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PRELIMINARY REPORT ON THE ABILITY OF MARINE
RECREATIONAL FISHERMEN TO IDENTIFY THE MORE
COMMONLY CAUGHT SPORTFISH

by

Vickie L. Wine

MARINE RESOURCES

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PRELIMINARY REPORT ON THE ABILITY OF MARINE
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ABSTRACT

Fishermen on piers and privately-owned boats in southern California were surveyed to determine their ability to identify (by common name) 18 of the more commonly caught sportfish. Anglers were shown color photographs of the fish and asked to identify them. Most people were not able to identify more than 5 or 6 species correctly. The number of incorrect responses (calling one species by another's name, or using a non-recommended common name) was not high. Instead, it was the level of non-response (the fisherman had no idea what the species was) that was surprisingly high.

The results of the survey indicate that anglers are not familiar with the names of the fish they are most likely to catch. This has serious implications concerning our fishery management programs which depend on anglers' compliance with fishing regulations. The effectiveness of the programs depends in part on anglers being able to recognize regulated species when encountered.

1/ Marine Resources Region, Administrative Report No. 79-14, December 1979.

2/ Marine Resources Region, California State Fisheries Laboratory, 350 Golden Shore, Long Beach, California 90802.

INTRODUCTION

During September-October, 1979, the California Department of Fish and Game initiated a preliminary survey on the ability of marine anglers to identify common fish species. The purpose of the initial study was to develop a methodology and to refine the focus for a subsequent study. This future study will be done in two parts, one in the winter and one in the summer of 1980, and it will focus on the ability of pier and private-boat anglers to identify the fish species which are mentioned in the 1979 California Sport Fishing Regulations.

However, there is a need to make the results of the preliminary angler-survey known now. The Department is currently participating in a federally-funded angler-survey ^{3/} directed by the National Marine Fisheries Service. In this survey, anglers are asked for "the names of the species you caught...." Although the question itself is valid, we feel that the answers could be greatly misleading.

Therefore, the preliminary results of this fish identification study are being presented. The results will show which fish are easily recognized, which fish are relatively unknown, whether the common names recommended by the Department are being used by the public, how many different names are used for the same fish, and how many different fish are given the same name.

OPERATIONS

Color photographs of freshly-caught, marine fish species that are commonly taken in the coastal waters off Los Angeles and Orange Counties were shown to anglers on public fishing piers and at private-boat launching facilities in the same area. Each pier or ramp was sampled once for

^{3/} Marine Recreational Fisheries Statistics Survey

a period of 4-8 hr. Every fourth fisherman on a pier and one randomly chosen fisherman on each boat was asked if he/she would participate in a fish-identification survey. Anglers were then shown a series of 18 - 8x10 in. color photographs and asked to name each fish or the group of family it belongs in. Correct answers were given to the fisherman only after the test was completed. All interviews were given where the answers would not be heard by the next angler to be interviewed.

The 18 species were *Atractoscion nobilis*, white seabass; *Caulolatilus princeps*, ocean whitefish; *Embiotoca jacksoni*, black surfperch; *Genyonemus lineatus*, white croaker; *Medialuna californiensis*, halfmoon; *Paralabrax clathratus*, kelp bass; *P. maculatofasciatus*, spotted sand bass; *P. nebulifer*, barred sand bass; *Paralichthys californicus*, California halibut; *Sarda chiliensis*, Pacific bonito; *Scomber japonicus*, Pacific mackerel; *Scorpaena guttulata*, sculpin or scorpionfish; *Sebastes goodei*, chilipepper; *S. mystinus*, blue rockfish; *S. paucispinis*, bocaccio; *S. serranoides*, olive rockfish; *Seriphus politus*, queenfish; and *Sphyræna argentea*, California barracuda.

RESULTS

A total of 402 fishermen of all ages and degrees of fishing experience were shown the same series of photographs. These anglers gave us 190 different names for the 18 fish species. The names can be sorted into several categories:

- 1) correct (i.e. recommended by the Department) common name or variation thereof. Example: calling a California barracuda a barracuda.
- 2) incorrect or non-recommended common name. Example: Calling a white croaker by its widely-used, non-recommended name, tomcod.

- 3) mis-identification of a fish. Example: calling a California barracuda a shark.
- 4) newly-invented common names, whereby an angler calls a fish by a name which cannot be correlated to any known species found in California. Example: calling a white croaker a smokefish.

In this survey a correct answer is designated as the identification of a fish by its recommended common name, or by its family or group name. Anglers averaged 5 and 6 correct answers at piers and launch ramps respectively. If we accepted widely-used, but non-recommended common names as correct answers, that average would be raised by only one.

There were six species which were easily recognized and properly named over half the time: Pacific bonito, correctly named by 76% of the anglers; California barracuda and California halibut, 75%; Pacific mackerel, 65%; sculpin, 59%; and barred sand bass (recognized as a bass of some sort), 52%.

Four species were recognized about one-third of the time, if the widely-used, non-recommended common names are counted as correct answers: spotted sand bass (recognized as a bass of some sort), 36%; white croaker (accepting tomcod as a correct answer), 36%; kelp bass (recognized as a bass of some sort), 33%; and chilipepper (accepting red snapper as a correct answer), 31%.

The remaining eight species were poorly recognized. The queenfish and blue rockfish were frequently mis-identified, and the other species were simply unfamiliar to the anglers.

There are a number of responses which were counted as neither correct nor incorrect since their use was very ambiguous. These names, such as seabass, rockbass, and seatrout, were not used consistently

for a specific fish species or group. The term rockbass was used almost equally in reference to bass (*Paralabrax* spp.) as to rockfish (*Sebastes* spp.). One might expect that the term seabass would be used to refer to the white seabass, but it was used for bass, rockfish, croakers (family Sciaenidae), and ocean whitefish.

Probably the most misused name in the whole survey was bass. It seems to be a catch-all term used in relation to almost any type of fish. Although there were only three pictures of bass in the survey, every species except barracuda, bonito, and halibut was referred to as a bass by a substantial proportion of the anglers. The probability of an angler using the term bass correctly in this survey was 0.60.

A list of all the names and the frequencies with which they were used for each of the 18 species is presented in the Appendix.

DISCUSSION

It is realized that the results of this survey are not definitive or irrefutable. An angler's ability to recognize fish from pictures is not necessarily the same as if he were presented with live or freshly-caught fish. We made no adjustment for the fact that we interviewed avid fishermen more often than occasional fishermen, and that experienced fishermen presumably know more about fish identification than inexperienced fishermen do. Also, the photographs of olive rockfish, kelp bass, and black surfperch were not as good as they could have been. These factors will be taken into account in the future survey.

However, I feel that the preliminary results do give an indication of a pressing need to educate anglers. A valid fishery management program cannot be effective unless anglers are 1) aware that the take of certain fish species is regulated, 2) able to recognize the regulated species when encountered, and 3) willing to comply with the fishing

regulations. Unless these conditions are met, fishery conservation policies are worthless. It is the fishermen who hold the power to enhance or deplete sport fish stocks.

This survey also gives evidence that any program which attempts to estimate the sport catch of fish by asking anglers how many and what kinds of fish they caught, will suffer from lack of credibility.

In conclusion, the results of this survey seem to verify the truth of an old adage which says, "don't believe all those fish stories you hear."

APPENDIX

Angler Responses to Each Picture

Atractoscion nobilis---WHITE SEABASS

277 people (69%) had no idea what the fish was

<u>Names given</u>	<u>No. responses</u>	<u>% of total</u>
(bass)	31	8
* white seabass	22	5
seatrout	9	2
corbina	6	1
corvina	5	1
* seabass	5	1
(perch)	4	1
sand bass	4	1
herring	2	<1
kingfish	2	<1
mackerel	2	<1
sablefish.	2	<1
(salmon)	2	<1
(seaperch)	2	<1
white seabass or seatrout	2	<1
bigmouth bass	1	<1
bonito	1	<1
cod	1	<1
* (croaker)	1	<1
hake	1	<1
herring family	1	<1
lingcod	1	<1
(rockbass)	1	<1
silver salmon	1	<1
smelt	1	<1
tomcod	1	<1
(trout)	1	<1
whitebass	1	<1
whitefish	1	<1
yellowtail	1	<1

Comments: The white seabass was the least-recognized fish in the survey. Almost 70% of the anglers did not have the vaguest idea what type of fish this was. Of those who did assign a name to the fish, about 7% used its correct name. The designated common name may be confusing to anglers since it implies that the fish is a bass (Serranidae), although it is actually a member of the croaker family (Sciaenidae). The most common response from anglers was that the fish was a bass. This confusion leads to serious problems in management programs. According to the 1979 California Sport Fishing Regulations there is a 28-in.

* acceptable as a correct name

() a group name

minimum size limit on white seabass. However, since very few people can recognize the fish as a white seabass, and others consider it a bass (with a 12-in. size limit) or have no idea what it is, the 28-in. size limit is rarely applied. As a result, this minimum size limit becomes ineffective.

Caulolatilus princeps---OCEAN WHITEFISH

268 people (67%) had no idea what the fish was

<u>Names given</u>	<u>No. of responses</u>	<u>% of total</u>
* whitefish	33	8
tomcod	23	6
(bass)	9	2
(perch)	8	2
mackerel	6	1
(croaker)	5	1
corbina	4	1
herring	4	1
seatrout	3	<1
(trout)	3	<1
corvina	2	<1
johnny bass	2	<1
kelpfish	2	<1
whiting	2	<1
black croaker	1	<1
black seabass	1	<1
bluefin tuna	1	<1
bluefish	1	<1
bonito	1	<1
bullnose	1	<1
buttermough.	1	<1
buttermough bass	1	<1
calico	1	<1
* California whitefish	1	<1
cod	1	<1
dogfish	1	<1
flyingfish	1	<1
kingfish	1	<1
mullet	1	<1
* ocean whitefish	1	<1
opaleye	1	<1
queenfish	1	<1
reef perch	1	<1
sand bass	1	<1
seabass	1	<1
senorita	1	<1
sheephead	1	<1
sugar bass	1	<1
(tuna)	1	<1
white bass	1	<1
white seabass, or seatrout	1	<1

Comments: Very few people recognized this fish: less than 10% could correctly name it.

* acceptable as a correct name

() a group name

Embiotoca jacksoni--BLACK SURFPERCH

219 people (54%) had no idea what this fish was

<u>Names given</u>	<u>No. responses</u>	<u>% of total</u>
*(perch)	85	21
buttermouth perch	27	7
opaleye	17	4
buttermouth	13	3
*black perch	6	1
blue perch	4	1
barred perch	3	<1
black bass	3	<1
(bass)	2	<1
flounder	2	<1
opaleye perch	2	<1
pile perch	2	<1
sanddab	2	<1
angelfish	1	<1
barred surfperch	1	<1
black seabass	1	<1
bluegill	1	<1
Catadipna blue	1	<1
flounder or halibut	1	<1
ocean perch	1	<1
(rockbass)	1	<1
(rockcod)	1	<1
seabass	1	<1
(seaperch)	1	<1
sole	1	<1
striped perch	1	<1
turbot	1	<1

Comments: About 33% of the anglers identified this fish as a perch (Embiotocidae) of some sort, although only 1% called it by its recommended common name. The more popular name, buttermouth perch, was the most frequently given name.

* acceptable as a correct name

() a group name

Genyonemus lineatus--WHITE CROAKER

105 people (26%) had no idea what this fish was

<u>Names given</u>	<u>No. responses</u>	<u>% of total</u>
tomcod	127	32
(perch)	39	10
(bass)	21	5
herring	16	4
kingfish	16	4
*(croaker)	13	3
*white croaker	6	1
herring or tomcod	5	1
seabass	5	1
(rockcod)	4	1
whitefish	4	1
mackerel	3	<1
Catalina blue perch	2	<1
cod	2	<1
opaleye perch	2	<1
pompano	2	<1
seatrout	2	<1
tomcod or kingfish	2	<1
tomcod or (perch)	2	<1
(bass) or (perch)	1	<1
bluebass	1	<1
butterfish	1	<1
buttermilk	1	<1
buttermouth	1	<1
corbina	1	<1
golden croaker	1	<1
halibut	1	<1
red snapper	1	<1
(rockbass)	1	<1
(rockcod) or seabass	1	<1
rockperch or whitefish	1	<1
sandbass	1	<1
sargo	1	<1
(seaperch)	1	<1
seatrout or tomcod	1	<1
shad	1	<1
smelt	1	<1
smokefish	1	<1
sugar bass	1	<1
trout	1	<1
yellow perch	1	<1
walleye perch	1	<1
white seabass	1	<1

Comments: The most prevalent common name for this fish was tomcod--an incorrect name since there is another (unrelated) fish whose

* acceptable as a correct name
 () a group name

designated common name is Pacific tomcod, *Gadus macrocephalus*. Only 1% of the anglers called this fish by its recommended common name. About 35% misidentified the fish.

Medialuna californiensis--HALFMOON

278 people (69%) had no idea what this fish was

<u>Names given</u>	<u>No. responses</u>	<u>% of total</u>
(perch)	30	7
(bass)	23	6
Catalina blue perch	16	4
blue perch	15	4
Catalina blue	10	2
opaleye	8	2
*halfmoon	4	1
Catalina perch	3	<1
(tuna)	2	<1
albacore	1	<1
blue bass	1	<1
blue runner	1	<1
bluefish	1	<1
blue rockbass	1	<1
bonito	1	<1
buttermouth bass	1	<1
calico bass	1	<1
*Catalina halfmoon	1	<1
crappie	1	<1
(rockbass)	1	<1
(surfperch)	1	<1
whitefish	1	<1

Comments: The most commonly used name for this fish was Catalina blue perch, or some variation thereof. This leads people to think that this fish is a perch (Embiotocidae), although it is not. Only 1% of the anglers called it by its recommended common name.

* acceptable as a correct name

() a group name

Paralabrax clathratus---KELP BASS

228 people (57%) had no idea what this fish was

<u>Names given</u>	<u>No. responses</u>	<u>% of total</u>
*(bass)	84	21
*calico bass	38	9
(rockcod)	8	2
(rockfish)	8	2
*sandbass	6	1
*kelp bass	4	1
rockbass	3	<1
salmon grouper	2	<1
seabass	2	<1
(trout)	2	<1
bigmouth bass	1	<1
bull bass	1	<1
calico rockbass	1	<1
catfish	1	<1
cod	1	<1
corbina	1	<1
(croaker)	1	<1
herring	1	<1
largemouth bass	1	<1
lingcod	1	<1
queenfish	1	<1
red snapper	1	<1
sculpin	1	<1
snapper	1	<1
speckled perch	1	<1
tomcod	1	<1
white seabass	1	<1

Comments: About 33% of the anglers identified this fish as a bass of some sort. The non-recommended name, calico bass, was used frequently. The three *Paralabrax* bass species have a 12-in minimum size limit according to the 1979 California Sport Fishing Regulations. For this reason, an angler need not distinguish between the three bass; he need only be able to recognize each as a bass.

* acceptable as a correct name

() a group name

Paralabrax maculatofasciatus--SPOTTED SAND BASS

178 people (44%) had no idea what this fish was

<u>Names given</u>	<u>No. responses</u>	<u>% of total</u>
*(bass)	93	23
*calico bass	17	4
seabass	15	4
black seabass	14	3
black bass	12	3
*spotted bass	12	3
(rockbass)	8	2
(rockfish)	7	2
*sand bass	7	2
*spotted bay bass	5	1
* kelp bass	4	1
*spotted sand bass	4	1
(perch)	3	<1
(rockcod)	3	<1
* baybass	2	<1
grouper	2	<1
blackfish	1	<1
black striped bass	1	<1
bocaccio	1	<1
buttermouth	1	<1
cabezon	1	<1
California blue perch	1	<1
calico	1	<1
(croaker)	1	<1
grouper seabass	1	<1
johnny bass or sugar bass	1	<1
johnny bass	1	<1
seabass or grouper	1	<1
seatrout	1	<1
*speckled sand bass	1	<1
*spotted sand	1	<1
sugar bass	1	<1

Comments: The spotted sand bass has a 12-in minimum size limit according to the 1979 California Sport Fishing Regulations, as do the two other *Paralabrax* bass: kelp bass and barred sand bass. An angler need not distinguish between these bass in order to comply with the regulations. All that is necessary is to recognize the fish as a bass. Less than 40% of the anglers identified this fish as a bass (excluding striped bass, seabass, and black seabass, which have different size regulations).

* acceptable as a correct name

() a group name

Paralabrax nebulifer---BARRED SAND BASS

133 people (33%) had no idea what this fish was

<u>Names given</u>	<u>No. responses</u>	<u>% of total</u>
*(bass)	90	22
*sand bass	62	15
*calico bass	48	12
seabass	8	2
(rockbass)	7	2
*kelp bass	5	1
(rockcod)	5	1
(perch)	4	1
(rockfish)	4	1
bluebass	2	<1
bonito	2	<1
calico	2	<1
mackerel	2	<1
striped bass	2	<1
white seabass	2	<1
angelfish	1	<1
*barred sand bass	1	<1
*baybass	1	<1
black bass	1	<1
black seabass	1	<1
cabezon	1	<1
cabezon or sculpin	1	<1
*calico or sandbass	1	<1
catfish	1	<1
codfish	1	<1
cod	1	<1
corbina	1	<1
(croaker)	1	<1
dogfish	1	<1
herring	1	<1
johnny bass	1	<1
queenfish	1	<1
rainbowfish	1	<1
(seaperch)	1	<1
*spotted bay bass	1	<1
striper	1	<1
sugar bass	1	<1
(trout)	1	<1
tomcod	1	<1
whitebass	1	<1

Comments: The three *Paralabrax* bass have a 12-in minimum size limit under the 1979 California Sport Fishing Regulations. For this reason, an angler need not distinguish between a barred sand bass and a kelp bass. He need only be able to

* acceptable as a correct name

() a group name

recognize both as bass. Over 50% of the anglers identified this fish as a bass, although only one person called it by its complete common name.

Paralichthys californicus--CALIFORNIA HALIBUT

54 people (13%) had no idea what this fish was

<u>Names given</u>	<u>No. responses</u>	<u>% of total</u>
*halibut	302	75
flounder	23	6
sanddab	9	2
halibut or flounder	5	1
(flatfish)	2	<1
turbot	2	<1
(bass)	1	<1
carp	1	<1
grouper	1	<1
halibut or sole	1	<1
halibut or sole or flounder	1	<1

Comments: The name halibut seems to be widely known among anglers; 75% of the anglers identified this fish as a halibut. However, we were not able to test whether anglers used this name to refer to flatfishes other than the California halibut. Very few people misidentified the halibut, but no one made the distinction between the California halibut and the Pacific halibut, *Hippoglossus stenolepis*. These two fishes have different regulations covering bag limits and fishing seasons. In order to comply with the fishing regulations, the full name of the fish must be known.

* acceptable as a correct name

() a group name

Sarda chiliensis--PACIFIC BONITO

44 people (11%) had no idea what this fish was

<u>Names given</u>	<u>No. responses</u>	<u>% of total</u>
*bonito	307	76
mackerel	17	4
(tuna)	15	4
albacore	5	1
yellowtail	3	<1
barracuda	2	<1
mackerel or bonito	2	<1
bluefin tuna	1	<1
horse mackerel	1	<1
salmon	1	<1
sardine	1	<1
Spanish mackerel	1	<1
tuna fish	1	<1
wahoo	1	<1

Comments: This fish was easily recognized. About 10% of the anglers who did not know the correct name of the fish placed it in the proper group of fish, the tunas (taxonomically: the mackerel family, Scombridae).

* acceptable as a common name

() a group name

Scomber japonicus--PACIFIC MACKEREL.

68 people (17%) had no idea what this fish was

<u>Names given</u>	<u>No. responses</u>	<u>% of total</u>
*mackerel	251	62
bonito	51	13
*Pacific mackerel	11	3
mackerel or bonito	3	<1
Spanish mackerel	3	<1
flying fish	2	<1
greenback mackerel	2	<1
anchovy	1	<1
barracuda	1	<1
barracuda or mackerel	1	<1
herring	1	<1
jack mackerel	1	<1
jack/spanish mackerel	1	<1
jacksmelt	1	<1
smelt	1	<1
trout	1	<1
(tuna)	1	<1
yellowtail	1	<1

Comments: The majority of the anglers recognized this very common fish as a mackerel, but few distinguished it from another mackerel, the jack mackerel, *Trachurus symmetricus*. Over 10% of the anglers confused the Pacific mackerel with the Pacific bonito.

* acceptable as a common name

() a group name

Scorpaena guttata--SCULPIN OR SCORPIONFISH

110 people (27%) had no idea what this fish was

<u>Names given</u>	<u>No. responses</u>	<u>% of total</u>
*sculpin	166	41
*(rockcod)	24	6
*(rockfish)	21	5
*scorpion	17	4
calico bass	8	2
(bass)	7	2
(rockbass)	7	2
*scorpionfish	7	2
cabezon	6	1
lionfish	5	1
dogfish	3	<1
seabass	3	<1
angelfish	2	<1
carp	1	<1
cod	1	<1
codfish	1	<1
garibaldi	1	<1
kelp bass	1	<1
leopardfish	1	<1
porcupinefish	1	<1
red snapper	1	<1
*scorpion bass	1	<1
sculpture	1	<1
snapper	1	<1
spiderfish	1	<1
stingerfish	1	<1
stonefish	1	<1
sturgeon	1	<1
tigerfish	1	<1

Comments: The sculpin has poisonous spines and should be recognized for safety's sake. Almost 50% of the anglers identified the fish by its recommended common name. Another 10% placed it in the proper family.

* acceptable as a correct name

() a group name

Sebastes goodei--CHILIPEPPER

198 people (49%) had no idea what this fish was

<u>Names given</u>	<u>No. responses</u>	<u>% of total</u>
*(rockcod)	61	15
red snapper	41	10
*(rockfish)	29	7
(bass)	13	3
*chilipepper	12	3
snapper	5	1
cod	4	1
sculpin	4	1
grouper	3	<1
(rockbass)	3	<1
*(red rockcod)	3	<1
codfish	2	<1
garibaldi	2	<1
kelp bass	2	<1
*(red rockfish)	2	<1
salmon grouper	2	<1
sunfish	2	<1
bigmouth	1	<1
calico bass	1	<1
*chili	1	<1
*(crimson rockcod)	1	<1
goldfish	1	<1
(perch)	1	<1
red seabass	1	<1
sablefish	1	<1
(salmon)	1	<1
sandbass	1	<1
seatrout	1	<1
turpin	1	<1
vermilion rockfish	1	<1
weakfish	1	<1

Comments: Although only 3% of the anglers could correctly name this fish, at least 28% recognized it as a rockfish (or rockcod). The non-designated common names, red snapper or snapper, were used by over 10% of the anglers.

* acceptable as a correct name

() a group name

Sebastes mystinus--BLUE ROCKFISH

260 people (65%) had no idea what this fish was

<u>Names given</u>	<u>No. responses</u>	<u>% of total</u>
(bass)	62	15
*(rockfish)	23	6
(perch)	12	3
blue bass	9	2
(rockbass)	9	2
*blue rockfish	3	<1
seabass	3	<1
blue perch	2	<1
cod	2	<1
kelp bass	2	<1
*(rockcod)	2	<1
black seabass	1	<1
bluegill	1	<1
blue rockbass	1	<1
buttermouth	1	<1
calico bass	1	<1
crappie	1	<1
dock bass	1	<1
grouper	1	<1
opaleye perch	1	<1
(perch) or (bass)	1	<1
rubbermouth perch	1	<1
sandbass	1	<1
spotted bass	1	<1

Comments: About 7% of the fishermen correctly identified this fish as a rockfish, while almost 20% called it a bass of some kind. The blue rockfish does not look like a typical red- or brown-colored rockfish, which may explain why so few people recognize it as a member of the rockfish family.

* acceptable as a correct name

() a group name

Sebastes paucispinis--BOCACCIO

166 people (41%) had no idea what this fish was

<u>Names given</u>	<u>No. responses</u>	<u>% of total</u>
(bass)	63	16
*(rockcod)	36	9
*(rockfish)	24	6
(rockbass)	16	4
red snapper	12	3
salmon grouper	11	3
cod	10	2
*bocaccio	8	2
grouper	8	2
kelp bass	8	2
johnny bass	4	1
seabass	4	1
chilipepper	3	<1
sculpin	3	<1
calico bass	2	<1
snapper	2	<1
walleye	2	<1
baybass	1	<1
bigmouth	1	<1
bigmouth bass	1	<1
bonito	1	<1
*(brown rockcod)	1	<1
codfish	1	<1
cowcod	1	<1
cowfish	1	<1
lingcod	1	<1
oggle-eye	1	<1
red grouper	1	<1
*(red rockcod)	1	<1
sandbass	1	<1
scorpion	1	<1
seatrout	1	<1
sheephead	1	<1
spotted bass	1	<1
sturgeon	1	<1
sugar bass	1	<1
widemouth bass	1	<1

Comments: There was considerable confusion about the naming of this fish, although it is the second-most commonly caught rockfish in the area. Only 2% of the anglers called it by its recommended common name, and 6% called it by two non-recommended.

* acceptable as a correct name

() a group name

common names: salmon grouper and red snapper.. About 20% were aware that it was a rockfish (or rockcod) of some sort, while an equal number specified it as a bass.

Sebastes serranoides--OLIVE ROCKFISH

254 people (63%) had no idea what this fish was

<u>Names given</u>	<u>No. responses</u>	<u>% of total</u>
(bass)	85	21
(perch)	12	3
*(rockfish)	6	1
black seabass	5	1
calico bass	5	1
johnny bass	4	1
seabass	4	1
bonito	3	<1
(croaker)	3	<1
(rockbass)	3	<1
black bass	2	<1
kelp bass	2	<1
*(rockcod)	2	<1
black or white seabass	1	<1
blue bass	1	<1
cat bass	1	<1
kingfish	1	<1
mackerel	1	<1
*olive rockfish	1	<1
opal eye	1	<1
(salmon)	1	<1
salmon grouper	1	<1
sand bass	1	<1
striped bass	1	<1
sugar bass	1	<1

Comments: This is the most commonly caught rockfish in the area, but most people could not identify it. However, the photograph of this fish was not as good as it might have been, so the results listed above are not necessarily indicative of the true ability of anglers to recognize this fish.

* acceptable as a correct name

() a group name

Seriplus politus--QUEENFISH

309 people (77%) had no idea what this fish was

<u>Names given</u>	<u>No. responses</u>	<u>% of total</u>
herring	42	10
*queenfish	8	2
(perch)	7	2
(bass)	6	1
*(croaker)	4	1
tomcod	4	1
red snapper	3	<1
kingfish	2	<1
yellowfin croaker	2	<1
yellowtail	2	<1
anchovy	1	<1
calico bass	1	<1
cod	1	<1
grunion	1	<1
kelpfish	1	<1
Pasadena trout	1	<1
pompano	1	<1
(rockbass)	1	<1
(rockcod)	1	<1
sardine	1	<1
senoritafish	1	<1
(smelt)	1	<1
white seabass	1	<1

Comments: Surprisingly few people recognized this fish. Only 2% correctly identified it as a queenfish. The most frequently used name was herring, which is an unacceptable common name since the true herrings are members of the herring family (Clupeidae), and the queenfish is a member of the croaker family (Scianenidae).

* acceptable as a correct name

() a group name

Sphyracna argentea--CALIFORNIA BARRACUDA

72 people (18%) had no idea what this fish was

<u>Names given</u>	<u>No. responses</u>	<u>% of total</u>
*barracuda	301	75
needlefish	6	1
bonito	4	1
mackerel	3	<1
(smelt)	3	<1
*barrie	2	<1
sardine	2	<1
spanish mackerel	2	<1
garfish	1	<1
lizardfish	1	<1
needlenose	1	<1
*Pacific barracuda	1	<1
(shark)	1	<1
(shark) or gar	1	<1
snakefish	1	<1

Comments: This fish was well-recognized by the fishermen. Few people misidentified it.

* acceptable as a correct name

() a group name