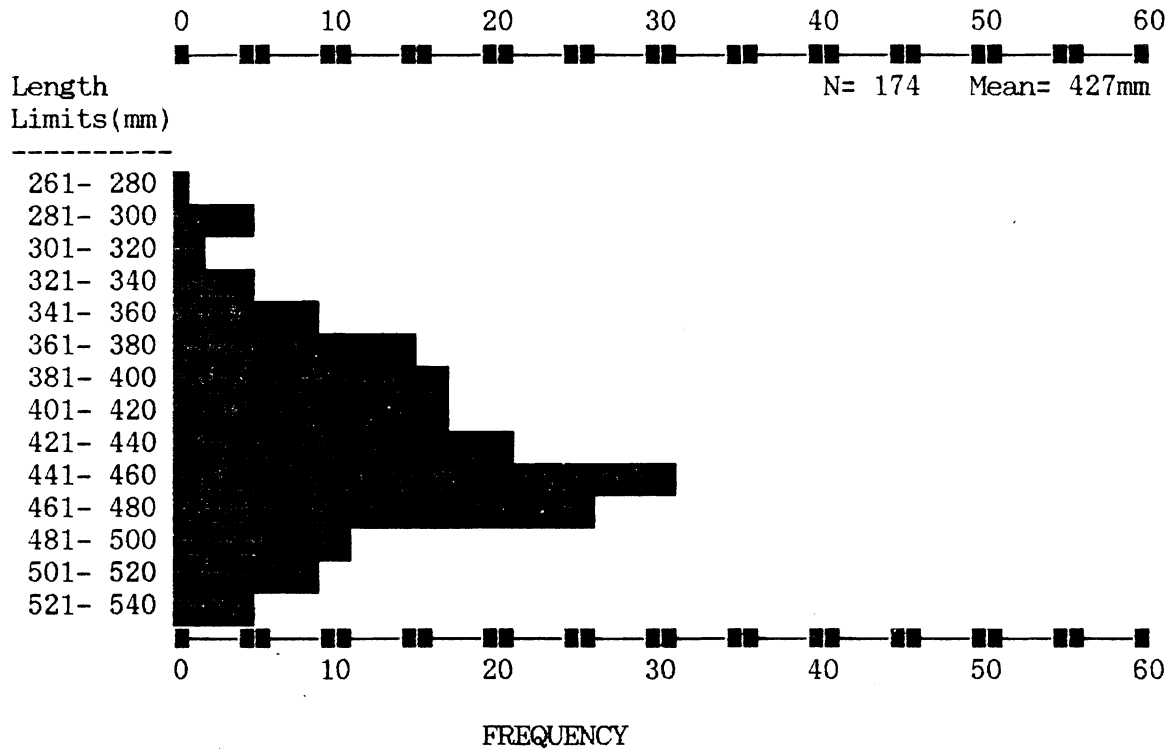


Table 61. Sampled Effort, Ranked Catch and CPUE for Area 3 (Bay) in 1979 for Quarter 3, by Pier or Dock Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted	=	252
Total Hours Effort for Anglers Intercepted	=	869.3
Total Hours Still to Fish (Incomplete Trips)	=	24.4

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Sculpin, Pacific Staghorn	1	188	18.7
Anchovy, Northern	2	167	16.7
Perch, Shiner	3	120	12.0
Sculpin, Buffalo	4	117	11.7
Surfperches	5	82	8.2
Sculpins	6	76	7.6
Rockfish, Brown	7	45	4.5
Rockfishes (unidentified)	8	40	4.0
Surfperch, Walleye	9	33	3.3
Gobies	10	31	3.1
Bocaccio	11	29	2.9
Jacksmelt	12	19	1.9
Surfperch, Silver	13	10	1.0
Goby, Yellowfin	14	5	0.5
Seaperch, Striped	15	4	0.4
Perch, Pile	16	4	0.4
Shark, Leopard	17	3	0.3
Croaker, White	18	3	0.3
Seaperch, Rainbow	19	3	0.3
Smoothhound, Brown	20	2	0.2
Anchovies	21	2	0.2
Cabazon	22	2	0.2
Perch, Black	23	2	0.2
Sanddab, Pacific	24	2	0.2
Unidentified Fishes	25	1	0.1
Sharks	26	1	0.1

(Table 61. - continued)

Common name	Rank by Number	Number Caught	% by Number
Smoothhound, Gray	27	1	0.1
Skates	28	1	0.1
Stingrays	29	1	0.1
Minnows and Carps	30	1	0.1
Topsmelt	31	1	0.1
Sculpin, Bull	32	1	0.1
Irish Lord, Brown	33	1	0.1
Bass, Striped	34	1	0.1
Sand & Kelp Basses	35	1	0.1
Surfperch, Redtail	36	1	0.1
Flounders, Lefteye	37	1	0.1
Flounder, Starry	38	1	0.1
Total		1003	100

C. CPUE

Catch per Angler Day = 3.98 Catch per Angler Hour = 1.15

Table 62. Sampled Effort, Ranked Catch and CPUE for Area 3 (Bay) in 1979 for Quarter 3, by Pier or Dock Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted	=	252
Total Hours Effort for Anglers Intercepted	=	869.3
Total Hours Still to Fish (Incomplete Trips)	=	24.4

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Anchovy, Northern	1	167	35.5	0.02	2.73
Perch, Shiner	2	74	15.7	0.05	3.40
Surfperches	3	36	7.7	0.11**	3.96
Surfperch, Walleye	4	32	6.8	0.15	4.75
Rockfishes (unidentified)	5	30	6.4	0.06**	1.80
Sculpin, Pacific Staghorn	6	26	5.5	0.09	2.26
Bocaccio	7	24	5.1	0.03	0.82
Gobies	8	23	4.9	0.06**	1.38
Rockfish, Brown	9	11	2.3	0.06	0.68
Sculpins	10	9	1.9	0.09**	0.81
Surfperch, Silver	11	9	1.9	0.19	1.72
Jacksmelt	12	5	1.1	0.48	2.39
Seaperch, Striped	13	4	0.9	0.20	0.81
Perch, Pile	14	3	0.6	0.68	2.04
Seaperch, Rainbow	15	3	0.6	0.20	0.61
Cabezon	16	2	0.4	0.17	0.34
Croaker, White	17	2	0.4	0.22	0.45
Perch, Black	18	2	0.4	0.20	0.39
Sanddab, Pacific	19	2	0.4	0.40	0.80
Smoothhound, Gray	20	1	0.2	0.00**	0.00
Minnows and Carps	21	1	0.2	0.00**	0.00
Topsmelt	22	1	0.2	0.05	0.05
Surfperch, Redtail	23	1	0.2	0.01	0.01
Goby, Yellowfin	24	1	0.2	0.06	0.06
Flounder, Starry	25	1	0.2	0.19	0.19
Total		470	100		32.46

C. CPUE

Catch per Angler Day	=	1.87	Catch per Angler Hour	=	0.54
Kg per Angler Day	=	0.13	Kg per Angler Hour	=	0.04

* Weight estimated from length-to-weight regression if available.

** Mean weight for this group was not calculated or was estimated from other sources (see text).

Table 63. Sampled Effort, Ranked Catch and CPUE for Area 3 (Bay) in 1979 for Quarter 3, by Pier or Dock Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted	=	252
Total Hours Effort for Anglers Intercepted	=	869.3
Total Hours Still to Fish (Incomplete Trips)	=	24.4

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Surfperch, Walleye	1	4.75	32	10.1	32	0.15	195	46
Perch, Shiner	2	3.22	70	22.2	56	0.05	144	29
Jacksmelt	3	2.39	5	1.6	5	0.48	370	95
Anchovy, Northern	4	2.09	128	40.5	41	0.02	144	20
Perch, Pile	5	2.04	3	0.9	3	0.68	319	118
Surfperch, Silver	6	1.72	9	2.8	4	0.19	210	72
Seaperch, Striped	7	0.81	4	1.3	4	0.20	232	13
Sanddab, Pacific	8	0.80	2	0.6	2	0.40	283	144
Bocaccio	9	0.69	20	6.3	20	0.03	153	13
Rockfish, Brown	10	0.68	11	3.5	11	0.06	147	19
Seaperch, Rainbow	11	0.61	3	0.9	3	0.20	230	30
Croaker, White	12	0.45	2	0.6	2	0.22	271	2
Perch, Black	13	0.39	2	0.6	2	0.20	216	18
Flounder, Starry	14	0.19	1	0.3	1	0.19	261	0
Cabezon	15	0.17	1	0.3	1	0.17	205	0
Sculpin, Pacific Staghorn	16	0.09	1	0.3	1	0.09	204	0
Goby, Yellowfin	17	0.06	1	0.3	1	0.06	202	0
Topsmelt	18	0.05	1	0.3	1	0.05	194	0
Surfperch, Redtail	19	0.01	1	0.3	1	0.01	93	0
Surfperches	20	0.00	6	1.9	0	0.00	0	0
Gobies	21	0.00	13	4.1	0	0.00	0	0
Total		21.20	316	100	191			

C. CPUE***

Catch per Angler Day	=	1.25	Catch per Angler Hour	=	0.36
Kg per Angler Day	=	0.08	Kg per Angler Hour	=	0.02

* Weight estimated from length-to-weight regression if available.

** Total length except for species with tuna-like caudal fins (see text).

*** CPUE is underestimated if all fish taken were not examined (see text).

Table 64. Sampled Effort, Ranked Catch and CPUE for Area 3 (Bay) in 1979 for Quarter 3, by Jetty or Breakwater Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted	=	8
Total Hours Effort for Anglers Intercepted	=	30.0
Total Hours Still to Fish (Incomplete Trips)	=	6.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Sculpin, Pacific Staghorn	1	8	40.0
Rockfishes (unidentified)	2	7	35.0
Surfperch, Walleye	3	2	10.0
Croaker, White	4	1	5.0
Sandabs	5	1	5.0
Sanddab, Pacific	6	1	5.0
Total		20	100

C. CPUE

Catch per Angler Day = 2.50 Catch per Angler Hour = 0.67

Table 65. Sampled Effort, Ranked Catch and CPUE for Area 3 (Bay) in 1979 for Quarter 3, by Jetty or Breakwater Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted = 8
 Total Hours Effort for Anglers Intercepted = 30.0
 Total Hours Still to Fish (Incomplete Trips) = 6.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Surfperch, Walleye	1	2	66.7	0.29	0.58
Croaker, White	2	1	33.3	0.32	0.32
Total		3	100		0.90

C. CPUE

Catch per Angler Day = 0.38 Catch per Angler Hour = 0.10
 Kg per Angler Day = 0.11 Kg per Angler Hour = 0.03

* Weight estimated from length-to-weight regression if available.

Table 66. Sampled Effort, Ranked Catch and CPUE for Area 3 (Bay) in 1979 for Quarter 3, by Jetty or Breakwater Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted	=	8
Total Hours Effort for Anglers Intercepted	=	30.0
Total Hours Still to Fish (Incomplete Trips)	=	6.0

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Surfperch, Walleye	1	0.58	2	66.7	2	0.29	250	1
Croaker, White	2	0.32	1	33.3	1	0.32	305	0
Total		0.90	3	100	3			

C. CPUE***

Catch per Angler Day	=	0.38	Catch per Angler Hour	=	0.10
Kg per Angler Day	=	0.11	Kg per Angler Hour	=	0.03

* Weight estimated from length-to-weight regression if available.

** Total length except for species with tuna-like caudal fins (see text).

*** CPUE is underestimated if all fish taken were not examined (see text).

Table 67. Sampled Effort, Ranked Catch and CPUE for Area 3 (Bay) in 1979 for Quarter 3, by Beach or Bank Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted = 37
 Total Hours Effort for Anglers Intercepted = 117.0
 Total Hours Still to Fish (Incomplete Trips) = 12.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Rockfishes (unidentified)	1	22	39.3
Rockfish, Brown	2	17	30.4
Sculpin, Pacific Staghorn	3	8	14.3
Sculpins	4	4	7.1
Shark, Leopard	5	1	1.8
Stingrays	6	1	1.8
Rockfish, Black	7	1	1.8
Cabazon	8	1	1.8
Perch, Reef	9	1	1.8
Total		56	100

C. CPUE

Catch per Angler Day = 1.51 Catch per Angler Hour = 0.48

Table 68. Sampled Effort, Ranked Catch and CPUE for Area 3 (Bay) in 1979 for Quarter 3, by Beach or Bank Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted = 37
 Total Hours Effort for Anglers Intercepted = 117.0
 Total Hours Still to Fish (Incomplete Trips) = 12.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Rockfish, Brown	1	16	80.0	0.06	0.95
Shark, Leopard	2	1	5.0	2.76	2.76
Rockfish, Black	3	1	5.0	0.05	0.05
Cabazon	4	1	5.0	0.25	0.25
Perch, Reef	5	1	5.0	0.00**	0.00
Total		20	100		4.00

C. CPUE

Catch per Angler Day = 0.54 Catch per Angler Hour = 0.17
 Kg per Angler Day = 0.11 Kg per Angler Hour = 0.03

* Weight estimated from length-to-weight regression if available.

** Mean weight for this group was not calculated or was estimated from other sources (see text).

Table 69. Sampled Effort, Ranked Catch and CPUE for Area 3 (Bay) in 1979 for Quarter 3, by Beach or Bank Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted = 37
 Total Hours Effort for Anglers Intercepted = 117.0
 Total Hours Still to Fish (Incomplete Trips) = 12.0

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Shark, Leopard	1	2.76	1	5.0	1	2.76	660	0
Rockfish, Brown	2	0.95	16	80.0	16	0.06	145	19
Cabezon	3	0.25	1	5.0	1	0.25	235	0
Rockfish, Black	4	0.05	1	5.0	1	0.05	145	0
Perch, Reef	5	0.00	1	5.0	0	0.00	0	0
Total		4.00	20	100	19			

C. CPUE***

Catch per Angler Day = 0.54 Catch per Angler Hour = 0.17
 Kg per Angler Day = 0.11 Kg per Angler Hour = 0.03

* Weight estimated from length-to-weight regression if available.

** Total length except for species with tuna-like caudal fins (see text).

*** CPUE is underestimated if all fish taken were not examined (see text).

Table 70. Sampled Effort, Ranked Catch and CPUE for Area 3 (Bay) in 1979 for Quarter 3, by Private or Rental Boat Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted	=	93
Total Hours Effort for Anglers Intercepted	=	439.5
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Smoothhound, Gray	1	57	20.6
Shark, Leopard	2	46	16.6
Rockfish, Brown	3	42	15.2
Bass, Striped	4	22	7.9
Perch, Shiner	5	13	4.7
Smoothhound, Brown	6	12	4.3
Sharks	7	10	3.6
Greenling, Rock	8	10	3.6
Sculpin, Pacific Staghorn	9	10	3.6
Stingrays	10	9	3.2
Rockfish, Blue	11	9	3.2
Sanddab, Pacific	12	7	2.5
Salmon, Chinook (King)	13	6	2.2
Seaperch, Rainbow	14	5	1.8
Rockfish, Black	15	3	1.1
Halibut, California	16	3	1.1
Smoothhounds	17	2	0.7
Rockfishes (unidentified)	18	2	0.7
Sculpin, Buffalo	19	2	0.7
Surfperches	20	2	0.7
Unidentified Fishes	21	1	0.4
Bottomfishes (Groundfishes)	22	1	0.4
Croaker, White	23	1	0.4
Seaperch, Striped	24	1	0.4
Perch, Pile	25	1	0.4
Total		277	100

C. CPUE

Catch per Angler Day = 2.98 Catch per Angler Hour = 0.63

Table 71. Sampled Effort, Ranked Catch and CPUE for Area 3 (Bay) in 1979 for Quarter 3, by Private or Rental Boat Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted	=	93
Total Hours Effort for Anglers Intercepted	=	439.5
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Smoothhound, Gray	1	57	29.1	0.00**	0.00
Rockfish, Brown	2	42	21.4	0.15	6.34
Bass, Striped	3	20	10.2	2.01	40.11
Shark, Leopard	4	14	7.1	9.84	137.79
Perch, Shiner	5	13	6.6	0.00**	0.00
Greenling, Rock	6	10	5.1	0.46	4.63
Rockfish, Blue	7	9	4.6	0.22	1.99
Sanddab, Pacific	8	7	3.6	0.12	0.81
Salmon, Chinook (King)	9	6	3.1	4.17	25.05
Seaperch, Rainbow	10	5	2.6	0.26	1.29
Rockfish, Black	11	3	1.5	0.73	2.20
Halibut, California	12	3	1.5	4.18	12.53
Surfperches	13	2	1.0	0.35**	0.70
Unidentified Fishes	14	1	0.5	0.00**	0.00
Stingrays	15	1	0.5	0.00**	0.00
Croaker, White	16	1	0.5	0.20	0.20
Seaperch, Striped	17	1	0.5	0.80	0.80
Perch, Pile	18	1	0.5	1.13	1.13
Total		196	100		235.56

C. CPUE

Catch per Angler Day	=	2.11	Catch per Angler Hour	=	0.45
Kg per Angler Day	=	2.53	Kg per Angler Hour	=	0.54

* Weight estimated from length-to-weight regression if available.

** Mean weight for this group was not calculated or was estimated from other sources (see text).

Table 72. Sampled Effort, Ranked Catch and CPUE for Area 3 (Bay) in 1979 for Quarter 3, by Private or Rental Boat Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted = 93
 Total Hours Effort for Anglers Intercepted = 439.5
 Total Hours Still to Fish (Incomplete Trips) = 0.0

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Shark, Leopard	1	68.89	7	6.7	6	9.84	1003	183
Bass, Striped	2	40.11	20	19.2	19	2.01	691	89
Salmon, Chinook (King)	3	25.05	6	5.8	6	4.17	753	87
Halibut, California	4	12.53	3	2.9	3	4.18	725	97
Greenling, Rock	5	4.63	10	9.6	10	0.46	320	22
Rockfish, Brown	6	4.53	30	28.8	21	0.15	185	56
Rockfish, Black	7	2.20	3	2.9	3	0.73	347	98
Rockfish, Blue	8	1.99	9	8.7	9	0.22	228	64
Seaperch, Rainbow	9	1.29	5	4.8	5	0.26	251	22
Perch, Pile	10	1.13	1	1.0	1	1.13	407	0
Sanddab, Pacific	11	0.81	7	6.7	7	0.12	215	39
Seaperch, Striped	12	0.80	1	1.0	1	0.80	366	0
Croaker, White	13	0.20	1	1.0	1	0.20	260	0
Unidentified Fishes	14	0.00	1	1.0	0	0.00	0	0
Total		164.16	104	100	92			

C. CPUE***

Catch per Angler Day = 1.12 Catch per Angler Hour = 0.24
 Kg per Angler Day = 1.77 Kg per Angler Hour = 0.37

* Weight estimated from length-to-weight regression if available.
 ** Total length except for species with tuna-like caudal fins (see text).
 *** CPUE is underestimated if all fish taken were not examined (see text).

Table 73. Sampled Effort, Ranked Catch and CPUE for Area 4 in 1979 for Quarter 3, by Pier or Dock Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted	=	154
Total Hours Effort for Anglers Intercepted	=	499.0
Total Hours Still to Fish (Incomplete Trips)	=	37.5

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Bocaccio	1	785	65.0
Sanddab, Pacific	2	160	13.2
Croaker, White	3	51	4.2
Surfperch, Walleye	4	38	3.1
Tomcod, Pacific	5	30	2.5
Sculpin, Pacific Staghorn	6	20	1.7
Surfperches	7	18	1.5
Sculpins	8	17	1.4
Rockfishes (unidentified)	9	15	1.2
Perch, Shiner	10	13	1.1
Rockfish, Kelp	11	12	1.0
Drums	12	9	0.7
Cabezon	13	8	0.7
Sunfish, Ocean	14	6	0.5
Flatfishes	15	4	0.3
Greenling, Kelp	16	3	0.2
Rockfish, Black	17	2	0.2
Rockfish, Blue	18	2	0.2
Seaperch, White	19	2	0.2
Surfperch, Barred	20	2	0.2
Flounders, Lefteye	21	2	0.2
Sandabs	22	2	0.2
Sole, Sand	23	2	0.2
Bottomfishes (Groundfishes)	24	1	0.1
Greenlings (unidentified)	25	1	0.1
Perch, Black	26	1	0.1

(Table 73. - continued)

Common name	Rank by Number	Number Caught	% by Number
Sanddab, Speckled	27	1	0.1
Halibut, California	28	1	0.1
Total		1208	100

C. CPUE

Catch per Angler Day = 7.84 Catch per Angler Hour = 2.42

Table 74. Sampled Effort, Ranked Catch and CPUE for Area 4 in 1979 for Quarter 3, by Pier or Dock Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted	=	154
Total Hours Effort for Anglers Intercepted	=	499.0
Total Hours Still to Fish (Incomplete Trips)	=	37.5

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Bocaccio	1	657	76.9	0.03	22.75
Sanddab, Pacific	2	74	8.7	0.05	3.79
Surfperch, Walleye	3	38	4.4	0.11	4.05
Croaker, White	4	23	2.7	0.08	1.73
Perch, Shiner	5	13	1.5	0.02	0.31
Surfperches	6	8	0.9	0.09**	0.72
Rockfish, Kelp	7	7	0.8	0.39	2.76
Sunfish, Ocean	8	6	0.7	0.00**	0.00
Rockfishes (unidentified)	9	3	0.4	0.04**	0.12
Greenling, Kelp	10	3	0.4	0.25	0.74
Flatfishes	11	3	0.4	0.05**	0.15
Rockfish, Black	12	2	0.2	0.45	0.91
Rockfish, Blue	13	2	0.2	0.10	0.20
Sculpin, Pacific Staghorn	14	2	0.2	0.02	0.05
Cabezon	15	2	0.2	0.16	0.31
Seaperch, White	16	2	0.2	0.17	0.33
Surfperch, Barred	17	2	0.2	0.08	0.16
Sandabs	18	2	0.2	0.03	0.06
Sole, Sand	19	2	0.2	0.04	0.08
Bottomfishes (Groundfishes)	20	1	0.1	0.00**	0.00
Perch, Black	21	1	0.1	0.26	0.26
Sanddab, Speckled	22	1	0.1	0.03	0.03
Total		854	100		39.50

C. CPUE

Catch per Angler Day	=	5.55	Catch per Angler Hour	=	1.71
Kg per Angler Day	=	0.26	Kg per Angler Hour	=	0.08

* Weight estimated from length-to-weight regression if available.

** Mean weight for this group was not calculated or was estimated from other sources (see text).

Table 75. Sampled Effort, Ranked Catch and CPUE for Area 4 in 1979 for Quarter 3, by Pier or Dock Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted = 154
 Total Hours Effort for Anglers Intercepted = 499.0
 Total Hours Still to Fish (Incomplete Trips) = 37.5

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Bocaccio	1	10.49	303	66.2	139	0.03	153	15
Surfperch, Walleye	2	3.94	37	8.1	23	0.11	183	33
Sanddab, Pacific	3	3.54	69	15.1	53	0.05	162	41
Rockfish, Kelp	4	1.58	4	0.9	4	0.39	294	43
Rockfish, Black	5	0.91	2	0.4	2	0.45	310	11
Greenling, Kelp	6	0.74	3	0.7	3	0.25	257	17
Croaker, White	7	0.68	9	2.0	9	0.08	178	46
Seaperch, White	8	0.33	2	0.4	2	0.17	239	14
Cabazon	9	0.31	2	0.4	2	0.16	175	103
Perch, Shiner	10	0.31	13	2.8	13	0.02	121	11
Perch, Black	11	0.26	1	0.2	1	0.26	243	0
Surfperch, Barred	12	0.16	2	0.4	2	0.08	162	18
Rockfish, Blue	13	0.10	1	0.2	1	0.10	187	0
Sanddabs	14	0.06	2	0.4	2	0.03	135	6
Sole, Sand	15	0.04	1	0.2	1	0.04	156	0
Sanddab, Speckled	16	0.03	1	0.2	1	0.03	140	0
Sculpin, Pacific Staghorn	17	0.02	1	0.2	1	0.02	128	0
Sunfish, Ocean	18	0.00	5	1.1	5	0.00	432	28
Total		23.49	458	100	264			

C. CPUE***

Catch per Angler Day = 2.97 Catch per Angler Hour = 0.92
 Kg per Angler Day = 0.15 Kg per Angler Hour = 0.05

* Weight estimated from length-to-weight regression if available.

** Total length except for species with tuna-like caudal fins (see text).

*** CPUE is underestimated if all fish taken were not examined (see text).

Table 76. Sampled Effort, Ranked Catch and CPUE for Area 4 in 1979 for Quarter 3, by Jetty or Breakwater Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted	=	51
Total Hours Effort for Anglers Intercepted	=	148.2
Total Hours Still to Fish (Incomplete Trips)	=	12.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Sculpin, Pacific Staghorn	1	178	69.8
Sandabs	2	10	3.9
Jacksmelt	3	9	3.5
Bocaccio	4	8	3.1
Rockfish, Grass	5	7	2.7
Surfperch, Walleye	6	7	2.7
Sole, Sand	7	7	2.7
Croaker, White	8	4	1.6
Flatfishes	9	4	1.6
Rockfishes (unidentified)	10	3	1.2
Flounders, Righteye	11	3	1.2
Bottomfishes (Groundfishes)	12	2	0.8
Rockfish, Kelp	13	2	0.8
Surfperches	14	2	0.8
Seaperch, White	15	2	0.8
Sanddab, Speckled	16	2	0.8
Flounder, Starry	17	2	0.8
Shark, Leopard	18	1	0.4
Sanddab, Pacific	19	1	0.4
Halibut, California	20	1	0.4
Total		255	100

C. CPUE

Catch per Angler Day = 5.00 Catch per Angler Hour = 1.72

Table 77. Sampled Effort, Ranked Catch and CPUE for Area 4 in 1979 for Quarter 3, by Jetty or Breakwater Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted	=	51
Total Hours Effort for Anglers Intercepted	=	148.2
Total Hours Still to Fish (Incomplete Trips)	=	12.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Sculpin, Pacific Staghorn	1	12	17.4	0.00**	0.00
Jacksmelt	2	9	13.0	0.43	3.87
Bocaccio	3	8	11.6	0.03	0.25
Rockfish, Grass	4	7	10.1	0.16	1.15
Surfperch, Walleye	5	7	10.1	0.18	1.29
Sole, Sand	6	7	10.1	0.15	1.03
Croaker, White	7	4	5.8	0.26	1.04
Bottomfishes (Groundfishes)	8	2	2.9	0.00**	0.00
Rockfishes (unidentified)	9	2	2.9	0.10**	0.20
Rockfish, Kelp	10	2	2.9	0.15	0.31
Seaperch, White	11	2	2.9	0.17	0.35
Sanddab, Speckled	12	2	2.9	0.03	0.06
Flounder, Starry	13	2	2.9	0.57	1.14
Shark, Leopard	14	1	1.4	4.04	4.04
Sanddab, Pacific	15	1	1.4	0.14	0.14
Halibut, California	16	1	1.4	1.10	1.10
Total		69	100		15.98

C. CPUE

Catch per Angler Day	=	1.35	Catch per Angler Hour	=	0.47
Kg per Angler Day	=	0.31	Kg per Angler Hour	=	0.11

* Weight estimated from length-to-weight regression if available.

** Mean weight for this group was not calculated or was estimated from other sources (see text).

Table 78. Sampled Effort, Ranked Catch and CPUE for Area 4 in 1979 for Quarter 3, by Jetty or Breakwater Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted	=	51
Total Hours Effort for Anglers Intercepted	=	148.2
Total Hours Still to Fish (Incomplete Trips)	=	12.0

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Shark, Leopard	1	4.04	1	2.2	1	4.04	754	0
Jacksmelt	2	1.72	4	8.9	4	0.43	376	21
Surfperch, Walleye	3	1.29	7	15.6	7	0.18	220	14
Rockfish, Grass	4	1.15	7	15.6	7	0.16	199	21
Flounder, Starry	5	1.14	2	4.4	2	0.57	355	62
Halibut, California	6	1.10	1	2.2	1	1.10	473	0
Croaker, White	7	1.04	4	8.9	4	0.26	282	26
Sole, Sand	8	1.03	7	15.6	7	0.15	216	60
Seaperch, White	9	0.35	2	4.4	2	0.17	243	4
Bocaccio	10	0.22	7	15.6	7	0.03	148	7
Rockfish, Kelp	11	0.15	1	2.2	1	0.15	214	0
Sanddab, Pacific	12	0.14	1	2.2	1	0.14	237	0
Sanddab, Speckled	13	0.03	1	2.2	1	0.03	138	0
Total		13.41	45	100	45			

C. CPUE***

Catch per Angler Day	=	0.88	Catch per Angler Hour	=	0.30
Kg per Angler Day	=	0.26	Kg per Angler Hour	=	0.09

* Weight estimated from length-to-weight regression if available.

** Total length except for species with tuna-like caudal fins (see text).

*** CPUE is underestimated if all fish taken were not examined (see text).

Table 79. Sampled Effort, Ranked Catch and CPUE for Area 4 in 1979 for Quarter 3, by Beach or Bank Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted	=	35
Total Hours Effort for Anglers Intercepted	=	88.0
Total Hours Still to Fish (Incomplete Trips)	=	38.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Surfperch, Barred	1	24	36.9
Sculpin, Pacific Staghorn	2	18	27.7
Sandabs	3	5	7.7
Sole, Sand	4	4	6.2
Shark, Leopard	5	3	4.6
Surfperches	6	3	4.6
Lingcod	7	2	3.1
Surfperch, Calico	8	2	3.1
Unidentified Fishes	9	1	1.5
Cabazon	10	1	1.5
Surfperch, Walleye	11	1	1.5
Flounder, Starry	12	1	1.5
Total		65	100

C. CPUE

Catch per Angler Day =	1.86	Catch per Angler Hour =	0.74
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Table 80. Sampled Effort, Ranked Catch and CPUE for Area 4 in 1979 for Quarter 3, by Beach or Bank Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted	=	35
Total Hours Effort for Anglers Intercepted	=	88.0
Total Hours Still to Fish (Incomplete Trips)	=	38.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Surfperch, Barred	1	14	60.9	0.28	3.96
Sole, Sand	2	3	13.0	0.28	0.85
Surfperch, Calico	3	2	8.7	0.15	0.30
Shark, Leopard	4	1	4.3	0.71	0.71
Sculpin, Pacific Staghorn	5	1	4.3	0.00**	0.00
Cabazon	6	1	4.3	0.21	0.21
Surfperch, Walleye	7	1	4.3	0.27	0.27
Total		23	100		6.28

C. CPUE

Catch per Angler Day	=	0.66	Catch per Angler Hour	=	0.26
Kg per Angler Day	=	0.18	Kg per Angler Hour	=	0.07

* Weight estimated from length-to-weight regression if available.

** Mean weight for this group was not calculated or was estimated from other sources (see text).

Table 81. Sampled Effort, Ranked Catch and CPUE for Area 4 in 1979 for Quarter 3, by Beach or Bank Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted = 35
 Total Hours Effort for Anglers Intercepted = 88.0
 Total Hours Still to Fish (Incomplete Trips) = 38.0

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Surfperch, Barred	1	3.96	14	66.7	14	0.28	244	27
Shark, Leopard	2	0.71	1	4.8	1	0.71	412	0
Sole, Sand	3	0.56	2	9.5	2	0.28	283	17
Surfperch, Calico	4	0.30	2	9.5	2	0.15	211	13
Surfperch, Walleye	5	0.27	1	4.8	1	0.27	245	0
Cabezón	6	0.21	1	4.8	1	0.21	219	0
Total		6.00	21	100	21			

C. CPUE***

Catch per Angler Day = 0.60 Catch per Angler Hour = 0.24
 Kg per Angler Day = 0.17 Kg per Angler Hour = 0.07

* Weight estimated from length-to-weight regression if available.

** Total length except for species with tuna-like caudal fins (see text).

*** CPUE is underestimated if all fish taken were not examined (see text).

Table 82. Sampled Effort, Ranked Catch and CPUE for Area 4 in 1979 for Quarter 3, by Private or Rental Boat Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted	=	33
Total Hours Effort for Anglers Intercepted	=	152.3
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Sanddab, Pacific	1	354	52.8
Bocaccio	2	79	11.8
Rockfish, Blue	3	77	11.5
Sandabs	4	36	5.4
Croaker, White	5	30	4.5
Rockfish, Black-and-yellow	6	17	2.5
Rockfish, Canary	7	15	2.2
Rockfishes (unidentified)	8	12	1.8
Rockfish, Gopher	9	9	1.3
Rockfish, Olive	10	8	1.2
Rockfish, Yellowtail	11	6	0.9
Greenling, Kelp	12	4	0.6
Rockfish, Brown	13	3	0.4
Sole, Sand	14	3	0.4
Chilipepper	15	2	0.3
Rockfish, Rosy	16	2	0.3
Sharks, Dogfish	17	1	0.1
Ray, Bat	18	1	0.1
Rockfish, Copper	19	1	0.1
Rockfish, Rosethorn	20	1	0.1
Rockfish, Vermilion	21	1	0.1
Rockfish, Greenspotted	22	1	0.1
Rockfish, Starry	23	1	0.1
Rockfish, Grass	24	1	0.1
Lingcod	25	1	0.1
Cabezon	26	1	0.1

(Table 82. - continued)

Common name	Rank by Number	Number Caught	% by Number
Senorita	27	1	0.1
Clinids	28	1	0.1
Mackerel, Pacific (Chub)	29	1	0.1
Halibut, California	30	1	0.1
Total		671	100

C. CPUE

Catch per Angler Day = 20.33 Catch per Angler Hour = 4.41

Table 83. Sampled Effort, Ranked Catch and CPUE for Area 4 in 1979 for Quarter 3, by Private or Rental Boat Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted	=	33
Total Hours Effort for Anglers Intercepted	=	152.3
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Sanddab, Pacific	1	351	59.8	0.12	41.21
Rockfish, Blue	2	59	10.1	0.31	18.40
Bocaccio	3	49	8.3	0.04	1.84
Croaker, White	4	30	5.1	0.25	7.40
Rockfish, Black-and-yellow	5	17	2.9	0.50	8.44
Rockfish, Canary	6	15	2.6	0.39	5.91
Rockfishes (unidentified)	7	10	1.7	0.51**	5.10
Rockfish, Gopher	8	9	1.5	0.35	3.16
Rockfish, Olive	9	8	1.4	0.33	2.64
Rockfish, Yellowtail	10	6	1.0	0.26	1.58
Sandabs	11	6	1.0	0.12**	0.72
Greenling, Kelp	12	4	0.7	0.50	2.01
Rockfish, Brown	13	3	0.5	0.79	2.38
Sole, Sand	14	3	0.5	0.33	0.99
Chilipepper	15	2	0.3	0.34	0.69
Rockfish, Rosy	16	2	0.3	0.30	0.59
Sharks, Dogfish	17	1	0.2	0.00**	0.00
Ray, Bat	18	1	0.2	19.54	19.54
Rockfish, Copper	19	1	0.2	0.14	0.14
Rockfish, Rosethorn	20	1	0.2	0.17	0.17
Rockfish, Vermilion	21	1	0.2	0.20	0.20
Rockfish, Greenspotted	22	1	0.2	0.40	0.40
Rockfish, Starry	23	1	0.2	0.62	0.62
Rockfish, Grass	24	1	0.2	1.75	1.75
Lingcod	25	1	0.2	1.01	1.01
Senorita	26	1	0.2	0.04	0.04
Clinids	27	1	0.2	0.00**	0.00

(Table 83. - continued)

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Mackerel, Pacific (Chub)	28	1	0.2	0.20	0.20
Halibut, California	29	1	0.2	3.43	3.43
Total		587	100		130.53

C. CPUE

Catch per Angler Day = 17.79 Catch per Angler Hour = 3.86
 Kg per Angler Day = 3.96 Kg per Angler Hour = 0.86

* Weight estimated from length-to-weight regression if available.

** Mean weight for this group was not calculated or was estimated from other sources (see text).

Table 84. Sampled Effort, Ranked Catch and CPUE for Area 4 in 1979 for Quarter 3, by Private or Rental Boat Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted	=	33
Total Hours Effort for Anglers Intercepted	=	152.3
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Sanddab, Pacific	1	41.21	351	62.0	65	0.12	215	38
Ray, Bat	2	19.54	1	0.2	1	19.54	992	0
Rockfish, Blue	3	16.53	53	9.4	33	0.31	266	45
Rockfish, Black-and-yellow	4	8.44	17	3.0	12	0.50	294	25
Croaker, White	5	7.40	30	5.3	10	0.25	277	24
Rockfish, Canary	6	5.91	15	2.7	15	0.39	291	56
Halibut, California	7	3.43	1	0.2	1	3.43	688	0
Rockfish, Gopher	8	3.16	9	1.6	9	0.35	272	50
Rockfish, Olive	9	2.64	8	1.4	8	0.33	294	33
Rockfish, Brown	10	2.38	3	0.5	3	0.79	353	37
Bocaccio	11	1.84	49	8.7	20	0.04	158	9
Rockfish, Grass	12	1.75	1	0.2	1	1.75	419	0
Greenling, Kelp	13	1.51	3	0.5	3	0.50	327	41
Rockfish, Yellowtail	14	1.31	5	0.9	5	0.26	259	44
Lingcod	15	1.01	1	0.2	1	1.01	453	0
Sole, Sand	16	0.99	3	0.5	3	0.33	292	45
Chilipepper	17	0.69	2	0.4	2	0.34	309	27
Rockfish, Starry	18	0.62	1	0.2	1	0.62	335	0
Rockfish, Rosy	19	0.59	2	0.4	2	0.30	263	16
Rockfish, Greenspotted	20	0.40	1	0.2	1	0.40	291	0
Rockfish, Vermilion	21	0.20	1	0.2	1	0.20	227	0
Mackerel, Pacific (Chub)	22	0.20	1	0.2	1	0.20	253	0
Rockfish, Rosethorn	23	0.17	1	0.2	1	0.17	218	0
Rockfish, Copper	24	0.14	1	0.2	1	0.14	198	0
Senorita	25	0.04	1	0.2	1	0.04	158	0
Sharks, Dogfish	26	0.00	1	0.2	0	0.00	0	0

(Table 84. - continued)

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Rockfishes (unidentified)	27	0.00	1	0.2	0	0.00	0	0
Clinids	28	0.00	1	0.2	1	0.00	275	0
Sandabs	29	0.00	2	0.4	0	0.00	0	0
Total		122.08	566	100	202			

C. CPUE***

Catch per Angler Day = 17.15 Catch per Angler Hour = 3.72
 Kg per Angler Day = 3.70 Kg per Angler Hour = 0.80

* Weight estimated from length-to-weight regression if available.

** Total length except for species with tuna-like caudal fins (see text).

*** CPUE is underestimated if all fish taken were not examined (see text).

Table 85. Sampled Effort, Ranked Catch and CPUE for Area 4 in 1979 for Quarter 3, by All CPFV Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted	=	83
Total Hours Effort for Anglers Intercepted	=	324.5
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Chilipepper	1	285	35.4
Sablefish	2	151	18.7
Sanddab, Pacific	3	66	8.2
Rockfishes (unidentified)	4	61	7.6
Rockfish, Yellowtail	5	36	4.5
Rockfish, Rosy	6	35	4.3
Rockfish, Greenspotted	7	30	3.7
Rockfish, Greenstriped	8	24	3.0
Bocaccio	9	18	2.2
Rockfish, Starry	10	16	2.0
Rockfish, Canary	11	15	1.9
Rockfish, Widow	12	14	1.7
Rockfish, Blue	13	12	1.5
Jack Mackerel	14	6	0.7
Sandabs	15	5	0.6
Sole, Petrale	16	5	0.6
Rockfish, Copper	17	4	0.5
Lingcod	18	3	0.4
Unidentified Fishes	19	2	0.2
Hake, Pacific	20	2	0.2
Rockfish, Yelloweye	21	2	0.2
Rockfish, Squarespot	22	2	0.2
Rockfish, Speckled	23	2	0.2
Rockfish, Gopher	24	2	0.2
Shark, Blue	25	1	0.1
Sharks, Dogfish	26	1	0.1

(Table 85. - continued)

Common name	Rank by Number	Number Caught	% by Number
Rockfish, Shortbelly	27	1	0.1
Rockfish, Stripetail	28	1	0.1
Rockfish, Olive	29	1	0.1
Cabazon	30	1	0.1
Flounders, Lefteye	31	1	0.1
Sole, Rock	32	1	0.1
Total		806	100

C. CPUE

Catch per Angler Day = 9.71 Catch per Angler Hour = 2.48

Table 86. Sampled Effort, Ranked Catch and CPUE for Area 4 in 1979 for Quarter 3, by All CPFV Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted	=	83
Total Hours Effort for Anglers Intercepted	=	324.5
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Chilipepper	1	283	37.4	0.58	163.02
Sablefish	2	151	20.0	0.84	127.02
Sanddab, Pacific	3	66	8.7	0.21	13.57
Rockfish, Yellowtail	4	36	4.8	0.64	22.93
Rockfish, Rosy	5	35	4.6	0.21	7.36
Rockfish, Greenspotted	6	30	4.0	0.59	17.56
Rockfishes (unidentified)	7	25	3.3	0.61**	15.25
Rockfish, Greenstriped	8	24	3.2	0.26	6.36
Bocaccio	9	16	2.1	0.97	15.50
Rockfish, Starry	10	16	2.1	0.53	8.48
Rockfish, Canary	11	15	2.0	0.84	12.58
Rockfish, Widow	12	14	1.9	0.30	4.24
Rockfish, Blue	13	11	1.5	0.54	5.98
Jack Mackerel	14	6	0.8	1.58	9.50
Rockfish, Copper	15	4	0.5	1.69	6.77
Lingcod	16	3	0.4	1.99	5.98
Sandabs	17	3	0.4	0.21**	0.63
Unidentified Fishes	18	2	0.3	0.00**	0.00
Hake, Pacific	19	2	0.3	1.12	2.25
Rockfish, Yelloweye	20	2	0.3	0.84	1.68
Rockfish, Squarespot	21	2	0.3	0.16	0.33
Rockfish, Speckled	22	2	0.3	0.60	1.20
Rockfish, Gopher	23	2	0.3	0.33	0.66
Rockfish, Shortbelly	24	1	0.1	0.06	0.06
Rockfish, Stripetail	25	1	0.1	0.39	0.39
Rockfish, Olive	26	1	0.1	0.63	0.63
Cabazon	27	1	0.1	1.99	1.99

(Table 86. - continued)

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Sole, Petrale	28	1	0.1	0.80	0.80
Sole, Rock	29	1	0.1	1.21	1.21
Total		756	100		453.90

C. CPUE

Catch per Angler Day = 9.11 Catch per Angler Hour = 2.33
 Kg per Angler Day = 5.47 Kg per Angler Hour = 1.40

* Weight estimated from length-to-weight regression if available.

** Mean weight for this group was not calculated or was estimated from other sources (see text).

Table 87. Sampled Effort, Ranked Catch and CPUE for Area 4 in 1979 for Quarter 3, by All CPFV Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted	=	83
Total Hours Effort for Anglers Intercepted	=	324.5
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Chilipepper	1	161.86	281	42.8	196	0.58	351	62
Sablefish	2	105.15	125	19.0	105	0.84	455	67
Rockfish, Yellowtail	3	21.65	34	5.2	34	0.64	342	65
Rockfish, Greenspotted	4	17.56	30	4.6	25	0.59	327	44
Bocaccio	5	15.50	16	2.4	16	0.97	429	104
Rockfish, Canary	6	12.58	15	2.3	15	0.84	383	34
Jack Mackerel	7	9.50	6	0.9	5	1.58	448	156
Rockfish, Starry	8	8.48	16	2.4	16	0.53	313	44
Rockfish, Rosy	9	7.36	35	5.3	34	0.21	234	17
Rockfish, Copper	10	6.77	4	0.6	4	1.69	436	99
Rockfish, Greenstriped	11	6.36	24	3.7	24	0.26	282	33
Lingcod	12	5.98	3	0.5	3	1.99	560	85
Sanddab, Pacific	13	5.55	27	4.1	27	0.21	261	22
Rockfish, Blue	14	5.43	10	1.5	10	0.54	322	53
Rockfish, Widow	15	4.24	14	2.1	13	0.30	279	56
Hake, Pacific	16	2.25	2	0.3	2	1.12	528	16
Cabezon	17	1.99	1	0.2	1	1.99	505	0
Rockfish, Yelloweye	18	1.68	2	0.3	2	0.84	354	55
Sole, Rock	19	1.21	1	0.2	1	1.21	446	0
Rockfish, Speckled	20	1.20	2	0.3	2	0.60	347	40
Sole, Petrale	21	0.80	1	0.2	1	0.80	396	0
Rockfish, Gopher	22	0.66	2	0.3	2	0.33	270	45
Rockfish, Olive	23	0.63	1	0.2	1	0.63	366	0
Rockfish, Stripetail	24	0.39	1	0.2	1	0.39	302	0
Rockfish, Squarespot	25	0.33	2	0.3	2	0.16	235	8
Rockfish, Shortbelly	26	0.06	1	0.2	1	0.06	184	0

(Table 87. - continued)

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Rockfishes (unidentified)	27	0.00	1	0.2	0	0.00	0	0
Total		405.16	657	100	543			

C. CPUE***

Catch per Angler Day = 7.92 Catch per Angler Hour = 2.02
 Kg per Angler Day = 4.88 Kg per Angler Hour = 1.25

* Weight estimated from length-to-weight regression if available.

** Total length except for species with tuna-like caudal fins (see text).

*** CPUE is underestimated if all fish taken were not examined (see text).

Figure 13. Length-Frequency Histogram for Bocaccio
 Taken by Pier or Dock Anglers Using Hook-and-Line Gear.
 Area 4, Quarter 3, 1979.

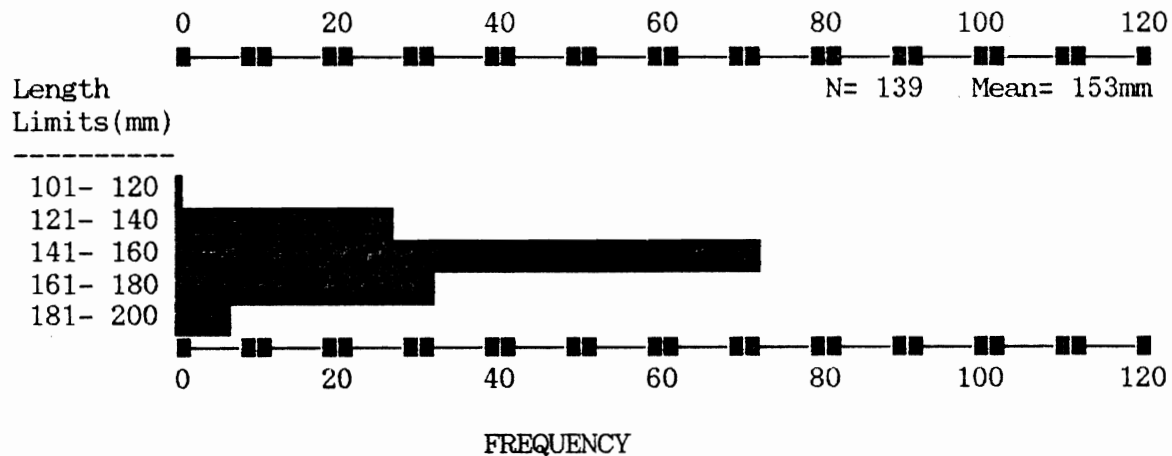


Figure 14. Length-Frequency Histogram for Pacific Sanddab
 Taken by Private or Rental Boat Anglers Using Hook-and-Line Gear.
 Area 4, Quarter 3, 1979.

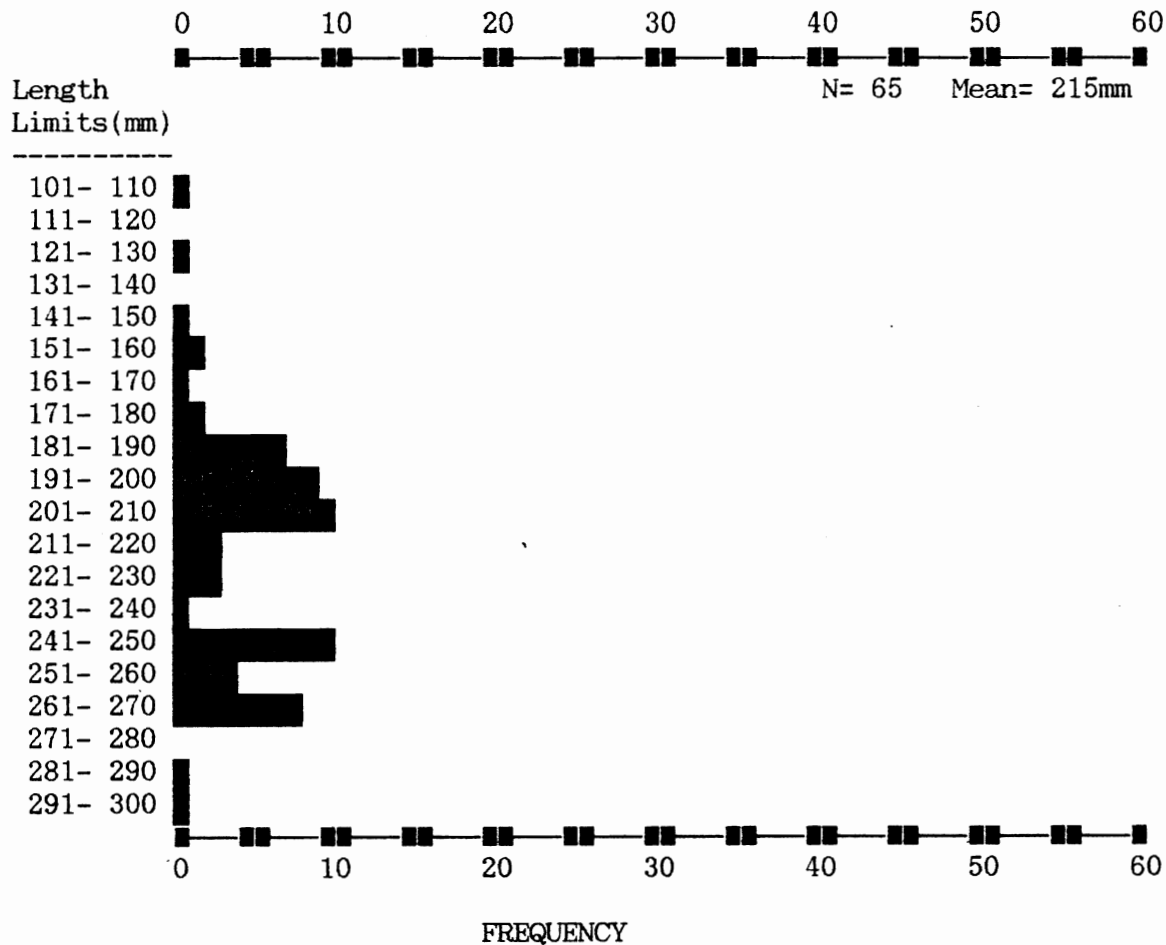


Figure 15. Length-Frequency Histogram for Bocaccio
 Taken by Private or Rental Boat Anglers Using Hook-and-Line Gear.
 Area 4, Quarter 3, 1979.

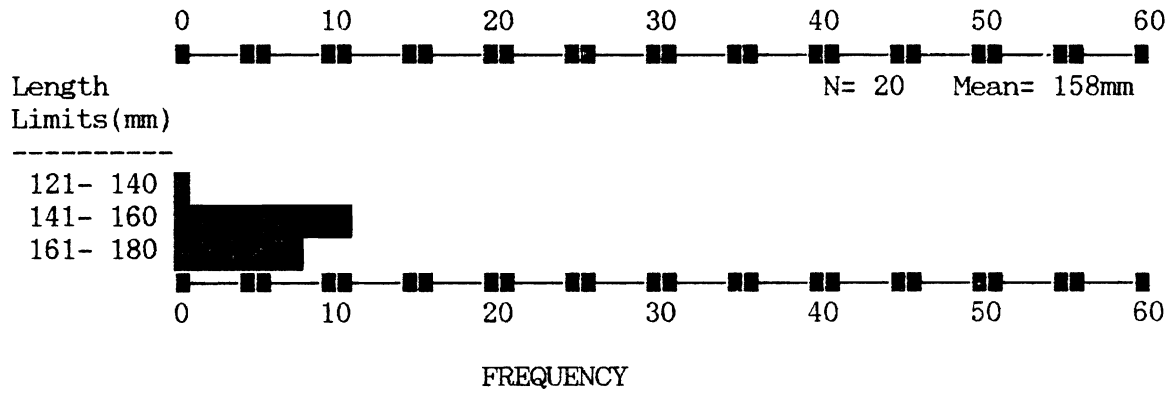


Figure 16. Length-Frequency Histogram for Chilipepper
 Taken by All CPFV Anglers Using Hook-and-Line Gear.
 Area 4, Quarter 3, 1979.

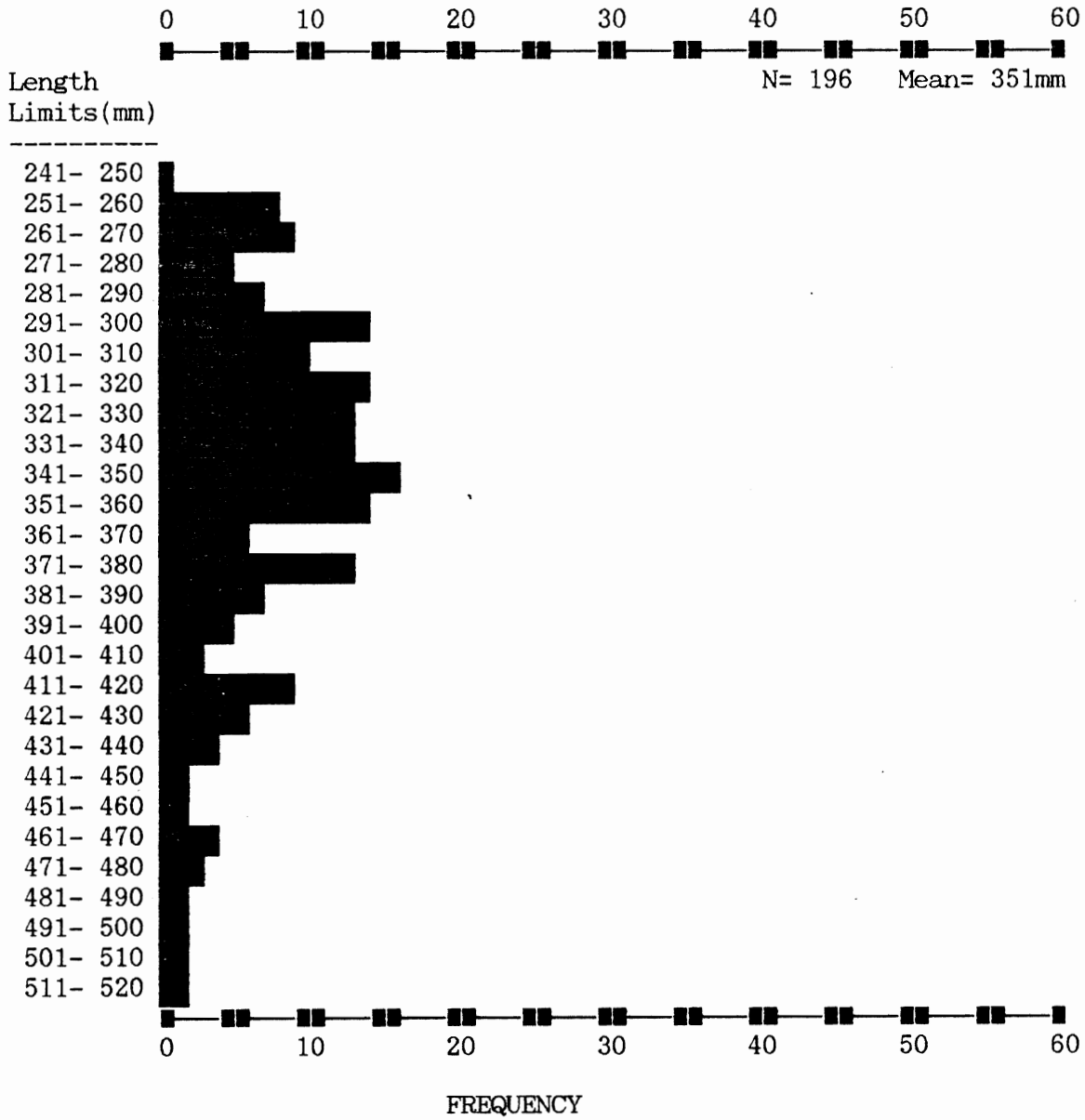


Figure 17. Length-Frequency Histogram for Rosy Rockfish
 Taken by All CPFV Anglers Using Hook-and-Line Gear.
 Area 4, Quarter 3, 1979.

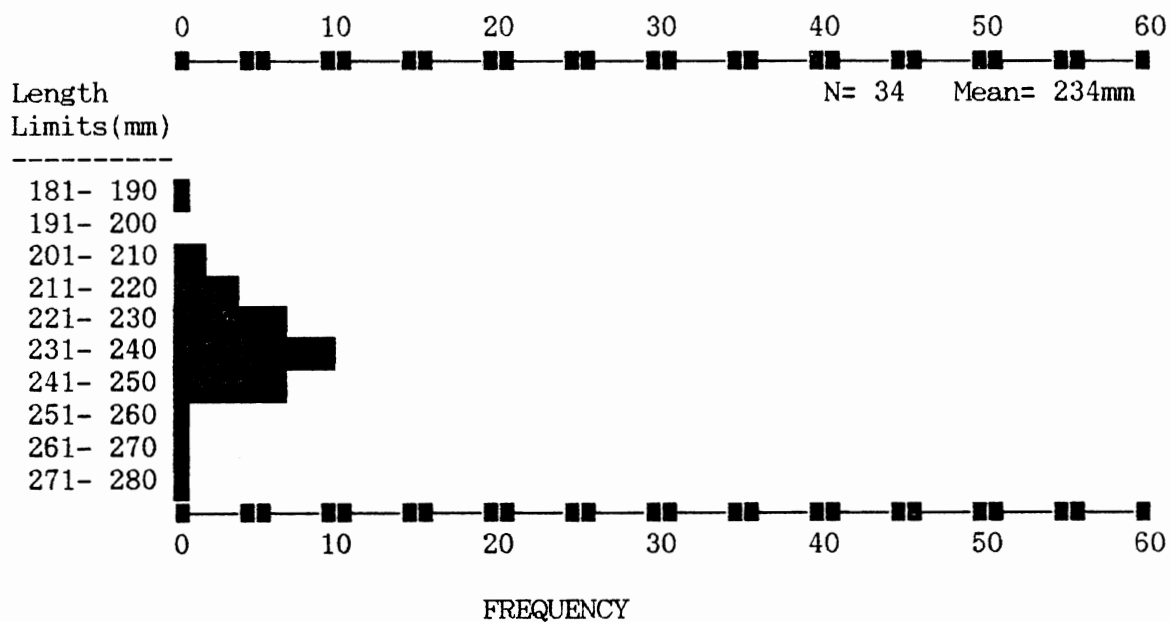


Figure 18. Length-Frequency Histogram for Sablefish
 Taken by All CPFV Anglers Using Hook-and-Line Gear.
 Area 4, Quarter 3, 1979.

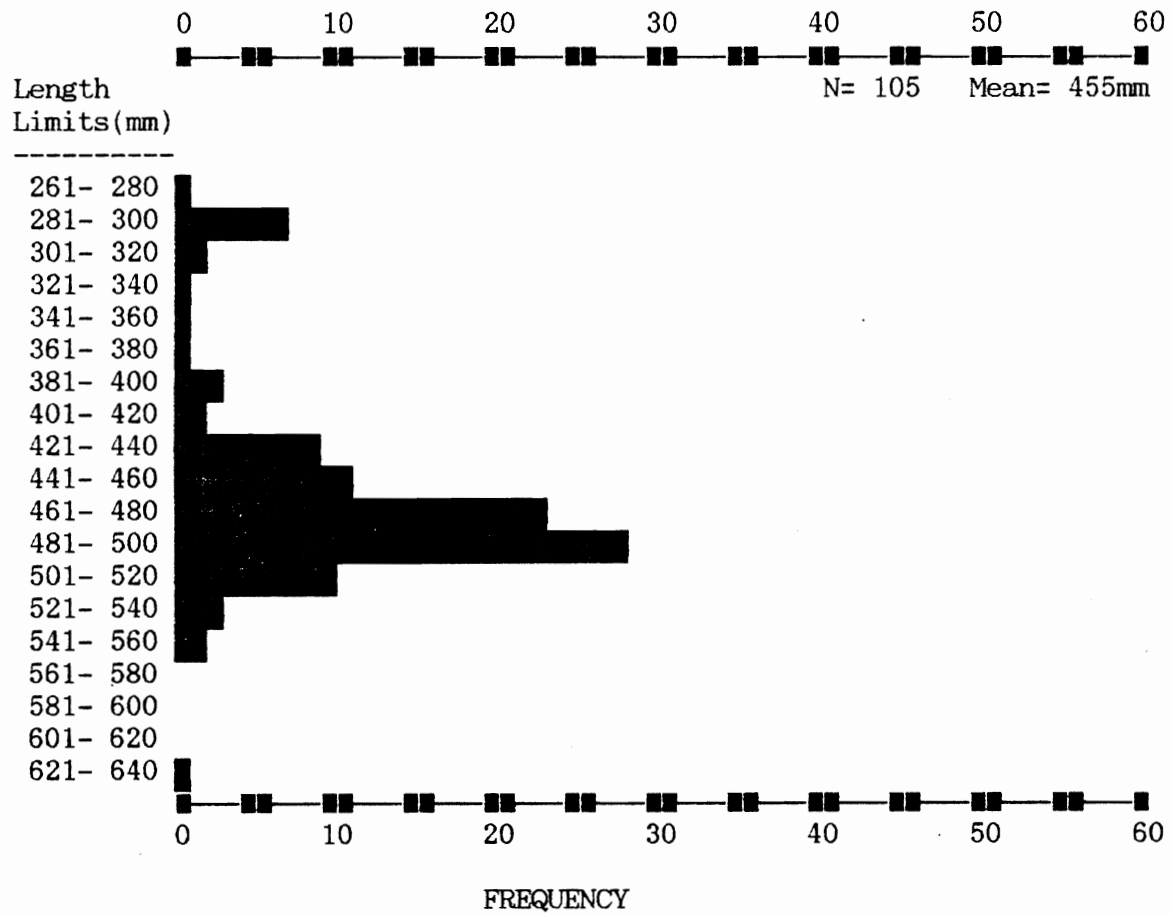


Table 88. Sampled Effort, Ranked Catch and CPUE for Area 5 in 1979 for Quarter 3, by Pier or Dock Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted	=	255
Total Hours Effort for Anglers Intercepted	=	669.5
Total Hours Still to Fish (Incomplete Trips)	=	182.1

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Bocaccio	1	1228	60.3
Mackerel, Pacific (Chub)	2	249	12.2
Sculpin, Pacific Staghorn	3	177	8.7
Croaker, White	4	111	5.5
Surfperches	5	73	3.6
Jacksmelt	6	62	3.0
Anchovy, Northern	7	28	1.4
Perch, Shiner	8	23	1.1
Perch, Pile	9	21	1.0
Surfperch, Barred	10	12	0.6
Cabazon	11	9	0.4
Surfperch, Walleye	12	9	0.4
Surfperch, Silver	13	8	0.4
Bottomfishes (Groundfishes)	14	7	0.3
Rockfishes (unidentified)	15	5	0.2
Surfperch, Calico	16	5	0.2
Unidentified Fishes	17	2	0.1
Sharks	18	1	0.0
Rockfish, Blue	19	1	0.0
Surfperch, Spotfin	20	1	0.0
Sanddab, Pacific	21	1	0.0
Halibut, California	22	1	0.0
Sole, Sand	23	1	0.0
Total		2035	100

C. CPUE

Catch per Angler Day = 7.98 Catch per Angler Hour = 3.04

Table 89. Sampled Effort, Ranked Catch and CPUE for Area 5 in 1979 for Quarter 3, by Pier or Dock Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted	=	255
Total Hours Effort for Anglers Intercepted	=	669.5
Total Hours Still to Fish (Incomplete Trips)	=	182.1

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Bocaccio	1	1010	65.4	0.03	28.17
Mackerel, Pacific (Chub)	2	241	15.6	0.41	98.05
Croaker, White	3	83	5.4	0.11	8.97
Jacksmelt	4	61	4.0	0.33	20.16
Sculpin, Pacific Staghorn	5	38	2.5	0.03	1.09
Anchovy, Northern	6	22	1.4	0.02	0.36
Perch, Shiner	7	18	1.2	0.03	0.56
Perch, Pile	8	18	1.2	0.08	1.49
Surfperches	9	11	0.7	0.08**	0.88
Surfperch, Barred	10	11	0.7	0.07	0.76
Surfperch, Walleye	11	9	0.6	0.13	1.16
Surfperch, Silver	12	8	0.5	0.10	0.83
Surfperch, Calico	13	5	0.3	0.10	0.50
Rockfishes (unidentified)	14	4	0.3	0.03**	0.12
Rockfish, Blue	15	1	0.1	0.03	0.03
Cabezon	16	1	0.1	0.04	0.04
Surfperch, Spotfin	17	1	0.1	0.05	0.05
Sanddab, Pacific	18	1	0.1	0.09	0.09
Sole, Sand	19	1	0.1	0.09	0.09
Total		1544	100		163.41

C. CPUE

Catch per Angler Day	=	6.05	Catch per Angler Hour	=	2.31
Kg per Angler Day	=	0.64	Kg per Angler Hour	=	0.24

* Weight estimated from length-to-weight regression if available.

** Mean weight for this group was not calculated or was estimated from other sources (see text).

Table 90. Sampled Effort, Ranked Catch and CPUE for Area 5 in 1979 for Quarter 3, by Pier or Dock Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted = 255
 Total Hours Effort for Anglers Intercepted = 669.5
 Total Hours Still to Fish (Incomplete Trips) = 182.1

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Mackerel, Pacific (Chub)	1	67.13	165	16.9	127	0.41	303	54
Bocaccio	2	16.68	598	61.3	297	0.03	142	17
Jacksmelt	3	14.87	45	4.6	39	0.33	334	68
Croaker, White	4	8.00	74	7.6	70	0.11	201	52
Perch, Pile	5	1.41	17	1.7	17	0.08	169	32
Surfperch, Silver	6	0.83	8	0.8	8	0.10	188	12
Surfperch, Walleye	7	0.77	6	0.6	6	0.13	198	21
Perch, Shiner	8	0.56	18	1.8	18	0.03	131	17
Surfperch, Barred	9	0.55	8	0.8	8	0.07	156	8
Sculpin, Pacific Staghorn	10	0.55	19	1.9	19	0.03	136	20
Surfperch, Calico	11	0.50	5	0.5	5	0.10	184	23
Anchovy, Northern	12	0.12	7	0.7	7	0.02	148	5
Sole, Sand	13	0.09	1	0.1	1	0.09	200	0
Sanddab, Pacific	14	0.09	1	0.1	1	0.09	205	0
Surfperch, Spotfin	15	0.05	1	0.1	1	0.05	155	0
Cabazon	16	0.04	1	0.1	1	0.04	115	0
Rockfish, Blue	17	0.03	1	0.1	1	0.03	130	0
Total		112.26	975	100	626			

C. CPUE***

Catch per Angler Day = 3.82 Catch per Angler Hour = 1.46
 Kg per Angler Day = 0.44 Kg per Angler Hour = 0.17

* Weight estimated from length-to-weight regression if available.
 ** Total length except for species with tuna-like caudal fins (see text).
 *** CPUE is underestimated if all fish taken were not examined (see text).

Table 91. Sampled Effort, Ranked Catch and CPUE for Area 5 in 1979 for Quarter 3, by Jetty or Breakwater Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted	=	6
Total Hours Effort for Anglers Intercepted	=	9.0
Total Hours Still to Fish (Incomplete Trips)	=	1.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Sculpin, Pacific Staghorn	1	3	50.0
Halibut, California	2	3	50.0
Total		6	100

C. CPUE

Catch per Angler Day = 1.00 Catch per Angler Hour = 0.67

Table 92. Sampled Effort, Ranked Catch and CPUE for Area 5 in 1979 for Quarter 3, by Jetty or Breakwater Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted	=	6
Total Hours Effort for Anglers Intercepted	=	9.0
Total Hours Still to Fish (Incomplete Trips)	=	1.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught

Total		0	0		0.00

C. CPUE

Catch per Angler Day	=	0.00	Catch per Angler Hour	=	0.00
Kg per Angler Day	=	0.00	Kg per Angler Hour	=	0.00

* Weight estimated from length-to-weight regression if available.

Table 93. Sampled Effort, Ranked Catch and CPUE for Area 5 in 1979 for Quarter 3, by Jetty or Breakwater Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted = 6
 Total Hours Effort for Anglers Intercepted = 9.0
 Total Hours Still to Fish (Incomplete Trips) = 1.0

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Total		0.00	0	0	0			

C. CPUE***

Catch per Angler Day = 0.00 Catch per Angler Hour = 0.00
 Kg per Angler Day = 0.00 Kg per Angler Hour = 0.00

* Weight estimated from length-to-weight regression if available.
 ** Total length except for species with tuna-like caudal fins (see text).
 *** CPUE is underestimated if all fish taken were not examined (see text).

Table 94. Sampled Effort, Ranked Catch and CPUE for Area 5 in 1979 for Quarter 3, by Beach or Bank Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted	=	67
Total Hours Effort for Anglers Intercepted	=	119.8
Total Hours Still to Fish (Incomplete Trips)	=	83.8

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Sculpin, Pacific Staghorn	1	54	46.2
Bocaccio	2	15	12.8
Surfperch, Barred	3	12	10.3
Prickleback, Monkeyface	4	7	6.0
Surfperch, Walleye	5	6	5.1
Surfperch, Silver	6	5	4.3
Rockfishes (unidentified)	7	4	3.4
Surfperch, Calico	8	3	2.6
Rockfish, Black-and-yellow	9	2	1.7
Rockfish, Grass	10	2	1.7
Greenling, Kelp	11	2	1.7
Surfperches	12	2	1.7
Jacksmelt	13	1	0.9
Cabezon	14	1	0.9
Perch, Shiner	15	1	0.9
Total		117	100

C. CPUE

Catch per Angler Day = 1.75 Catch per Angler Hour = 0.98

Table 95. Sampled Effort, Ranked Catch and CPUE for Area 5 in 1979 for Quarter 3, by Beach or Bank Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted = 67
 Total Hours Effort for Anglers Intercepted = 119.8
 Total Hours Still to Fish (Incomplete Trips) = 83.8

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Bocaccio	1	15	29.4	0.05	0.78
Surfperch, Barred	2	11	21.6	0.24	2.61
Prickleback, Monkeyface	3	7	13.7	0.00**	0.00
Sculpin, Pacific Staghorn	4	4	7.8	0.02	0.10
Surfperch, Silver	5	4	7.8	0.12	0.49
Surfperch, Calico	6	3	5.9	0.18	0.54
Rockfish, Grass	7	2	3.9	0.30	0.60
Greenling, Kelp	8	2	3.9	0.28	0.56
Jacksmelt	9	1	2.0	0.08	0.08
Rockfish, Black-and-yellow	10	1	2.0	0.02	0.02
Cabezon	11	1	2.0	0.65	0.65
Total		51	100		6.44

C. CPUE

Catch per Angler Day = 0.76 Catch per Angler Hour = 0.43
 Kg per Angler Day = 0.10 Kg per Angler Hour = 0.05

* Weight estimated from length-to-weight regression if available.

** Mean weight for this group was not calculated or was estimated from other sources (see text).

Table 96. Sampled Effort, Ranked Catch and CPUE for Area 5 in 1979 for Quarter 3, by Beach or Bank Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted = 67
 Total Hours Effort for Anglers Intercepted = 119.8
 Total Hours Still to Fish (Incomplete Trips) = 83.8

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Surfperch, Barred	1	2.61	11	25.0	11	0.24	225	47
Cabezon	2	0.65	1	2.3	1	0.65	335	0
Rockfish, Grass	3	0.60	2	4.5	2	0.30	213	117
Bocaccio	4	0.58	11	25.0	11	0.05	175	15
Greenling, Kelp	5	0.56	2	4.5	2	0.28	270	14
Surfperch, Calico	6	0.54	3	6.8	3	0.18	213	55
Surfperch, Silver	7	0.49	4	9.1	4	0.12	198	15
Jacksmelt	8	0.08	1	2.3	1	0.08	230	0
Sculpin, Pacific Staghorn	9	0.02	1	2.3	1	0.02	130	0
Rockfish, Black-and-yellow	10	0.02	1	2.3	1	0.02	115	0
Prickleback, Monkeyface	11	0.00	7	15.9	7	0.00	434	86
Total		6.15	44	100	44			

C. CPUE***

Catch per Angler Day = 0.66 Catch per Angler Hour = 0.37
 Kg per Angler Day = 0.09 Kg per Angler Hour = 0.05

* Weight estimated from length-to-weight regression if available.

** Total length except for species with tuna-like caudal fins (see text).

*** CPUE is underestimated if all fish taken were not examined (see text).

Table 97. Sampled Effort, Ranked Catch and CPUE for Area 5
in 1979 for Quarter 3, by Private or Rental Boat Anglers Using
Hook-and-Line Gear. Catch Represents All Fish Captured,
Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted	=	210
Total Hours Effort for Anglers Intercepted	=	811.4
Total Hours Still to Fish (Incomplete Trips)	=	12.9

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Rockfish, Blue	1	810	42.4
Croaker, White	2	139	7.3
Mackerel, Pacific (Chub)	3	130	6.8
Rockfish, Gopher	4	121	6.3
Sanddab, Pacific	5	84	4.4
Rockfish, Yellowtail	6	79	4.1
Rockfish, Brown	7	78	4.1
Sculpin, Pacific Staghorn	8	76	4.0
Rockfish, Copper	9	59	3.1
Rockfish, Canary	10	40	2.1
Rockfish, Olive	11	36	1.9
Rockfish, Black	12	33	1.7
Lingcod	13	30	1.6
Rockfish, Rosy	14	29	1.5
Rockfish, Vermilion	15	23	1.2
Bottomfishes (Groundfishes)	16	21	1.1
Rockfish, Starry	17	21	1.1
Cabezon	18	14	0.7
Rockfish, China	19	13	0.7
Rockfishes (unidentified)	20	11	0.6
Rockfish, Black-and-yellow	21	10	0.5
Rockfish, Kelp	22	9	0.5
Bocaccio	23	6	0.3
Spiny Dogfish	24	3	0.2
Salmon, Chinook (King)	25	3	0.2
Jacksmelt	26	3	0.2

(Table 97. - continued)

Common name	Rank by Number	Number Caught	% by Number
Rockfish, Calico	27	3	0.2
Rockfish, Grass	28	3	0.2
Halibut, California	29	3	0.2
Salmon, Coho (Silver)	30	2	0.1
Greenling, Kelp	31	2	0.1
Sole, Rock	32	2	0.1
Sharks	33	1	0.1
Smoothhounds	34	1	0.1
Shark, Blue	35	1	0.1
Sharks, Dogfish	36	1	0.1
Smelts	37	1	0.1
Rockfish, Yelloweye	38	1	0.1
Rockfish, Greenspotted	39	1	0.1
Rockfish, Flag	40	1	0.1
Surfperch, Barred	41	1	0.1
Flatfishes	42	1	0.1
Sole, Petrale	43	1	0.1
Flounder, Starry	44	1	0.1
Sole, Sand	45	1	0.1
Total		1909	100

C. CPUE

Catch per Angler Day = 9.09 Catch per Angler Hour = 2.35

Table 98. Sampled Effort, Ranked Catch and CPUE for Area 5 in 1979 for Quarter 3, by Private or Rental Boat Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted	=	210
Total Hours Effort for Anglers Intercepted	=	811.4
Total Hours Still to Fish (Incomplete Trips)	=	12.9

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Rockfish, Blue	1	750	45.3	0.48	361.26
Mackerel, Pacific (Chub)	2	129	7.8	0.70	89.72
Rockfish, Gopher	3	120	7.2	0.42	49.84
Sanddab, Pacific	4	84	5.1	0.14	11.75
Rockfish, Yellowtail	5	79	4.8	0.47	37.48
Rockfish, Brown	6	78	4.7	0.67	52.27
Croaker, White	7	62	3.7	0.23	14.49
Rockfish, Copper	8	59	3.6	0.66	38.75
Rockfish, Canary	9	40	2.4	0.49	19.65
Rockfish, Olive	10	36	2.2	0.67	24.08
Rockfish, Black	11	33	2.0	0.52	17.31
Lingcod	12	30	1.8	2.51	75.16
Rockfish, Rosy	13	28	1.7	0.26	7.25
Rockfish, Vermilion	14	23	1.4	1.35	31.10
Rockfish, Starry	15	21	1.3	0.68	14.19
Cabezon	16	14	0.8	1.95	27.27
Rockfish, China	17	13	0.8	0.54	7.01
Rockfish, Black-and-yellow	18	10	0.6	0.40	3.95
Rockfish, Kelp	19	9	0.5	0.40	3.58
Rockfishes (unidentified)	20	7	0.4	0.52**	3.64
Bocaccio	21	4	0.2	1.72	6.87
Spiny Dogfish	22	3	0.2	2.42	7.26
Salmon, Chinook (King)	23	3	0.2	6.89	20.67
Rockfish, Calico	24	3	0.2	0.00**	0.00
Rockfish, Grass	25	3	0.2	1.71	5.12
Greenling, Kelp	26	2	0.1	0.59	1.19
Sole, Rock	27	2	0.1	0.77	1.54

(Table 98. - continued)

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Bottomfishes (Groundfishes)	28	1	0.1	0.00**	0.00
Sharks, Dogfish	29	1	0.1	2.42**	2.42
Salmon, Coho (Silver)	30	1	0.1	3.38	3.38
Rockfish, Yelloweye	31	1	0.1	0.89	0.89
Rockfish, Greenspotted	32	1	0.1	0.87	0.87
Rockfish, Flag	33	1	0.1	0.88	0.88
Surfperch, Barred	34	1	0.1	0.14	0.14
Halibut, California	35	1	0.1	2.10	2.10
Sole, Petrale	36	1	0.1	0.73	0.73
Flounder, Starry	37	1	0.1	1.14	1.14
Sole, Sand	38	1	0.1	0.27	0.27
Total		1656	100		945.22

C. CPUE

Catch per Angler Day = 7.89 Catch per Angler Hour = 2.04
 Kg per Angler Day = 4.50 Kg per Angler Hour = 1.16

* Weight estimated from length-to-weight regression if available.

** Mean weight for this group was not calculated or was estimated from other sources (see text).

Table 99. Sampled Effort, Ranked Catch and CPUE for Area 5 in 1979 for Quarter 3, by Private or Rental Boat Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted	=	210
Total Hours Effort for Anglers Intercepted	=	811.4
Total Hours Still to Fish (Incomplete Trips)	=	12.9

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Rockfish, Blue	1	333.32	692	44.3	363	0.48	312	38
Mackerel, Pacific (Chub)	2	89.72	129	8.3	66	0.70	364	33
Lingcod	3	70.15	28	1.8	28	2.51	597	103
Rockfish, Brown	4	51.60	77	4.9	73	0.67	323	69
Rockfish, Gopher	5	49.01	118	7.6	111	0.42	294	26
Rockfish, Copper	6	38.10	58	3.7	58	0.66	318	62
Rockfish, Yellowtail	7	37.48	79	5.1	72	0.47	316	42
Rockfish, Olive	8	24.08	36	2.3	36	0.67	364	55
Cabezon	9	21.43	11	0.7	11	1.95	491	82
Salmon, Chinook (King)	10	20.67	3	0.2	3	6.89	880	168
Rockfish, Canary	11	19.65	40	2.6	40	0.49	318	42
Rockfish, Vermilion	12	17.58	13	0.8	13	1.35	422	88
Rockfish, Black	13	17.31	33	2.1	33	0.52	323	32
Croaker, White	14	14.49	62	4.0	47	0.23	271	33
Rockfish, Starry	15	14.19	21	1.3	21	0.68	341	32
Sanddab, Pacific	16	11.75	84	5.4	43	0.14	232	25
Rockfish, Rosy	17	6.99	27	1.7	27	0.26	251	13
Bocaccio	18	6.87	4	0.3	4	1.72	526	119
Rockfish, China	19	5.93	11	0.7	11	0.54	307	25
Rockfish, Grass	20	5.12	3	0.2	3	1.71	410	56
Spiny Dogfish	21	4.84	2	0.1	2	2.42	885	35
Rockfish, Kelp	22	3.58	9	0.6	9	0.40	292	48
Salmon, Coho (Silver)	23	3.38	1	0.1	1	3.38	710	0
Rockfish, Black-and-yellow	24	2.77	7	0.4	7	0.40	274	20
Halibut, California	25	2.10	1	0.1	1	2.10	585	0
Sole, Rock	26	1.54	2	0.1	2	0.77	385	21

(Table 99. - continued)

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Greenling, Kelp	27	1.19	2	0.1	2	0.59	348	39
Flounder, Starry	28	1.14	1	0.1	1	1.14	445	0
Rockfish, Yelloweye	29	0.89	1	0.1	1	0.89	365	0
Rockfish, Flag	30	0.88	1	0.1	1	0.88	375	0
Rockfish, Greenspotted	31	0.87	1	0.1	1	0.87	380	0
Sole, Petrale	32	0.73	1	0.1	1	0.73	385	0
Sole, Sand	33	0.27	1	0.1	1	0.27	280	0
Surfperch, Barred	34	0.14	1	0.1	1	0.14	195	0
Bottomfishes (Groundfishes)	35	0.00	1	0.1	1	0.00	520	0
Sharks, Dogfish	36	0.00	1	0.1	0	0.00	0	0
Total		879.74	1562	100	1095			

C. CPUE***

Catch per Angler Day = 7.44 Catch per Angler Hour = 1.92
 Kg per Angler Day = 4.19 Kg per Angler Hour = 1.08

* Weight estimated from length-to-weight regression if available.

** Total length except for species with tuna-like caudal fins (see text).

*** CPUE is underestimated if all fish taken were not examined (see text).

Table 100. Sampled Effort, Ranked Catch and CPUE for Area 5 in 1979 for Quarter 3, by All CPFV Anglers Using Hook-and-Line Gear. Catch Represents All Fish Captured, Both Kept and Returned.

A. Sampled Effort

Number Anglers Intercepted	=	49
Total Hours Effort for Anglers Intercepted	=	193.7
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number
Rockfish, Blue	1	235	52.6
Rockfishes (unidentified)	2	44	9.8
Rockfish, Yellowtail	3	41	9.2
Chilipepper	4	26	5.8
Bocaccio	5	22	4.9
Rockfish, Vermilion	6	14	3.1
Rockfish, Starry	7	13	2.9
Mackerel, Pacific (Chub)	8	9	2.0
Rockfish, Canary	9	8	1.8
Rockfish, Greenspotted	10	6	1.3
Rockfish, Rosy	11	5	1.1
Rockfish, Widow	12	4	0.9
Lingcod	13	4	0.9
Tuna, Albacore	14	4	0.9
Rockfish, Copper	15	2	0.4
Rockfish, Olive	16	2	0.4
Sharks	17	1	0.2
Rockfish, Greenstriped	18	1	0.2
Rockfish, Black	19	1	0.2
Rockfish, China	20	1	0.2
Rockfish, Yelloweye	21	1	0.2
Rockfish, Flag	22	1	0.2
Sablefish	23	1	0.2
Sole, Rock	24	1	0.2
Total		447	100

C. CPUE

Catch per Angler Day = 9.12 Catch per Angler Hour = 2.31

Table 101. Sampled Effort, Ranked Catch and CPUE for Area 5 in 1979 for Quarter 3, by All CPFV Anglers Using Hook-and-Line Gear. Catch Represents Number Landed and Does Not Include Fish Returned Dead or Alive.

A. Sampled Effort

Number Anglers Intercepted	=	49
Total Hours Effort for Anglers Intercepted	=	193.7
Total Hours Still to Fish (Incomplete Trips)	=	0.0

B. Ranked Catch

Common name	Rank by Number	Number Caught	% by Number	Mean Wt. (kg)*	Weight Caught
Rockfish, Blue	1	229	52.3	0.53	121.17
Rockfishes (unidentified)	2	43	9.8	0.66**	28.38
Rockfish, Yellowtail	3	41	9.4	0.48	19.48
Chilipepper	4	26	5.9	1.14	29.61
Bocaccio	5	22	5.0	0.90	19.86
Rockfish, Vermilion	6	14	3.2	1.76	24.59
Rockfish, Starry	7	13	3.0	0.70	9.05
Rockfish, Canary	8	8	1.8	0.94	7.51
Mackerel, Pacific (Chub)	9	8	1.8	0.70	5.63
Rockfish, Greenspotted	10	6	1.4	0.64	3.87
Rockfish, Rosy	11	5	1.1	0.27	1.34
Rockfish, Widow	12	4	0.9	0.86	3.45
Lingcod	13	4	0.9	2.14	8.56
Tuna, Albacore	14	4	0.9	8.58	34.31
Rockfish, Copper	15	2	0.5	0.55	1.11
Rockfish, Olive	16	2	0.5	0.69	1.37
Rockfish, Greenstriped	17	1	0.2	0.34	0.34
Rockfish, Black	18	1	0.2	0.89	0.89
Rockfish, China	19	1	0.2	0.60	0.60
Rockfish, Yelloweye	20	1	0.2	2.05	2.05
Rockfish, Flag	21	1	0.2	0.78	0.78
Sablefish	22	1	0.2	1.37	1.37
Sole, Rock	23	1	0.2	0.23	0.23
Total		438	100		325.54

C. CPUE

Catch per Angler Day	=	8.94	Catch per Angler Hour	=	2.26
Kg per Angler Day	=	6.64	Kg per Angler Hour	=	1.68

* Weight estimated from length-to-weight regression if available.

** Mean weight for this group was not calculated or was estimated from other sources (see text).

Table 102. Sampled Effort, Ranked Catch and CPUE for Area 5 in 1979 for Quarter 3, by All CPFV Anglers Using Hook-and-Line Gear. Catch Represents Only the Fish Examined by the Sampler.

A. Sampled Effort

Number Anglers Intercepted = 49
 Total Hours Effort for Anglers Intercepted = 193.7
 Total Hours Still to Fish (Incomplete Trips) = 0.0

B. Ranked Catch

Common name	Rank by Wt.	Weight* Caught	Number Caught	% by No.	No. Meas.	---Mean---		SD LN.
						Wt.* (kg)	Ln.** (mm)	
Rockfish, Blue	1	121.17	229	58.0	180	0.53	322	40
Tuna, Albacore	2	34.31	4	1.0	4	8.58	734	96
Chilipepper	3	29.61	26	6.6	26	1.14	443	51
Rockfish, Vermilion	4	24.59	14	3.5	14	1.76	472	60
Bocaccio	5	19.86	22	5.6	22	0.90	405	126
Rockfish, Yellowtail	6	19.48	41	10.4	41	0.48	318	37
Rockfish, Starry	7	9.05	13	3.3	13	0.70	344	32
Lingcod	8	8.56	4	1.0	4	2.14	578	59
Rockfish, Canary	9	7.51	8	2.0	8	0.94	390	67
Mackerel, Pacific (Chub)	10	5.63	8	2.0	8	0.70	369	11
Rockfish, Greenspotted	11	3.87	6	1.5	6	0.64	323	90
Rockfish, Widow	12	3.45	4	1.0	4	0.86	379	99
Rockfish, Yelloweye	13	2.05	1	0.3	1	2.05	480	0
Rockfish, Olive	14	1.37	2	0.5	2	0.69	375	7
Sablefish	15	1.37	1	0.3	1	1.37	550	0
Rockfish, Rosy	16	1.34	5	1.3	5	0.27	254	8
Rockfish, Copper	17	1.11	2	0.5	2	0.55	300	85
Rockfish, Black	18	0.89	1	0.3	1	0.89	390	0
Rockfish, Flag	19	0.78	1	0.3	1	0.78	360	0
Rockfish, China	20	0.60	1	0.3	1	0.60	320	0
Rockfish, Greenstriped	21	0.34	1	0.3	1	0.34	310	0
Sole, Rock	22	0.23	1	0.3	1	0.23	260	0
Total		297.16	395	100	346			

C. CPUE***

Catch per Angler Day = 8.06 Catch per Angler Hour = 2.04
 Kg per Angler Day = 6.06 Kg per Angler Hour = 1.53

* Weight estimated from length-to-weight regression if available.

** Total length except for species with tuna-like caudal fins (see text).

*** CPUE is underestimated if all fish taken were not examined (see text).

Figure 19. Length-Frequency Histogram for Bocaccio
 Taken by Pier or Dock Anglers Using Hook-and-Line Gear.
 Area 5, Quarter 3, 1979.

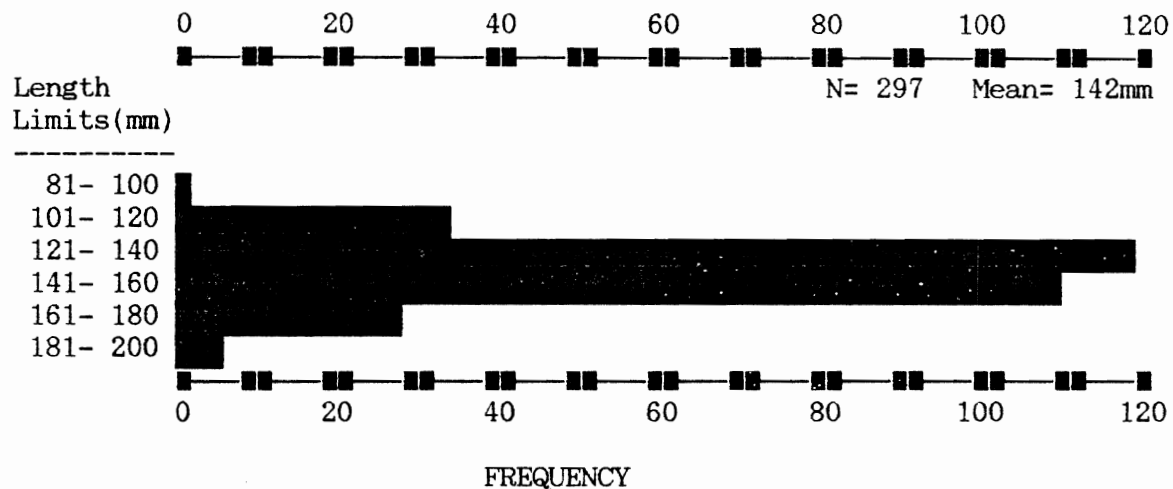


Figure 20. Length-Frequency Histogram for Pacific (Chub) Mackerel
 Taken by Pier or Dock Anglers Using Hook-and-Line Gear.
 Area 5, Quarter 3, 1979.

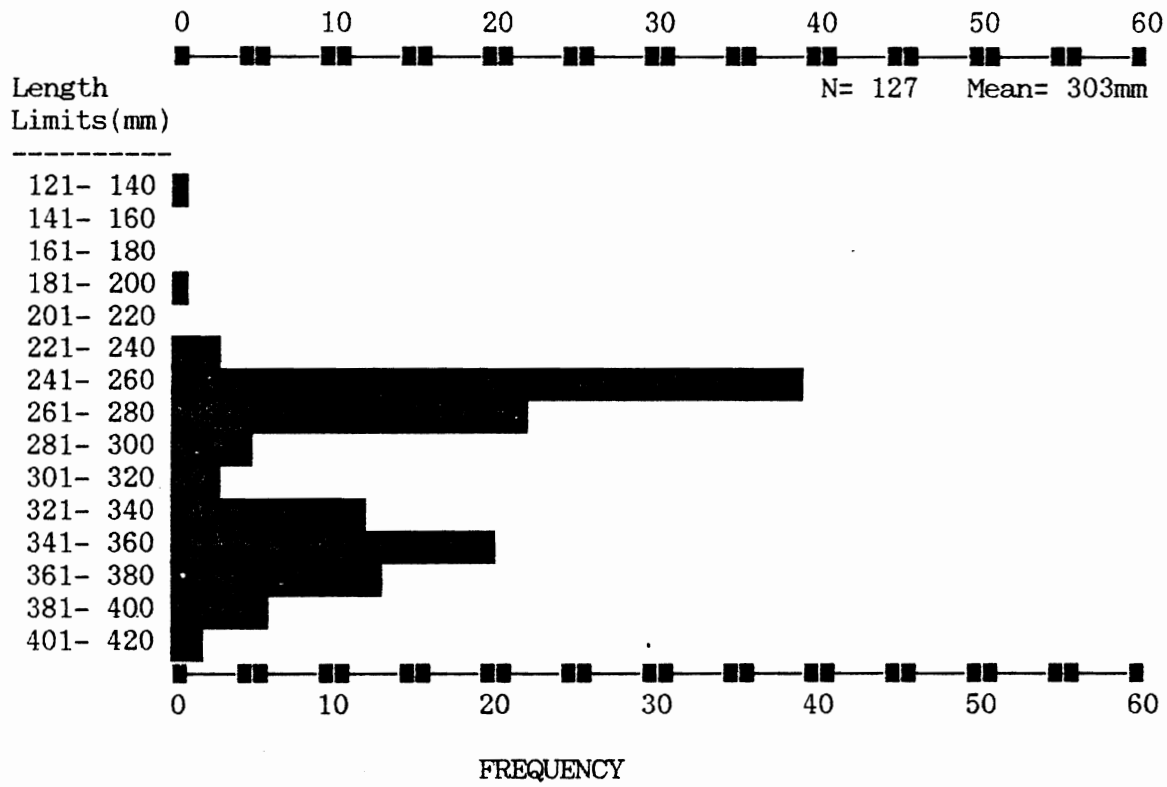


Figure 21. Length-Frequency Histogram for White Croaker
 Taken by Private or Rental Boat Anglers Using Hook-and-Line Gear.
 Area 5, Quarter 3, 1979.

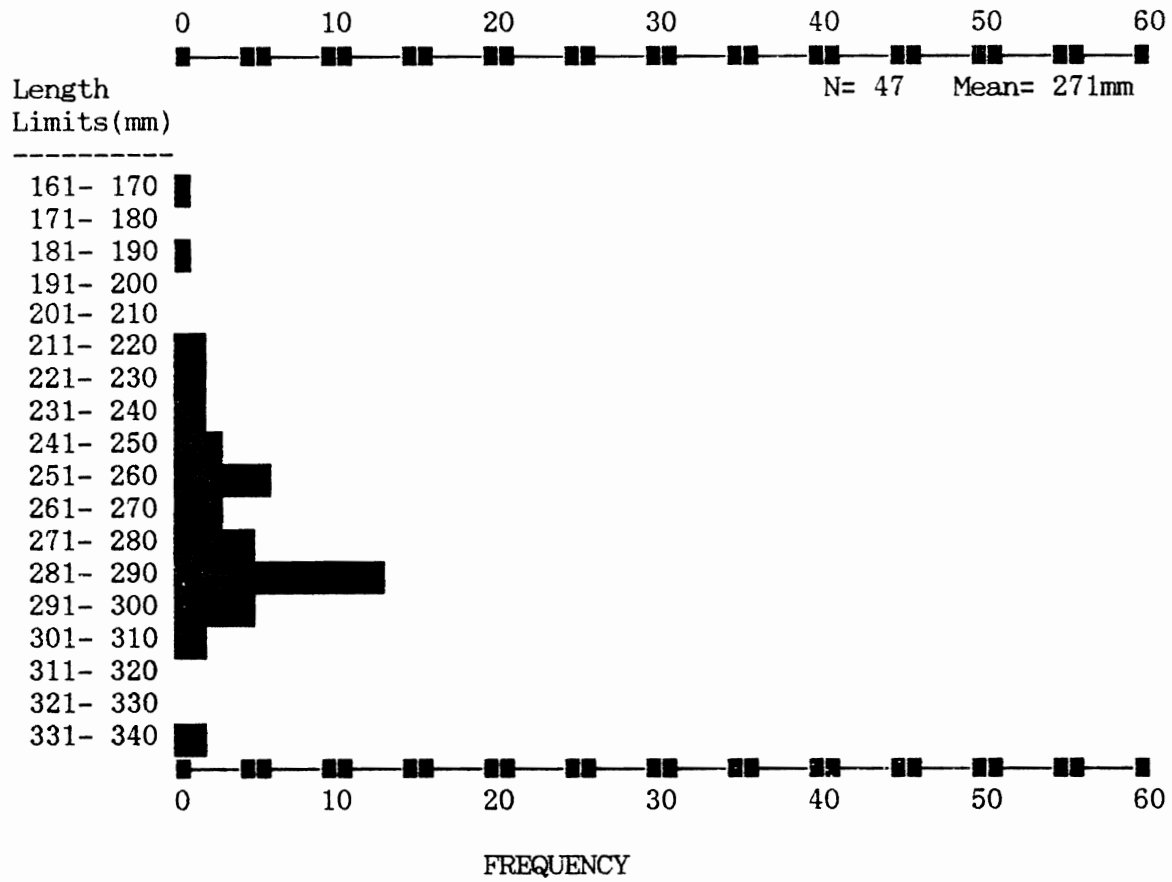


Figure 22. Length-Frequency Histogram for Pacific (Chub) Mackerel
 Taken by Private or Rental Boat Anglers Using Hook-and-Line Gear.
 Area 5, Quarter 3, 1979.

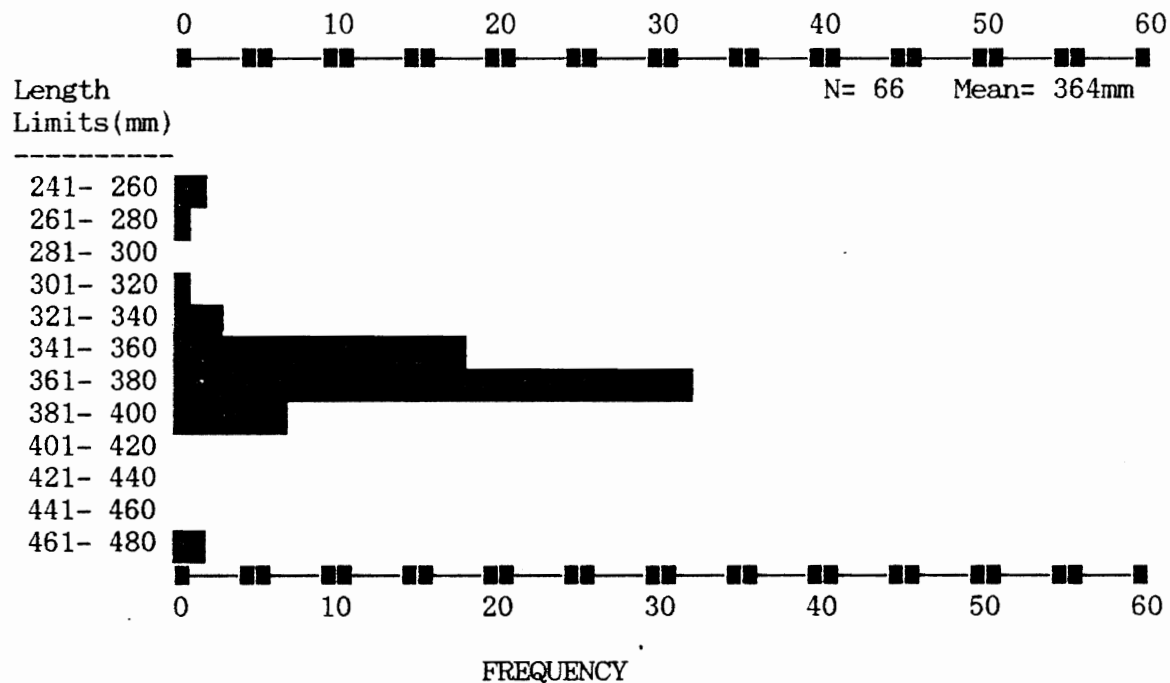


Figure 23. Length-Frequency Histogram for Blue Rockfish
 Taken by Private or Rental Boat Anglers Using Hook-and-Line Gear.
 Area 5, Quarter 3, 1979.

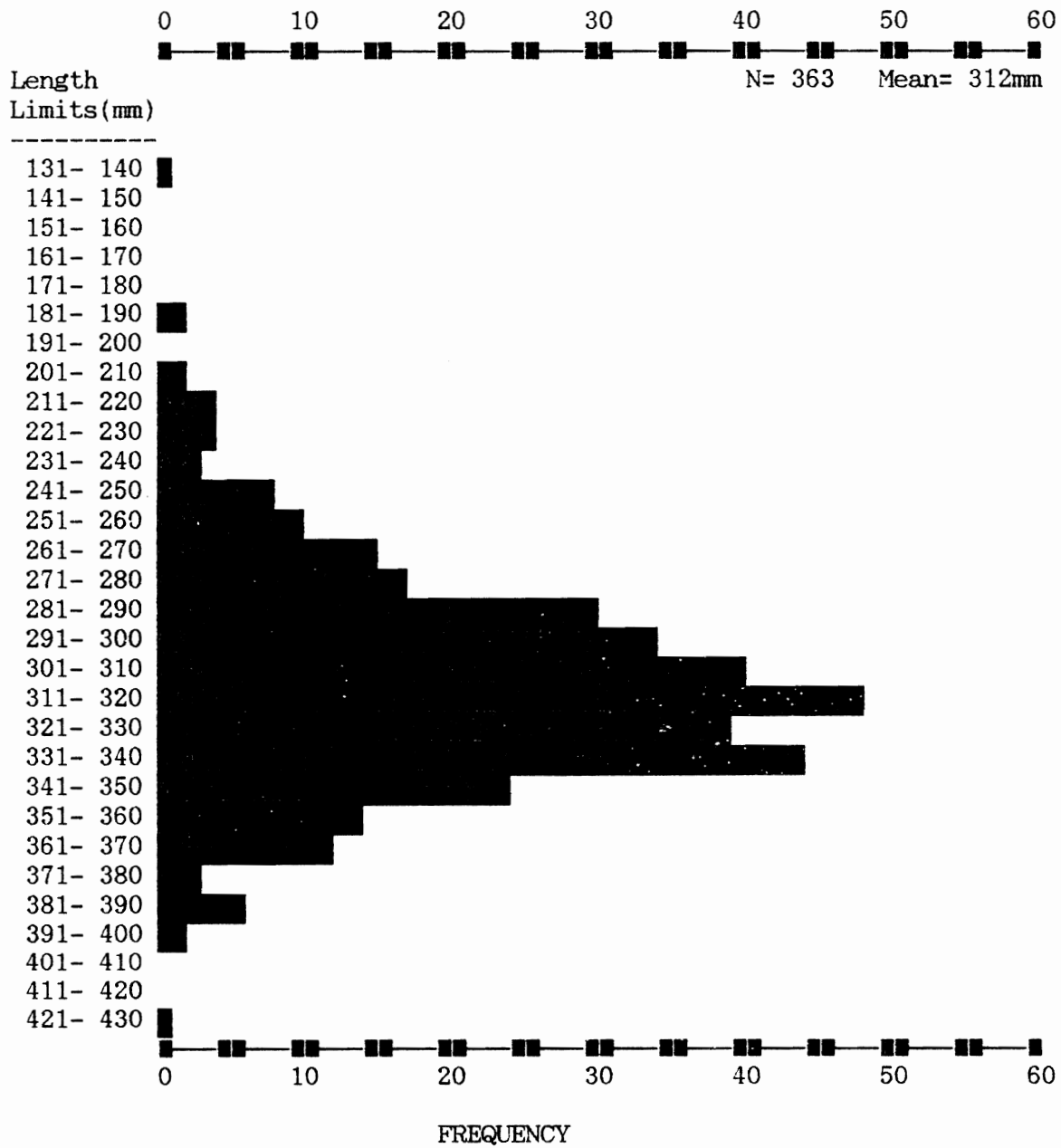


Figure 24. Length-Frequency Histogram for Brown Rockfish
 Taken by Private or Rental Boat Anglers Using Hook-and-Line Gear.
 Area 5, Quarter 3, 1979.

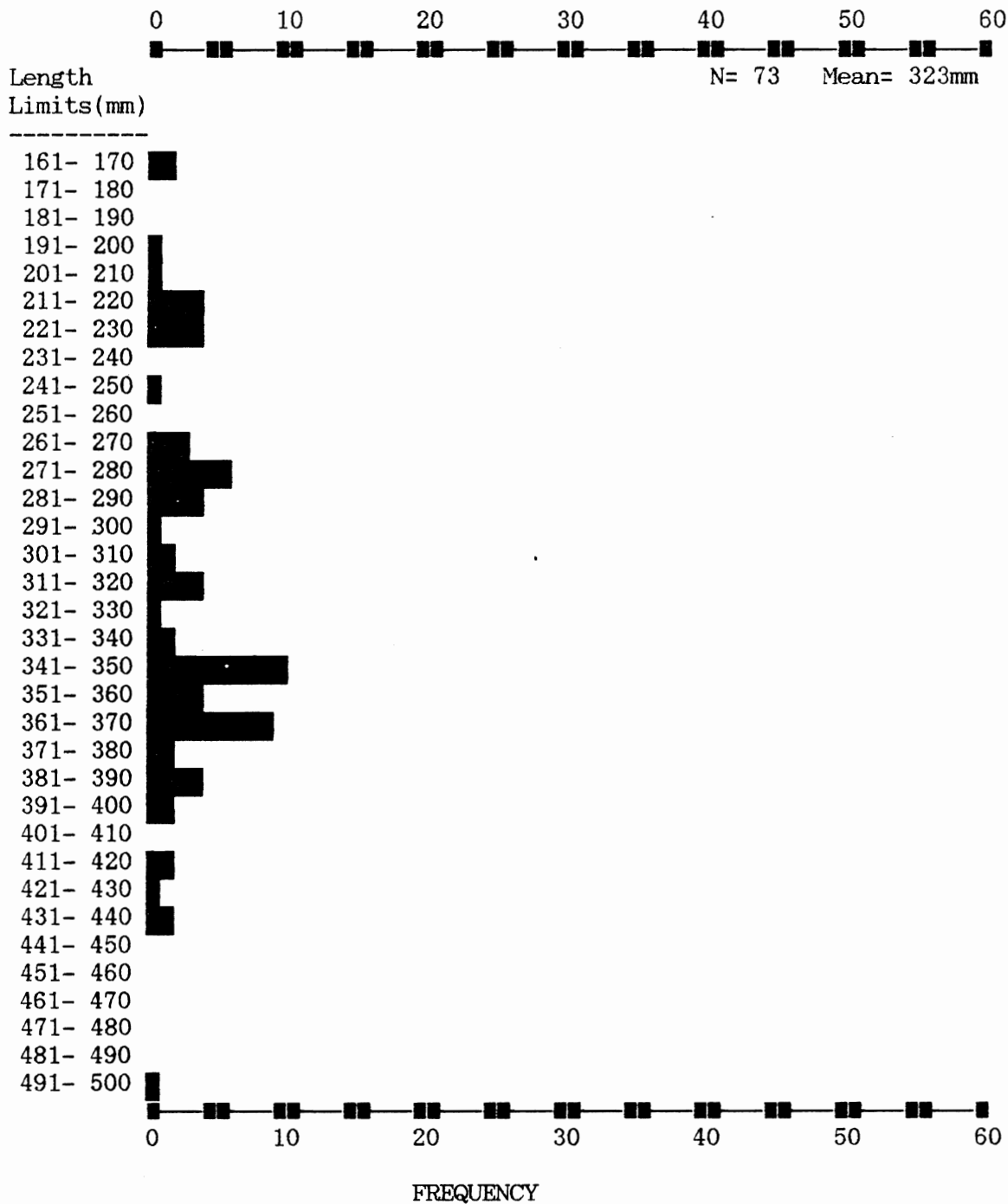


Figure 25. Length-Frequency Histogram for Gopher Rockfish
 Taken by Private or Rental Boat Anglers Using Hook-and-Line Gear.
 Area 5, Quarter 3, 1979.

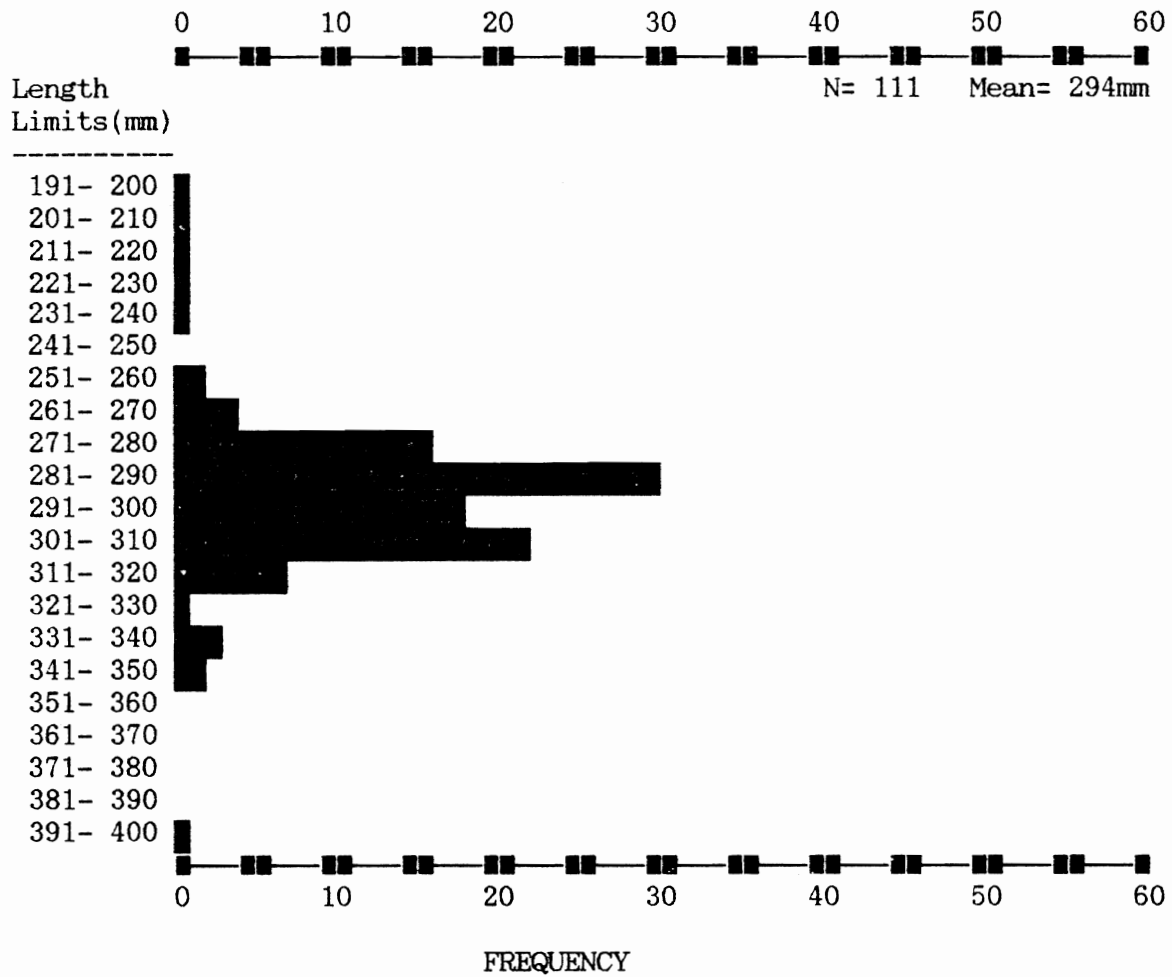


Figure 26. Length-Frequency Histogram for Yellowtail Rockfish
 Taken by Private or Rental Boat Anglers Using Hook-and-Line Gear.
 Area 5, Quarter 3, 1979.

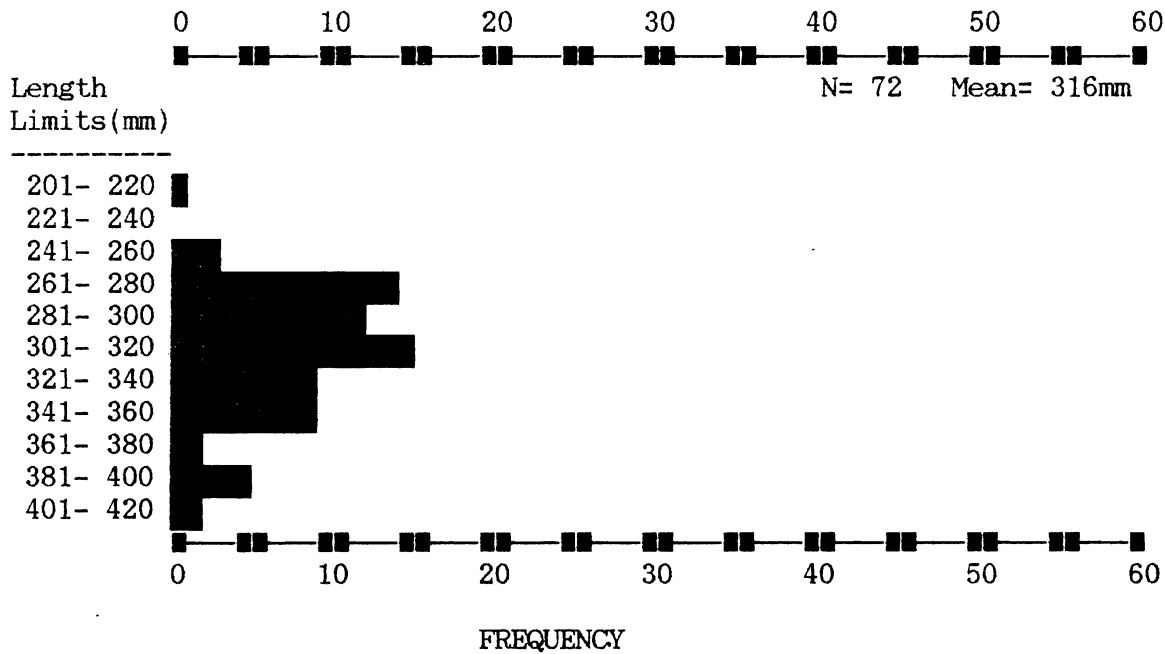
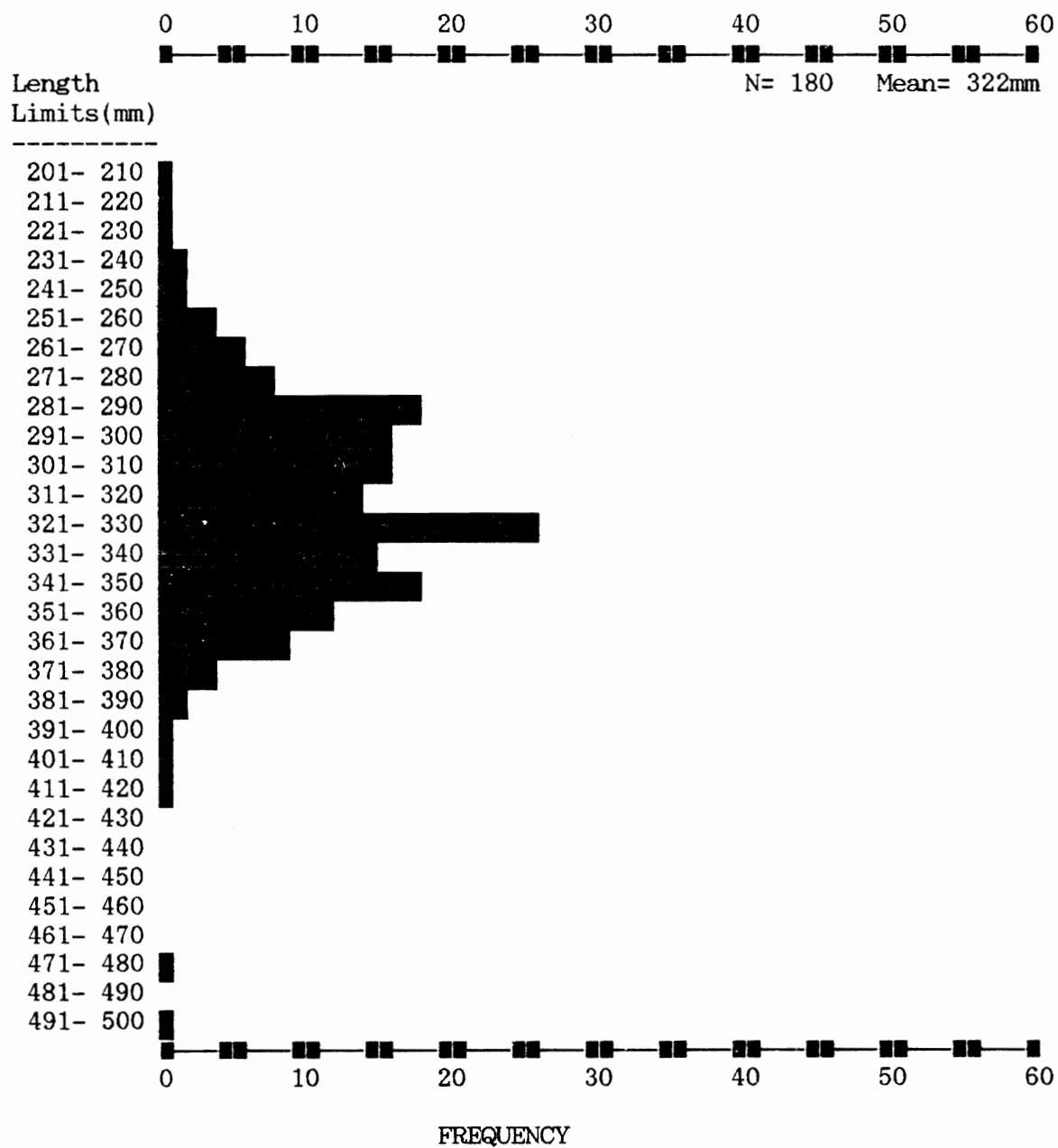


Figure 27. Length-Frequency Histogram for Blue Rockfish
 Taken by All CPFV Anglers Using Hook-and-Line Gear.
 Area 5, Quarter 3, 1979.



LITERATURE CITED

- Bailey, R.M., C.E. Bond, J.R. Brooker, E.A. Lachner, R.N. Lea, C.R. Robins, and W.B. Scott. 1980. A list of common and scientific names of fishes from the United States and Canada. 4th ed. Am. Fish Soc., Spec. Publ., (12):1-174.
- Echeverria, T. and W.H. Lenarz. 1984. Conversions between total, fork and standard lengths in 35 species of Sebastes from California. Fishery Bulletin 82(1):249-251.
- Karpov, K.A. 1984. Microcomputer program series for MRFSS regional data analysis. Reference Manual. Ver 1.1 and 1.11 for 1979-1980 (Available from author). 135 pp.
- Karpov, K.A. In press. Conversions between total, fork and standard lengths for 41 species from 15 families in California using preserved and fresh specimens. Calif. Dept. Fish and Game, Mar. Resources Admin. Rept.
- Miller, D.J. and R.N. Lea. 1972. Guide to coastal marine fishes of California. Calif. Dept. Fish and Game, Fish Bull. 157:235pp.
- Sokal, R.R. and F.J. Rohlf. 1969. Biometry. Freeman and Co., San Francisco and London. 776pp.
- U.S. Department of Commerce. 1984a. Marine recreational fisheries statistics survey, Pacific coast, 1979-1980. Prepared by M.C. Holliday, D.G. Deuel and W.M. Scogin. NOAA Current Fisheries Statistics. May 1984. No. 8321.
- U.S. Department of Commerce. 1984b. Marine recreational fisheries statistics survey, Pacific coast, 1981-1982. Prepared by M.C. Holliday, D.G. Deuel and W.M. Scogin. NOAA Current Fisheries Statistics. November 1984. No. 8323.
- U.S. Department of Commerce. 1985. Marine recreational fisheries statistics survey, Pacific coast, 1983-1984. Prepared by M.C. Holliday, D.G. Deuel and W.M. Scogin. NOAA Current Fisheries Statistics. August 1985. No. 8325.
- U.S. Department of Commerce. 1986. Marine recreational fisheries statistics survey, Pacific coast, 1985. Prepared by M.C. Holliday, D.G. Deuel and W.M. Scogin. NOAA Current Fisheries Statistics. July 1986. No. 8328.
- U.S. Department of Commerce. 1987. Marine recreational fisheries statistics survey, Pacific coast, 1986. Prepared by M.C. Holliday, D.G. Deuel and W.M. Scogin. NOAA Current Fisheries Statistics. September 1987. No. 8393.
- Van Hyning, J.M. 1951. The ocean salmon troll fishery of Oregon. Pac. Mar. Fish. Comm. Bull. 2:43-76.

APPENDIX A

Pages 149 to 318 are on the attached microfiche on inside of back cover.

Appendix B. List of Common Names, Scientific Names, and Length-Weight Parameters from All Areas in 1979 for Quarter 3, Taken by All Mode Anglers Using All Types of Gear.

Common Name	Scientific Name	a	b
Goby, Yellowfin	<u>Acanthogobius flavimanus</u>	0.00001360000	2.89000
Surfperch, Barred	<u>Amphistichus argenteus</u>	0.00001070000	3.10250
Surfperch, Calico	<u>Amphistichus koelzi</u>	0.00000469894	3.22700
Surfperch, Redtail	<u>Amphistichus rhodoterus</u>	0.00000469894	3.22700
Wolf-eel	<u>Anarrhichthys ocellatus</u>	0.00000502500	3.09100
Sablefish	<u>Anoplopoma fimbria</u>	0.00002248980	2.84080
Topsmelt	<u>Atherinops affinis</u>	0.00005566000	2.59000
Jacksmelt	<u>Atherinopsis californiensis</u>	0.00000098820	3.35360
Flounders, Lefteye	Bothidae		
Bottomfishes (Groundfishes)	Bottom Pisces (Groundfishes)		
Prickleback, Monkeyface	<u>Cebidichthys violaceus</u>	0.00000000000	0.00000
Sharks	Chondrichthyes		
Sanddab, Pacific	<u>Citharichthys sordidus</u>	0.00000142860	3.37080
Sandabs	<u>Citharichthys</u> spp.		
Sanddab, Speckled	<u>Citharichthys stigmaeus</u>	0.00000266000	3.29530
Clinids	Clinidae		
Sculpins	Cottidae		
Perch, Shiner	<u>Cymatogaster aggregata</u>	0.00000473500	3.21000
Minnows and Carps	Cyprinidae		
Stingrays	Dasyatidae		
Perch, Black	<u>Embiotoca jacksoni</u>	0.00029100000	2.49640
Seaperch, Striped	<u>Embiotoca lateralis</u>	0.00001540000	3.01000
Surfperches	Embiotocidae		
Anchovies	Engraulidae		
Anchovy, Northern	<u>Engraulis mordax</u>	0.00000560100	2.98400
Anchovies (general)	<u>Engraulis</u> spp.		
Sculpin, Buffalo	<u>Enophrys bison</u>	0.00001790000	2.89600
Sculpin, Bull	<u>Enophrys taurina</u>		
Sole, Petrale	<u>Eopsetta jordani</u>	0.00000305800	3.23950
Croaker, White	<u>Genyonemus lineatus</u>	0.00000708500	3.08328
Gobies	Gobiidae		
Irish Lord, Brown	<u>Hemilepidotus spinosus</u>	0.00003580000	2.90000
Greenlings (unidentified)	Hexagrammidae		
Greenling, Kelp	<u>Hexagrammos decagrammus</u>	0.00002604300	2.89280
Greenling, Rock	<u>Hexagrammos lagocephalus</u>	0.00002604300	2.89280
Surfperch, Spotfin	<u>Hyperprosopon anale</u>	0.00000035580	3.71700
Surfperch, Walleye	<u>Hyperprosopon argenteum</u>	0.00000035580	3.71700
Surfperch, Silver	<u>Hyperprosopon ellipticum</u>	0.00000469894	3.22700
Smelt, Surf	<u>Hypomesus pretiosus</u>	0.00000086900	3.38600
Seaperch, Rainbow	<u>Hypsurus caryi</u>	0.00001535000	3.00700
Sole, Butter	<u>Isopsetta isolepis</u>	0.00000277100	3.26480
Sole, Rock	<u>Lepidopsetta bilineata</u>	0.00000760300	3.09570
Sculpin, Pacific Staghorn	<u>Leptocottus armatus</u>	0.00001790000	2.89600
Hake, Pacific	<u>Merluccius productus</u>	0.00000633000	3.03000
Tomcod, Pacific	<u>Microgadus proximus</u>	0.00000534900	3.07000
Perch, Reef	<u>Micrometrus aurora</u>	0.00000000000	0.00000
Sole, Dover	<u>Microstomus pacificus</u>		

APPENDIX B (continued)

Common Name	Scientific Name	a	b
Sunfish, Ocean	<u>Mola mola</u>		
Bass, Striped	<u>Morone saxatilis</u>	0.00001068210	2.90671
Smoothhound, Gray	<u>Mustelus californicus</u>	0.00002089000	2.88000
Smoothhound, Brown	<u>Mustelus henlei</u>	0.00002089000	2.88000
Smoothhounds	<u>Mustelus</u> spp.		
Ray, Bat	<u>Myliobatis californica</u>	0.00001054400	3.09289
Salmon, Coho (Silver)	<u>Oncorhynchus kisutch</u>	0.00000944000	3.00000
Salmon	<u>Oncorhynchus</u> spp.		
Salmon, Chinook (King)	<u>Oncorhynchus tshawytscha</u>	0.00000944000	3.00000
Lingcod	<u>Ophiodon elongatus</u>	0.00001157000	2.99000
Smelts	Osmeridae		
Senorita	<u>Oxyjulis californica</u>	0.00000450000	3.16000
Sand & Kelp Basses	<u>Paralabrax</u> spp.		
Halibut, California	<u>Paralichthys californicus</u>	0.00000849000	3.03300
Seaperch, White	<u>Phanerodon furcatus</u>	0.00001366000	2.97800
Flounder, Starry	<u>Platichthys stellatus</u>	0.00000163000	3.34000
Flounders, Righteye	Pleuronectidae		
Flatfishes	Pleuronectiformes		
Shark, Blue	<u>Prionace glauca</u>	0.00000082655	3.20000
Sole, Sand	<u>Psettichthys melanostictus</u>	0.00000277100	3.26480
Skates	Rajidae		
Seaperch, Rubberlip	<u>Rhacochilus toxotes</u>	0.00003220500	2.90840
Perch, Pile	<u>Rhacochilus vacca</u>	0.00000925500	3.09900
Trouts	Salmonidae		
Drums	Sciaenidae		
Mackerel, Pacific (Chub)	<u>Scomber japonicus</u>	0.00000136600	3.39360
Cabezon	<u>Scorpaenichthys marmoratus</u>	0.00008823220	2.72030
Rockfishes (unidentified)	Scorpaenidae		
Rockfish, Rougheye	<u>Sebastes aleutianus</u>		
Rockfish, Kelp	<u>Sebastes atrovirens</u>	0.00003277410	2.86200
Rockfish, Brown	<u>Sebastes auriculatus</u>	0.00002601290	2.93360
Rockfish, Gopher	<u>Sebastes carnatus</u>	0.00002047310	2.95730
Rockfish, Copper	<u>Sebastes caurinus</u>	0.00001648140	3.01800
Rockfish, Greenspotted	<u>Sebastes chlorostictus</u>	0.00002047310	2.95730
Rockfish, Black-and-yellow	<u>Sebastes chrysomelas</u>	0.00000446010	3.25650
Rockfish, Starry	<u>Sebastes constellatus</u>	0.00000531230	3.19500
Rockfish, Darkblotched	<u>Sebastes crameri</u>		
Rockfish, Calico	<u>Sebastes dalli</u>	0.00000443100	3.18200
Rockfish, Greenstriped	<u>Sebastes elongatus</u>	0.00000475820	3.15310
Rockfish, Widow	<u>Sebastes entomelas</u>	0.00000291200	3.25430
Rockfish, Yellowtail	<u>Sebastes flavidus</u>	0.00001130400	3.04020
Chilipepper	<u>Sebastes goodei</u>	0.00000283950	3.24380
Rockfish, Rosethorn	<u>Sebastes helvomaculatus</u>	0.00001678550	2.99430
Rockfish, Squarespot	<u>Sebastes hopkinsi</u>	0.00000324000	3.25050
Rockfish, Shortbelly	<u>Sebastes jordani</u>	0.00000388300	3.16000
Rockfish, Black	<u>Sebastes melanops</u>	0.00001965710	2.95480
Rockfish, Blackgill	<u>Sebastes melanostomus</u>		
Rockfish, Vermilion	<u>Sebastes miniatus</u>	0.00002677000	2.91650

APPENDIX B (continued)

Common Name	Scientific Name	a	b
Rockfish, Blue	<u>Sebastes mystinus</u>	0.00001624670	2.98849
Rockfish, China	<u>Sebastes nebulosus</u>	0.00000564040	3.20470
Rockfish, Tiger	<u>Sebastes nigrocinctus</u>	0.00000564040	3.20470
Rockfish, Speckled	<u>Sebastes ovalis</u>	0.00000324000	3.25050
Bocaccio	<u>Sebastes paucispinis</u>	0.00000583320	3.09410
Rockfish, Canary	<u>Sebastes pinniger</u>	0.00001051000	3.05560
Rockfish, Grass	<u>Sebastes rastrelliger</u>	0.00000575900	3.23500
Rockfish, Rosy	<u>Sebastes rosaceus</u>	0.00001678900	2.99430
Rockfish, Yelloweye	<u>Sebastes ruberrimus</u>	0.00001304370	3.05710
Rockfish, Flag	<u>Sebastes rubrivinctus</u>	0.00002346750	2.94310
Rockfish, Bank	<u>Sebastes rufus</u>	0.00001860800	2.96050
Rockfish, Stripetail	<u>Sebastes saxicola</u>	0.00000706700	3.12010
Rockfish, Olive	<u>Sebastes serranoides</u>	0.00000521020	3.15410
Sharks, Dogfish	<u>Squalidae</u>		
Spiny Dogfish	<u>Squalus acanthias</u>	0.00000189000	3.09000
Surface Fishes	<u>Surface Pisces</u>		
Tuna, Albacore	<u>Thunnus alalunga</u>	0.00002263900	2.98800
Jack Mackerel	<u>Trachurus symmetricus</u>	0.00000331000	3.22320
Shark, Leopard	<u>Triakis semifasciata</u>	0.00002089000	2.88000
Unidentified Fishes	<u>Unidentified Pisces</u>		
Prickleback, Rock	<u>Xiphister mucosus</u>	0.00000000000	0.00000

Appendix C. List of Common and Scientific Names for Fish from Areas 097 and 3 in 1979 for Quarter 3 Corrected from Fork to Total Length Using Linear Regressions from Echeverria and Lenarz (1984), Karpov (In Press), and Van Hyning (1951).

Common Name	Scientific Name
Surfperch, Barred	<u>Amphistichus argenteus</u>
Surfperch, Calico	<u>Amphistichus koelzi</u>
Surfperch, Redtail	<u>Amphistichus rhodoterus</u>
Topsmelt	<u>Atherinops affinis</u>
Jacksmelt	<u>Atherinopsis californiensis</u>
Perch, Shiner	<u>Cymatogaster aggregata</u>
Perch, Black	<u>Embiotoca jacksoni</u>
Seaperch, Striped	<u>Embiotoca lateralis</u>
Anchovy, Northern	<u>Engraulis mordax</u>
Croaker, White	<u>Genyonemus lineatus</u>
Greenling, Kelp	<u>Hexagrammos decagrammus</u>
Greenling, Rock	<u>Hexagrammos lagocephalus</u>
Surfperch, Walleye	<u>Hyperprosopon argenteum</u>
Surfperch, Silver	<u>Hyperprosopon ellipticum</u>
Smelt, Surf	<u>Hypomesus pretiosus</u>
Seaperch, Rainbow	<u>Hypsurus caryi</u>
Sculpin, Pacific Staghorn	<u>Leptocottus armatus</u>
Perch, Reef	<u>Micrometrus aurora</u>
Bass, Striped	<u>Morone saxatilis</u>
Salmon, Coho (Silver)	<u>Oncorhynchus kisutch</u>
Salmon, Chinook (King)	<u>Oncorhynchus tshawytscha</u>
Lingcod	<u>Ophiodon elongatus</u>
Sand & Kelp Basses	<u>Paralabrax spp.</u>
Perch, Pile	<u>Rhacochilus vacca</u>
Rockfish, Brown	<u>Sebastes auriculatus</u>
Rockfish, Gopher	<u>Sebastes carnatus</u>
Rockfish, Copper	<u>Sebastes caurinus</u>
Rockfish, Greenspotted	<u>Sebastes chlorostictus</u>
Rockfish, Starry	<u>Sebastes constellatus</u>
Rockfish, Greenstriped	<u>Sebastes elongatus</u>
Rockfish, Widow	<u>Sebastes entomelas</u>
Rockfish, Yellowtail	<u>Sebastes flavidus</u>
Rockfish, Black	<u>Sebastes melanops</u>
Rockfish, Vermilion	<u>Sebastes miniatus</u>
Rockfish, Blue	<u>Sebastes mystinus</u>
Rockfish, China	<u>Sebastes nebulosus</u>
Bocaccio	<u>Sebastes paucispinis</u>
Rockfish, Canary	<u>Sebastes pinniger</u>
Rockfish, Rosy	<u>Sebastes rosaceus</u>
Rockfish, Yelloweye	<u>Sebastes ruberrimus</u>
Rockfish, Olive	<u>Sebastes serranoides</u>