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**CHECKLIST OF INSHORE DEMERSAL
FISHES FROM SOUTHERN
AND CENTRAL CALIFORNIA**

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Mearns & Allen
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This list was prepared to compare southern California trawl-caught fishes with those caught north of Point Conception. All data are based on otter trawl or beam trawl surveys; sources are listed at the end of the list, along with information on the effort, gear, and depths sampled in each survey.

The list, which simply shows the presence or absence of species, reveals that at least 225 species¹ of fish have been taken by otter trawl in coastal regions of southern and central California. Of these, 185 have been caught in southern California alone; 79 species have been found in both southern and central California waters.

To provide a picture of the present coastal shelf bottom fish communities, the data from 1969-72 southern California trawling surveys (Southern California Coastal Water Research Project 1973) were analyzed to identify recurrent groups (commonly associated species) of fishes. The analysis showed that about one-fifth of the 121 nearshore demersal species found in these surveys appeared in statistically significant associations. Five major groups and six associate species were defined in the analysis; the groups are shown in Figure 1.

With the exception of the yellowchin sculpin (Icelinus quadriseriatus), queenfish (Seriphus politus), blackbelly eelpout (Lycodopsis pacifica), and blacktip poacher (Xeneretmus latifrons), all southern California recurrent group species were also noted in the central California surveys described here. (The latter three species are known to occur at least as far north as northern California; the fact that they were not noted in the central California surveys may be a result of low sampling effort in their depth ranges.)

1. Species marked "UI" (unidentified) on the list were included in the species counts only where they were the only members of the genus taken in the surveys.

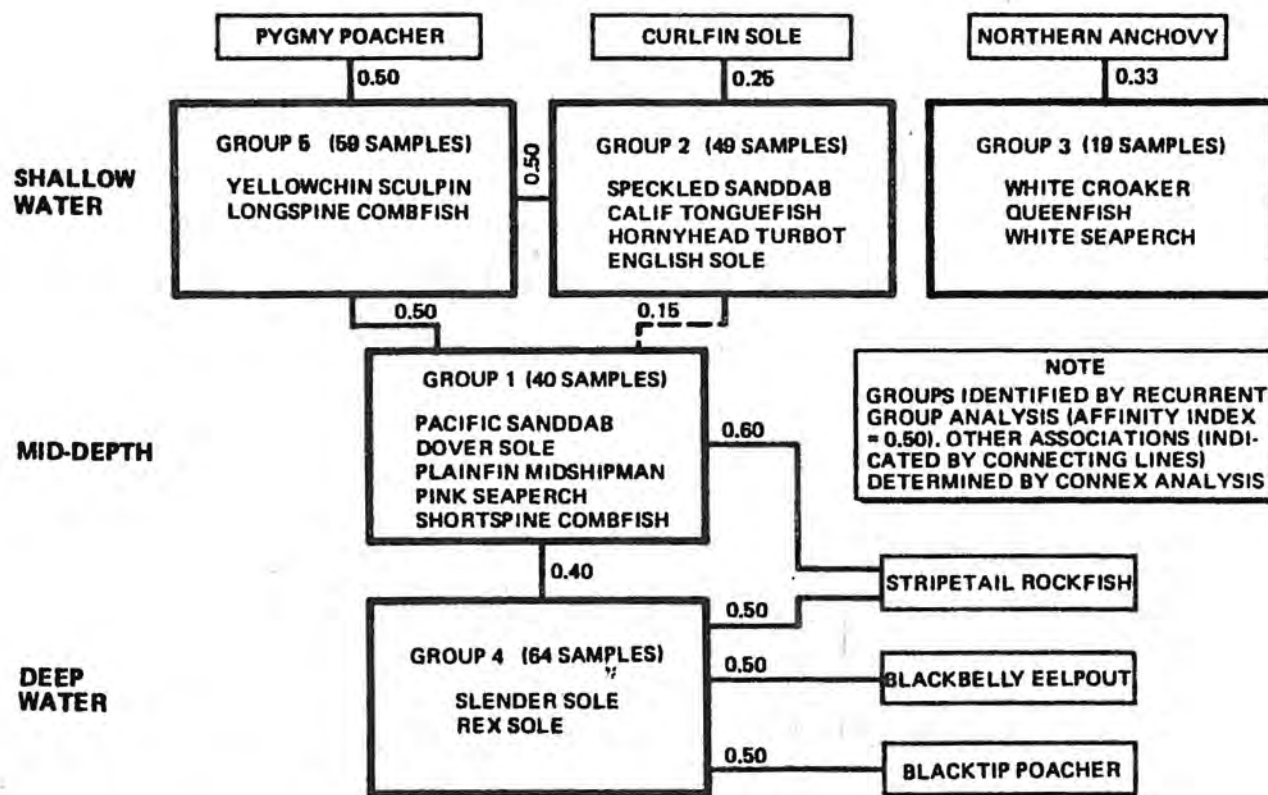


Figure 1. Species Associations of Southern California Nearshore Demersal Fishes, 1969-72.

Species	Southern California						Central California		
	SCCWRP	Carlisle	Babel	Anton Dohrn	UCSB Jow	UCLA	Morro Bay	Mont- erey Bay	San Fran- cisco
Myxinidae									
<u>Eptatretus</u> sp. (UI)*					X				
<u>Eptatretus stouti</u>	X								
Petromyzontidae									
<u>Lampetra ayresi</u>									X
Hexanchidae									
<u>Hexanchus griseus</u>							X		
<u>Notorynchus maculatus</u>									X
Heterodontidae									
<u>Heterodontus francisci</u>	X	X							
Scylliorhinidae									
<u>Apristurus brunneus</u>						X	X		X
<u>Cephaloscyllium ventriosum</u>	X	X			X		X		
<u>Parmaturus xaniurus</u>						X	X	X	X
Carcharhinidae									
<u>Galeorhinus zyopterus</u>			X				X		
<u>Mustelus californicus</u>	X	X	X						
<u>Mustelus henlei</u>	X		X						X
<u>Prionace glauca</u>							X		
<u>Triakis semifasciata</u>			X		X				X
Squalidae									
<u>Squalus acanthias</u>	X	X			X		X	X	X
Squatinae									
<u>Squatina californica</u>	X	X	X		X		X		
Rhinobatidae									
<u>Platyrrhinoidis triseriata</u>	X	X	X		X				
<u>Rhinobatos productus</u>	X	X	X		X				
Torpedinidae									
<u>Torpedo californica</u>	X	X	X		X	X	X	X	X
Rajidae									
<u>Raja binoculata</u>							X	X	X
<u>Raja inornata</u>		X	X		X	X	X	X	
<u>Raja kincaidii</u>	X	X			X	X	X	X	
<u>Raja rhina</u>					X	X	X	X	
<u>Raja stellulata</u>	X					X	X		
Dasyatidae									
<u>Dasyatis dipterura</u>			X						
<u>Gymnura marmorata</u>			X						
<u>Urolophus halleri</u>	X		X						
Myliobatidae									
<u>Myliobatis californica</u>	X		X						X
<u>Hydrolagus colliei</u>	X	X	X		X	X	X	X	
Acipenseridae									
<u>Acipenser medirostris</u>									X
<u>Acipenser transmontanus</u>									X
Nettastomatidae									
<u>Facciolella gilberti</u>					X				
Congridae									
<u>Gnathophis catalinensis</u>	X								
Clupeidae									
<u>Alosa sapidissima</u>								X	X
<u>Clupea harengus pallasii</u>								X	X
<u>Dorosoma petenense</u>									X
<u>Opisthonema medirastre</u>									X
<u>Sardinops sagax</u>									X

*UI = unidentified species.

Species	Southern California						Central California			
	SCCWRP	Carlisle	Babel	Anton Dohrn	UCSB	Jow	UCLA	Morro Bay	Mont- erey Bay	San Fran- cisco
Engraulidae										
<u>Anchoa compressa</u>	X									
<u>Anchoa delicatissima</u>	X									
<u>Engraulis mordax</u>	X	X				X				X
Salmonidae										
<u>Oncorhynchus tshawytscha</u>										X
<u>Salmo gairdneri</u>										X
Osmeridae										
<u>Allosmerus elongatus</u>										X
<u>Hypomesus pretiosus</u>										X
<u>Spirinchus starksi</u>										X
<u>Spirinchus thaleichthys</u>										X
Argentinidae										
<u>Argentina sialis</u>	X	X				X				
Bathylagidae										
<u>Bathylagus milleri</u>						X				
Stomiidae										
<u>Stomias atriventer</u>						X				
Alepocephalidae										
<u>Alepocephalus tenebrosus</u>						X				
Synodontidae										
<u>Synodus lucioceps</u>	X	X		X	X	X				
Myctophidae										
<u>Stenobranchius leucopsarus</u>						X				
Cyprinidae										
<u>Cyprinus carpio</u>										X
Batrachoididae										
<u>Porichthys myriaster</u>	X	X	X		X					
<u>Porichthys notatus</u>	X	X			X	X	X	X	X	X
Gobiesocidae										
<u>Gobiesox rhessodon</u>				X						
Moridae										
<u>Physiculus rastrelliger</u>	X					X				
Merlucciidae										
<u>Merluccius productus</u>	X	X				X	X	X	X	
Gadidae										
<u>Microgadus proximus</u>										X
Ophidiidae										
<u>Brosmophycis marginata</u>		X								
<u>Cataetyx rubrirostris</u>			X		X					
<u>Otophidium scrippsae</u>	X	X			X					
<u>Chilara taylori</u>	X	X			X		X	X	X	
Zoarcidae										
<u>Aprodon cortezianus</u>	X	X				X	X			
<u>Lycodapus sp. (UI)*</u>						X				
<u>Lycodopsis pacifica</u>	X	X				X				
<u>Lyconema barbatum</u>	X	X								
Macrouridae										
<u>Nezumia liolepis</u>						X				
<u>Nezumia stelgidolepis</u>	X					X				
Atherinidae										
<u>Atherinops affinis</u>				X						X
<u>Atherinopsis californiensis</u>										X
Gasterosteidae										
<u>Aulorhynchus flavidus</u>					X					
<u>Gasterosteus aculeatus</u>										X

*UI = unidentified species.

Central
California
Mont-
erey Fran-
cisco

Southern California

Species	SCCWRP	Carlisle	Babel	Anton Dohrn	UCSB	Jow	UCLA	Morro Bay	erey Bay	San Fran- cisco
Syngnathidae										
<u>Syngnathus</u> sp. (UI)*		X			X					
<u>Syngnathus californiensis</u>	X			X						
<u>Syngnathus leptorhynchus</u>				X			+			X
Percichthyidae										
<u>Roccus saxatilis</u>										X
<u>Stereolepis gigas</u>			X							
Serranidae										
<u>Paralabrax clathratus</u>	X	X		X	X					
<u>Paralabrax maculatofasciatus</u>	X									
<u>Paralabrax nebulifer</u>	X	X		X	X	X				
Branchiostegidae										
<u>Caulolatilus princeps</u>	X									
Carangidae										
<u>Trachurus symmetricus</u>								X		
Sciaenidae										
<u>Cynoscion nobilis</u>			X							
<u>Genyonemus lineatus</u>	X	X	X	X	X	X	X			X
<u>Menticirrhus undulatus</u>	X		X		X					
<u>Roncador stearnsi</u>			X							
<u>Seriphus politus</u>	X	X	X	X	X		X			
Kyphosidae										
<u>Medialuna californiensis</u>				X						
Embiotocidae										
<u>Amphistichus argenteus</u>	X		X	X	X					X
<u>Cymatogaster aggregata</u>	X	X	X	X	X	X				X
<u>Embiotoca jacksoni</u>	X	X	X	X	X					X
<u>Embiotoca lateralis</u>										X
<u>Hyperprosopon anale</u>	X				X					
<u>Hyperprosopon argenteum</u>	X	X	X		X					X
<u>Hyperprosopon ellipticum</u>					X					
<u>Hypsurus caryi</u>		X			X					X
<u>Micrometrus minimus</u>				X	X					X
<u>Phanerodon atripes</u>					X					
<u>Phanerodon furcatus</u>	X	X	X	X	X	X				X
<u>Rhacochilus toxotes</u>	X	X								X
<u>Rhacochilus vacca</u>	X	X	X	X		X		X		X
<u>Zalembeus rosaceus</u>	X	X		X	X	X	X	X		
Pomacentridae										
<u>Chromis punctipinnis</u>				X						
Labridae										
<u>Oxyjulis californica</u>				X						
<u>Pimelometopon pulchrum</u>				X						
Bathymasteridae										
<u>Rathbunella</u> sp. (NSP)**	X									
<u>Rathbunella hypoplecta</u>	X	X				X				
Uranoscopidae										
<u>Kathetostoma averruncus</u>	X	X								
Clinidae										
<u>Alloclinus holderi</u>	X									
<u>Cryptotrema corallinum</u>				X						
<u>Gibbonsia elegans</u>					X					
<u>Gibbonsia metzi</u>					X					
<u>Heterostichus rostratus</u>	X	X		X	X					
<u>Neoclinus blanchardi</u>	X	X		X	X					
<u>Neoclinus uninotatus</u>	X									

*UI = unidentified species.

**NSP = new species.

Species	Southern California						Central California			
	SCCWRP	Carlisle	Babel	Anton Dohrn	UCSB	Jow	UCLA	Morro Bay	Mont- erey Bay	San Fran- cisco
Stichaeidae										
<u>Plectobranchnus evides</u>	X	X								
<u>Poroclinus rothrocki</u>		X								
Pholidae										
<u>Apodichthys flavidus</u>					X					
<u>Pholis ornata</u>										X
<u>Ulvicola sanctaerosae</u>					X					
Anarrhichadidae										
<u>Anarrhichthys ocellatus</u>								X		
Ammodytidae										
<u>Ammodytes hexapterus</u>										X
Gobiidae										
<u>Acanthogobius flavimanus</u>										X
<u>Coryphopterus nicholsi</u>	X	X		X						X
<u>Lepidogobius lepidus</u>	X	X		X	X	X				X
<u>Lythrypnus dalli</u>				X						
<u>Lythrypnus zebra</u>				X						
Trichiuridae										
<u>Lepidopus xantusi</u>						X				
Scombridae										
<u>Sarda chiliensis</u>							X			
Stromateidae										
<u>Peprilus simillimus</u>	X	X	X			X		X		X
Scorpaenidae										
<u>Scorpaena guttata</u>	X	X	X	X		X	X			
<u>Sebastes alutus</u>		X								
<u>Sebastes auriculatus</u>		X								X
<u>Sebastes aurora</u>						X	X		X	
<u>Sebastes chlorostictus</u>	X	X			X	X	X		X	
<u>Sebastes constellatus</u>		X								
<u>Sebastes cramerii</u>	X	X				X		X	X	
<u>Sebastes dalli</u>	X	X			X	X				
<u>Sebastes diploproa</u>	X	X				X	X	X	X	
<u>Sebastes elongatus</u>	X	X				X	X	X	X	
<u>Sebastes ensifer</u>							X			
<u>Sebastes entomelas</u>								X	X	
<u>Sebastes eos</u>	X					X	X	X	X	
<u>Sebastes flavidus</u>	X							X	X	
<u>Sebastes goodei</u>	X	X				X	X	X	X	
<u>Sebastes hopkinsi</u>	X									
<u>Sebastes jordani</u>	X	X				X	X	X	X	
<u>Sebastes lentiginosus</u>	X									
<u>Sebastes levis</u>	X	X			X	X		X	X	
<u>Sebastes macdonaldi</u>	X	X								
<u>Sebastes melanostomus</u>	X					X	X	X	X	
<u>Sebastes miniatus</u>	X	X			X	X	X	X	X	
<u>Sebastes mystinus</u>	X							X		
<u>Sebastes ovalis</u>								X	X	
<u>Sebastes paucispinis</u>	X	X				X		X	X	X
<u>Sebastes pinniger</u>									X	
<u>Sebastes rastrelliger</u>					X					
<u>Sebastes rosaceus</u>	X									
<u>Sebastes rosenblatti</u>	X									
<u>Sebastes rubrivinctus</u>	X	X			X	X		X		
<u>Sebastes rufus</u>				X		X				
<u>Sebastes saxicola</u>	X	X		X		X	X	X	X	
<u>Sebastes semicinctus</u>	X	X		X	X	X	X			

Species	Southern California						Central California			
	SCCWRP	Carlisle	Babel	Anton Dohrn	UCSB	Jow	UCLA	Morro Bay	Mont- rey Bay	San Fran- cisco
<u>Sebastes serranoides</u>	X	X						X		
<u>Sebastes serriceps</u>	X							X		
<u>Sebastes umbrosus</u>	X	X				X				
<u>Sebastes vexillaris</u>	X	X			X	X		X		
<u>Sebastes zacentrus</u>		X							X	
<u>Sebastolobus alascanus</u>	X	X				X	X		X	
<u>Sebastolobus altivelus</u>		X				X				
Hexagrammidae										
<u>Hexagrammos stelleri</u>										X
<u>Ophiodon elongatus</u>								X	X	X
<u>Oxylebius pictus</u>	X	X		X				X		
<u>Zaniolepis frenata</u>	X	X		X	X	X	X	X		
<u>Zaniolepis latipinnis</u>	X	X	X		X	X	X			
Anoplopomatidae										
<u>Anoplopoma fimbria</u>	X	X				X	X	X	X	
Cottidae										
<u>Artedius fenestralis</u>										X
<u>Artedius harringtoni</u>					X					
<u>Artedius lateralis</u>										X
<u>Artedius notospilotus</u>		X	X							X
<u>Chitonotus pugetensis</u>	X	X	X	X			X			
<u>Hemilepidotus hemilepidotus</u>										X
<u>Icelinus cavifrons</u>				X						
<u>Icelinus filamentosus</u>	X	X				X				
<u>Icelinus fimbriatus</u>		X								
<u>Icelinus quadriseriatus</u>	X	X		X	X	X	X			
<u>Icelinus tenuis</u>	X	X					X			
<u>Leptocottus armatus</u>	X		X		X					X
<u>Radulinus asprellus</u>	X	X								
<u>Rhamphocottus richardsoni</u>	X	X								
<u>Scorpaenichthys marmoratus</u>		X			X					X
Agonidae										
<u>Agonopsis emmelane</u>		X								
<u>Agonopsis sterletus</u>	X	X		X	X		X			
<u>Asterotheca pentacanthus</u>	X					X	X			
<u>Odontopyxis trispinosa</u>	X	X		X	X		X			X
<u>Stellerina xyosterna</u>					X					X
<u>Xeneretmus latifrons</u>	X	X				X				
<u>Xeneretmus ritteri</u>					X					
<u>Xeneretmus triacanthus</u>	X	X		X	X					
Cyclopteridae										
<u>Careproctus melanurus</u>						X	X			
<u>Liparis mucosus</u>				X						
<u>Liparis pulchellus</u>										X
Bothidae										
<u>Citharichthys sordidus</u>	X	X	X	X	X	X	X	X	X	
<u>Citharichthys stigmaeus</u>	X	X	X	X	X	X	X			X
<u>Citharichthys xanthostigma</u>	X	X		X	X	X	X			
<u>Hippoglossina stomata</u>	X	X	X	X	X	X	X			
<u>Paralichthys californicus</u>	X	X	X	X	X		X			X
<u>Xystreurus liolepis</u>	X	X	X	X	X					
Pleuronectidae										
<u>Atheresthes stomias</u>									X	
<u>Eopsetta jordani</u>	X	X	X			X	X+	X	X	
<u>Glyptocephalus zachirus</u>	X	X				X	X	X	X	
<u>Hippoglossus stenolepis</u>					X			X		
<u>Hypsopsetta guttulata</u>	X	X	X	X	X					X
<u>Isopsetta isolepis</u>							X?			

Species	Southern California							Central California		
	SCCWRP	Carlisle	Babel	<u>Anton</u> <u>Dohrn</u>	UCSB	Jow	UCLA	Morro Bay	Mont- erey Bay	San Fran- cisco
<u>Lepidopsetta bilineata</u>	X						X		X	
<u>Lyopsetta exilis</u>	X	X		X	X	X	X	X	X	
<u>Microstomus pacificus</u>	X	X		X	X	X	X	X	X	
<u>Parophrys vetulus</u>	X	X	X		X	X	X	X	X	X
<u>Platichthys stellatus</u>										X
<u>Pleuronichthys coenosus</u>	X	X			X					
<u>Pleuronichthys decurrens</u>	X	X	X		X	X	X	X	X	X
<u>Pleuronichthys ritteri</u>	X	X	X	X	X		X			
<u>Pleuronichthys verticalis</u>	X	X	X	X	X	X	X	X		X
<u>Psettichthys melanostictus</u>					X					X
Cynoglossidae										
<u>Symphurus atricauda</u>	X	X	X	X	X	X	+			X

DATA SOURCES

SCCWRP

Southern California Coastal Water Research Project. 1973. The ecology of the Southern California Bight: Implications for water quality management. Ch. 7, Coastal fish populations, pp. 193-203. TR104, So. Calif. Coastal Water Res. Proj., El Segundo, Calif.

303 hauls from 119 stations between Point Hueneme and Newport Beach, including Santa Cataline Island, 1969-72.
Gear: 16- to 40-ft otter trawls with $\frac{1}{2}$ - to $1\frac{1}{2}$ -in. stretch mesh cod ends. Depths: 15 to 1,200 ft.

CARLISLE

Carlisle, J. 1969. Results of a six-year trawl study in an area of heavy waste discharge, Santa Monica Bay, California. Calif. Dept. Fish & Game 55:26-46.

705 hauls from quarterly surveys at 39 stations in Santa Monica Bay, 1958-63. Gear: 24-ft semiballon trinet with body of $1\frac{1}{2}$ -in. mesh, No. 18 twine; cod liners of $\frac{1}{4}$ - and $\frac{1}{2}$ -in. mesh. Depths: 60 to 600 ft.

BABEL

Babel, J. S. 1967. Reproduction, life history and ecology of the round stingray, Urolophus halleri Cooper. Calif. Dept. Fish & Game, Fish Bull. 137.

Surveys from Ventura to San Diego. Gear 12- to 18-ft otter trawls with 4-in. mesh.

ANTON DOHRN

Ulrey, A. B., and P. O. Greeley. 1928. A list of the marine fishes of southern California with their distribution. Bull. So. Calif. Acad. Sci. 27(1): 1-53.

Lists 301 southern California (Point Dume to Newport Beach) fishes and gives 50 to 60 known to be captured by trawl, 1912-22. Gear: 5-ft Baldwin beam trawl. Vessel: R/V Anton Dohrn. Depths: 24 to 348 ft.

UCSB

Ebling, A. W., W. Werner, F. A. DeWitt, Sr., and G. M. Cailliet. 1971. Santa Barbara oil spill: Short-term analysis of macroplankton and fish. EPA 15080 EALO 2/71, Univ. of Calif., Santa Barbara.

56 hauls at Santa Barbara and Zuma Beach. Gear: 16-ft otter trawl. Depths: 10 to 240 ft.

JOW

Jow, T. 1969. Cruise report 69-S-5, bottom fish program. Calif. Dept. Fish & Game, Menlo Park (mimeo).

36 hauls between Santa Monica Bay and La Jolla, July-August 1969 (species list obtained by personal communication). Gear: 400-mesh eastern net with 4½-in. webbing and 300-mesh semiballoon net with 3½-in. webbing; ½-in. cod liner. Depths: 150 to 2,460 ft.

UCLA

University of California, Los Angeles. Collection data on file, Dept. of Zoology.

Surveys of southern California areas. Gear: 4-in. and 1½-in. mesh nets. Depths: 42 to 1,320 ft.

MORRO BAY

Heimann, F. G., and D. J. Miller. 1960. The Morro Bay otter trawl and party boat fisheries, August 1957 to September 1958. Calif. Dept. Fish & Game 46:35-58.

Gear: 4-in. mesh trawl nets. Depths: 270 to 960 ft.

MONTEREY BAY

Heimann, F. G. 1963. Trawling in the Monterey Bay area, with special reference to catch composition. Calif. Dept. Fish & Game 49: 152-73.

Gear: 4-in. mesh trawl nets. Depths: 180 to 1,200 ft.

SAN FRANCISCO

Alpin, J. A. 1967. Biological survey of San Francisco Bay, 1963 to 1966. Calif. Dept. Fish & Game, MRO Ref. 67-4.

Surface and bottom trawls at 6 stations. Gear: For surface trawls, 25-ft square-mouth mid-water trawl with four 14-in. doors and ¼-in. stretch cod-end mesh; for 1963 bottom trawls, 10-ft. beam trawl with 10- by 4-ft opening on sled; for 1964-66 bottom trawls, 15-ft otter trawl. Depths: 30 to 50 ft.