

## **Appendix F – Glossary and Nomenclature**

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## F1. Glossary of abbreviations, acronyms, and technical terms used in the Southern California Bight 2003 Regional Survey, July-October 2003.

Term	Definition
ANOVA	Analysis of Variance statistical test
Acc.	Accuracy
AFA	ethyl alcohol-formalin-glacial acetic acid
ASE	Accelerated Solvent Extraction
B03, FSLC	Bight '03 Field Sampling & Logistics Committee
B03, SC	Bight '03 Steering Committee
Bays/Harbors	Subpopulation comprising bays, harbors, marinas, ports, and other bay-like areas of southern California at depths of 2-30 m.
BUNA	A type of rubber that is an elastomeric copolymer of butadiene and acrylonitrile.
CARP-1	A ground whole-fish sample of common carp ( <i>Cyprinus carpio</i> ). Certified values for 14 PCB congeners exist for common carp.
CDF	Cumulative distribution function. Represents the proportion of a population that has an attribute value equal to or less than the observed attribute value (Stevens 1995).
CDFG	California Department of Fish Game
CINMS	Channel Islands National Marine Sanctuary
CLAEMD	City of Los Angeles, Environmental Monitoring Division
Congener (PCB)	One of a possible 209 structural isomers for polychlorinated biphenyls (PCBs) that differ in the number and position of chlorine atoms on the two aromatic rings.
Connex	The proportion of possible positive affinities in a recurrent group analysis.
CRMs	Certified reference materials
CSDLAC	County Sanitation Districts of Los Angeles County
CSDMWWD	City of San Diego, Metropolitan Wastewater Department
CSDOC	County Sanitation Districts of Orange County
CVAA	Cold vapor atomic absorption spectrophotometry
DDE	Dichlorodiphenyldichloroethylene. An organic derivative of DDT.
DDT	Dichlorodiphenyltrichloroethane
DGPS	Differential Global Positioning System
DQOs	Data quality objectives
ectoparasite	A parasite living outside the host's body.
ETOH	ethyl alcohol
FFG	Fish Foraging Guild Index. A biointegrity index.
FID	Requiring further identification
FRI	Fish Response Index. A biointegrity index.
GC-ECD	Gas Chromatography with Electron Capture Detection
GC-MS	Gas Chromatography with Mass Selective Detection
GIS	Geographical Information System
GPS	Global Positioning System
HAA	Hydride generation atomic absorption
IA	Index of Affinity used in recurrent group analysis.
ICP-AES	Inductively coupled plasma atomic emission spectrometry
ID	Inner diameter
IM	Information management
Inner Shelf	Subpopulation occurring along the southern California shelf at depths of 5-30 m.
Intensity	Number of parasites or anomalies on a fish.
MIRI	Megabenthic Invertebrate Response Index. A biointegrity index.
LA/LB Harbor	Los Angeles/Long Beach Harbor
Large POTW	Subpopulation occurring on the middle shelf at large publicly owned treatment work (POTW) outfall areas: CLAEMD, CSDLAC, CSDOC, and CSDMWWD.
MASE	Microwave-Assisted Solvent Extraction
MDS	Multidimensional scaling, which is an ordination analysis similar to factor analysis.
Middle Shelf	Subpopulation occurring on the southern California shelf at depths of 31-120 m.
MS	Matrix spiked samples

## F1. (continued)

Term	Definition
MSD	Matrix Spike duplicates
MS Access 2000	The database application: Microsoft Access 2000
NAS	National Academy of Sciences
NIWQP	(National Irrigation Water Quality Program
NOAA	National Oceanographic and Atmospheric Administration
NW	Northwest
NWFSC	Northwest Fisheries Science Center (of National Marine Fisheries Service)
OCS	Orange County Sanitation District
OEHHA	California Office of Environmental Health Hazard Assessment
Outer Shelf	Subpopulation occurring on the southern California shelf at depths of 121-202 m.
PAA	Parsimony analysis for an "R-mode" approach
PAUP*	Phylogenetic Analysis Using Parsimony (* and other methods)
PCBs	Polychlorinated biphenyls
Prevalence	Percentage of fish that have parasites or anomalies.
POTW	Publicly owned treatment works
QA	Quality assurance
QA/QC	Quality assurance/quality control
QC	Quality control
Q-mode	Cladograms of site groups, showing the association of sites with one another.
R-mode	Cladograms of species groups, showing the association of species with one another.
RPD	Relative percent of difference
SCAMIT	The Southern California Association of Marine Invertebrate Taxonomists
SCB	Southern California Bight
SCBPP	Southern California Bight Pilot Project
SCCWRP	Southern California Coastal Water Research Project
SE	Southeast
SERRA	South East Regional Reclamation Authority
SL	Standard length. The length of a fish measured from the most posterior vertebrae to the tip of the snout.
Small POTW	Subpopulation occurring on the middle shelf at small publicly owned treatment work (POTW) outfall areas: Goleta, Santa Barbara, Oxnard, Terminal Island, Aliso, South East Regional Reclamation Authority (SERRA), Oceanside, Encina, and San Elijo wastewater treatment facilities.
SDTP	Standardized data transfer protocol
SV	Wildlife screening values
TCDD	Tetrachlorodibenzo-p-dioxin
TEF	Toxicity equivalency factor. The relative toxicity of PCBs based on their similarity to TCDD dioxin.
TEQ	Toxicity equivalent quotient. The sum of the products of the PCB congeners and their toxicity equivalency factors (TEFs).
TL	Total length. The length of a fish measured from the furthest extension of the tail to the tip of the snout.
TRI	Trawl Response Index. A biointegrity index.
VIMS	Virginia Institute of Marine Science
UCLA	University of California at Los Angeles
USEPA	United States Environmental Protection Agency

**F2. Alphabetic list by scientific name of demersal fish species collected at depths of 2-476 m on the southern California shelf and upper slope, July-October 2003.**

Species	CommonName
<i>Agonopsis sterletus</i>	southern spearnose poacher
<i>Anarrhichthys ocellatus</i>	wolf-eel
<i>Anchoa delicatissima</i>	slough anchovy
<i>Anoplopoma fimbria</i>	sablefish
<i>Argentina sialis</i>	Pacific argentine
<i>Argyrolepecus affinis</i>	slender hatchetfish
<i>Atherinops affinis</i>	topsmelt
<i>Bathyagonus pentacanthus</i>	bigeye poacher
<i>Bathyraja interrupta</i>	sandpaper skate
<i>Bollmannia gomezii</i>	Colombian goby
<i>Careproctus melanurus</i>	blacktail snailfish
<i>Cataetyx rubrirostris</i>	rubynose brotula
<i>Cephaloscyllium ventriosum</i>	swell shark
<i>Cheilotrema saturnum</i>	black croaker
<i>Chilara taylori</i>	spotted cusk-eel
<i>Chitonotus pugetensis</i>	roughback sculpin
<i>Chromis punctipinnis</i>	blacksmith
<i>Citharichthys fragilis</i>	Gulf sanddab
<i>Citharichthys sordidus</i>	Pacific sanddab
<i>Citharichthys stigmaeus</i>	speckled sanddab
<i>Citharichthys xanthostigma</i>	longfin sanddab
<i>Coryphopterus nicholsii</i> (see <i>Rhinogobiops nicholsii</i> )	
<i>Cryptotrema corallinum</i>	deepwater blenny
<i>Cymatogaster aggregata</i>	shiner perch
<i>Elassodiscus caudatus</i>	humpback snailfish
<i>Embiotoca jacksoni</i>	black perch
<i>Engraulis mordax</i>	northern anchovy
<i>Enophrys taurina</i>	bull sculpin
<i>Eopsetta jordani</i>	petrale sole
<i>Eptatretus stoutii</i>	Pacific hagfish
<i>Facciolella equatorialis</i>	dogface witch eel
<i>Genyonemus lineatus</i>	white croaker
<i>Gibbonsia montereyensis</i>	crevice kelpfish
<i>Glyptocephalus zachirus</i>	rex sole
<i>Gnathophis cinctus</i>	hardtail conger
<i>Gymnura marmorata</i>	California butterfly ray
<i>Heterostichus rostratus</i>	giant kelpfish
<i>Hippoglossina stomata</i>	bigmouth sole
<i>Hydrolagus colliei</i>	spotted ratfish
<i>Hyperprosopon argenteum</i>	walleye surfperch
<i>Hypsurus caryi</i>	rainbow seaperch
<i>Icelinus cavifrons</i>	pit-head sculpin
<i>Icelinus filamentosus</i>	threadfin sculpin
<i>Icelinus fimbriatus</i>	fringed sculpin

**F2. (continued)**

Species	CommonName
<i>Icelinus oculatus</i>	frogmouth sculpin
<i>Icelinus quadriseriatus</i>	yellowchin sculpin
<i>Icelinus tenuis</i>	spotfin sculpin
<i>Ichthyococcus irregularis</i>	bulldog lightfish
<i>Icichthys lockingtoni</i>	medusafish
<i>Ilypnus gilberti</i>	cheekspot goby
<i>Kathetostoma averruncus</i>	smooth stargazer
<i>Lepidogobius lepidus</i>	bay goby
<i>Lepidopsetta bilineata</i>	rock sole
<i>Leptocottus armatus</i>	Pacific staghorn sculpin
<i>Leuroglossus stilbius</i>	California smoothtongue
<i>Lycodes cortezianus</i>	bigfin eelpout
<i>Lycodes diapterus</i>	black eelpout
<i>Lycodes pacificus</i>	blackbelly eelpout
<i>Lyconema barbatum</i>	bearded eelpout
<i>Lyopsetta exilis</i>	slender sole
<i>Menticirrhus undulatus</i>	California corbina
<i>Merluccius productus</i>	Pacific hake
<i>Microstomus pacificus</i>	Dover sole
<i>Myliobatis californica</i>	bat ray
<i>Nezumia stelgidolepis</i>	California grenadier
<i>Odontopyxis trispinosa</i>	pygmy poacher
<i>Ophiodon elongatus</i>	lingcod
<i>Oxylebius pictus</i>	painted greenling
<i>Paralabrax clathratus</i>	kelp bass
<i>Paralabrax maculatofasciatus</i>	spotted sand bass
<i>Paralabrax nebulifer</i>	barred sand bass
<i>Paralichthys californicus</i>	California halibut
<i>Parmaturus xaniurus</i>	filetail cat shark
<i>Parophrys vetulus</i>	English sole
<i>Peprilus simillimus</i>	Pacific pompano
<i>Phanerodon furcatus</i>	white seaperch
<i>Physiculus rastrelliger</i>	hundred-fathom codling
<i>Plectobranchnus evides</i>	bluebarred prickleback
<i>Pleuronichthys coenosus</i>	C-O sole
<i>Pleuronichthys decurrens</i>	curlfin sole
<i>Pleuronichthys guttulatus</i>	diamond turbot
<i>Pleuronichthys ritteri</i>	spotted turbot
<i>Pleuronichthys verticalis</i>	hornyhead turbot
<i>Porichthys myriaster</i>	specklefin midshipman
<i>Porichthys notatus</i>	plainfin midshipman
<i>Prionotus stephanophrys</i>	lumptail searobin
<i>Quietula y-cauda</i>	shadow goby
<i>Radulinus asprellus</i>	slim sculpin
<i>Raja binoculata</i>	big skate

**F2. (continued)**

Species	CommonName
<i>Raja inornata</i>	California skate
<i>Raja rhina</i>	longnose skate
<i>Raja stellulata</i>	starry skate
<i>Rathbunella hypoplecta</i>	bluebanded ronquil
<i>Rhacochilus toxotes</i>	rubberlip seaperch
<i>Rhacochilus vacca</i>	pile perch
<i>Rhinobatos productus</i>	shovelnose guitarfish
<i>Rhinogobiops nicholsii</i> (=Coryphopterus nicholsii)	blackeye goby
<i>Ruscarius creaseri</i>	roughcheek sculpin
<i>Scorpaena guttata</i>	California scorpionfish
<i>Sebastes auriculatus</i>	brown rockfish
<i>Sebastes aurora</i>	aurora rockfish
<i>Sebastes caurinus</i>	copper rockfish
<i>Sebastes chlorostictus</i>	greenspotted rockfish
<i>Sebastes constellatus</i>	starry rockfish
<i>Sebastes dallii</i>	calico rockfish
<i>Sebastes diploproa</i>	splitnose rockfish
<i>Sebastes elongatus</i>	greenstriped rockfish
<i>Sebastes eos</i>	pink rockfish
<i>Sebastes goodei</i>	chilipepper
<i>Sebastes hopkinsi</i>	squarespot rockfish
<i>Sebastes jordani</i>	shortbelly rockfish
<i>Sebastes levis</i>	cowcod
<i>Sebastes macdonaldi</i>	Mexican rockfish
<i>Sebastes miniatus</i>	vermilion rockfish
<i>Sebastes paucispinis</i>	bocaccio
<i>Sebastes rosaceus</i>	rosy rockfish
<i>Sebastes rosenblatti</i>	greenblotched rockfish
<i>Sebastes rubrivinctus</i>	flag rockfish
<i>Sebastes saxicola</i>	stripetail rockfish
<i>Sebastes semicinctus</i>	halfbanded rockfish
<i>Sebastes umbrosus</i>	honeycomb rockfish
<i>Sebastolobus alascanus</i>	shortspine thornyhead
<i>Sebastolobus altivelis</i>	longspine thornyhead
<i>Semicossyphus pulcher</i>	California sheephead
<i>Seriphus politus</i>	queenfish
<i>Stenobranchius leucopsarus</i>	northern lampfish
<i>Stomias atriventer</i>	blackbelly dragonfish
<i>Symphurus atricaudus</i>	California tonguefish
<i>Symphurus oligomerus</i>	whitetail tonguefish
<i>Syngnathus exilis</i>	barcheek pipefish
<i>Syngnathus leptorhynchus</i>	bay pipefish
<i>Synodus lucioceps</i>	California lizardfish
<i>Torpedo californica</i>	Pacific electric ray
<i>Umbrina roncador</i>	yellowfin croaker

**F2. (continued)**

Species	CommonName
<i>Urobatis halleri</i> (= <i>Urolophus halleri</i> )	round stingray
<i>Urolophus halleri</i> (see <i>Urobatis halleri</i> )	
<i>Xeneretmus latifrons</i>	blacktip poacher
<i>Xeneretmus ritteri</i>	stripefin poacher
<i>Xeneretmus triacanthus</i>	bluespotted poacher
<i>Xystreurys liolepis</i>	fantail sole
<i>Zalembeus rosaceus</i>	pink seaperch
<i>Zaniolepis frenata</i>	shortspine combfish
<i>Zaniolepis latipinnis</i>	longspine combfish

**F3. Alphabetic list by common name of demersal fish species collected at depths of 2-476 m on the southern California shelf and upper slope, July-October 2003.**

Species	CommonName
barred sand bass	<i>Paralabrax nebulifer</i>
bat ray	<i>Myliobatis californica</i>
bay goby	<i>Lepidogobius lepidus</i>
bay pipefish	<i>Syngnathus leptorhynchus</i>
bearded eelpout	<i>Lycinema barbatum</i>
big skate	<i>Raja binoculata</i>
bigeye poacher	<i>Bathyagonus pentacanthus</i>
bigfin eelpout	<i>Lycodes cortezianus</i>
bigmouth sole	<i>Hippoglossina stomata</i>
black croaker	<i>Cheilotrema saturnum</i>
black eelpout	<i>Lycodes diapterus</i>
black perch	<i>Embiotoca jacksoni</i>
blackbelly dragonfish	<i>Stomias atriventer</i>
blackbelly eelpout	<i>Lycodes pacificus</i>
blackeye goby	<i>'Rhinogobiops nicholsii (=Coryphopterus nicholsii)</i>
blacksmith	<i>Chromis punctipinnis</i>
blacktail snailfish	<i>Careproctus melanurus</i>
blacktip poacher	<i>Xeneretmus latifrons</i>
bluebanded ronquil	<i>Rathbunella hypoplecta</i>
bluebarred prickleback	<i>Plectobranthus evides</i>
bluespotted poacher	<i>Xeneretmus triacanthus</i>
bocaccio	<i>Sebastes paucispinis</i>
brown rockfish	<i>Sebastes auriculatus</i>
bull sculpin	<i>Enophrys taurina</i>
bulldog lightfish	<i>Ichthyococcus irregularis</i>
calico rockfish	<i>Sebastes dallii</i>
California butterfly ray	<i>Gymnura marmorata</i>
California corbina	<i>Menticirrhus undulatus</i>
California grenadier	<i>Nezumia stelgidolepis</i>
California halibut	<i>Paralichthys californicus</i>
California lizardfish	<i>Synodus lucioceps</i>
California scorpionfish	<i>Scorpaena guttata</i>
California sheephead	<i>Semicossyphus pulcher</i>
California skate	<i>Raja inornata</i>
California smoothtongue	<i>Leuroglossus stilbius</i>
California tonguefish	<i>Symphurus atricaudus</i>
cheekspot goby	<i>Ilypnus gilberti</i>
chilipepper	<i>Sebastes goodei</i>
C-O sole	<i>Pleuronichthys coenosus</i>
Colombian goby	<i>Bollmannia gomezi</i>
CommonName	<i>Species</i>
copper rockfish	<i>Sebastes caurinus</i>
cowcod	<i>Sebastes levis</i>
crevice kelpfish	<i>Gibbonsia montereyensis</i>



### F3. (continued)

Species	CommonName
curlfin sole	<i>Pleuronichthys decurrens</i>
deepwater blenny	<i>Cryptotrema corallinum</i>
diamond turbot	<i>Pleuronichthys guttulatus</i>
dogface witch eel	<i>Facciolella equatorialis</i>
Dover sole	<i>Microstomus pacificus</i>
English sole	<i>Parophrys vetulus</i>
fantail sole	<i>Xystreurys liolepis</i>
filetail cat shark	<i>Parmaturus xaniurus</i>
flag rockfish	<i>Sebastes rubrivinctus</i>
fringed sculpin	<i>Icelinus fimbriatus</i>
frogmouth sculpin	<i>Icelinus oculatus</i>
giant kelpfish	<i>Heterostichus rostratus</i>
greenblotched rockfish	<i>Sebastes rosenblatti</i>
greenspotted rockfish	<i>Sebastes chlorostictus</i>
greenstriped rockfish	<i>Sebastes elongatus</i>
Gulf sanddab	<i>Citharichthys fragilis</i>
halfbanded rockfish	<i>Sebastes semicinctus</i>
hardtail conger	<i>Gnathophis cinctus</i>
honeycomb rockfish	<i>Sebastes umbrosus</i>
hornyhead turbot	<i>Pleuronichthys verticalis</i>
humpback snailfish	<i>Elassodiscus caudatus</i>
hundred-fathom codling	<i>Physiculus rastrelliger</i>
kelp bass	<i>Paralabrax clathratus</i>
lingcod	<i>Ophiodon elongatus</i>
longfin sanddab	<i>Citharichthys xanthostigma</i>
longnose skate	<i>Raja rhina</i>
longspine combfish	<i>Zaniolepis latipinnis</i>
longspine thornyhead	<i>Sebastolobus altivelis</i>
lumptail searobin	<i>Prionotus stephanophrys</i>
medusafish	<i>Icichthys lockingtoni</i>
Mexican rockfish	<i>Sebastes macdonaldi</i>
northern anchovy	<i>Engraulis mordax</i>
northern lampfish	<i>Stenobranchius leucopsarus</i>
Pacific argentine	<i>Argentina sialis</i>
Pacific electric ray	<i>Torpedo californica</i>
Pacific hagfish	<i>Eptatretus stoutii</i>
Pacific hake	<i>Merluccius productus</i>
Pacific pompano	<i>Pepilus simillimus</i>
Pacific sanddab	<i>Citharichthys sordidus</i>
Pacific staghorn sculpin	<i>Leptocottus armatus</i>
painted greenling	<i>Oxylebius pictus</i>
petrale sole	<i>Eopsetta jordani</i>
pile perch	<i>Rhacochilus vacca</i>
pink rockfish	<i>Sebastes eos</i>
pink seaperch	<i>Zalembius rosaceus</i>

### F3. (continued)

Species	CommonName
pit-head sculpin	<i>Icelinus cavifrons</i>
plainfin midshipman	<i>Porichthys notatus</i>
pygmy poacher	<i>Odontopyxis trispinosa</i>
queenfish	<i>Seriphus politus</i>
rainbow seaperch	<i>Hypsurus caryi</i>
rex sole	<i>Glyptocephalus zachirus</i>
rock sole	<i>Lepidopsetta bilineata</i>
rosy rockfish	<i>Sebastes rosaceus</i>
roughback sculpin	<i>Chitonotus pugetensis</i>
roughcheek sculpin	<i>Ruscarius creaseri</i>
round stingray	<i>Urobatis halleri</i> (=Urolophus halleri)
rubberlip seaperch	<i>Rhacochilus toxotes</i>
rubynose brotula	<i>Cataetyx rubrirostris</i>
sablefish	<i>Anoplopoma fimbria</i>
sandpaper skate	<i>Bathyraja interrupta</i>
shadow goby	<i>Quietula y-cauda</i>
shiner perch	<i>Cymatogaster aggregata</i>
shortbelly rockfish	<i>Sebastes jordani</i>
shortspine combfish	<i>Zaniolepis frenata</i>
shortspine thornyhead	<i>Sebastolobus alascanus</i>
shovelnose guitarfish	<i>Rhinobatos productus</i>
slender hatchetfish	<i>Argyropelecus affinis</i>
slender sole	<i>Lyopsetta exilis</i>
slim sculpin	<i>Radulinus asprellus</i>
slough anchovy	<i>Anchoa delicatissima</i>
smooth stargazer	<i>Kathetostoma avertuncus</i>
southern spearnose poacher	<i>Agonopsis sterletus</i>
speckled sanddab	<i>Citharichthys stigmaeus</i>
specklefin midshipman	<i>Porichthys myriaster</i>
splitnose rockfish	<i>Sebastes diploproa</i>
spotfin sculpin	<i>Icelinus tenuis</i>
spotted cusk-eel	<i>Chilara taylori</i>
spotted ratfish	<i>Hydrolagus colliei</i>
spotted sand bass	<i>Paralabrax maculatofasciatus</i>
spotted turbot	<i>Pleuronichthys ritteri</i>
squarespot rockfish	<i>Sebastes hopkinsi</i>
starry rockfish	<i>Sebastes constellatus</i>
starry skate	<i>Raja stellulata</i>
stripefin poacher	<i>Xeneretmus ritteri</i>
stripetail rockfish	<i>Sebastes saxicola</i>
swell shark	<i>Cephaloscyllium ventriosum</i>
threadfin sculpin	<i>Icelinus filamentosus</i>
topsmelt	<i>Atherinops affinis</i>
vermilion rockfish	<i>Sebastes miniatus</i>
walleye surfperch	<i>Hyperprosopon argenteum</i>

**F3. (continued)**

Species	CommonName
white croaker	<i>Genyonemus lineatus</i>
white seaperch	<i>Phanerodon furcatus</i>
whitetail tonguefish	<i>Symphurus oligomerus</i>
wolf-eel	<i>Anarrhichthys ocellatus</i>
yellowchin sculpin	<i>Icelinus quadriseriatus</i>
yellowfin croaker	<i>Umbrina roncador</i>

**F4. Alphabetic list by scientific name of megabenthic invertebrates collected at depths of 2-476 m on the southern California shelf and upper slope, July-October 2003.**

Scientific Name	Common Name
<i>Abietinaria sp</i>	"hydroid"
<i>Acanthodoris brunnea</i>	brown spiny doris
<i>Acanthodoris hudsoni</i>	Hudson spiny doris
<i>Acanthoptilum sp</i>	trailtip sea pen
<i>Actinostola sp A</i>	"anemone"
<i>Adelogorgia phyllosclera</i>	orange gorgonian
<i>Aega lecontii</i>	"isopod"
<i>Aeolidia papillosa</i>	shag-rug aeolis
<i>Aglaophenia sp</i>	"hydroid"
<i>Allocentrotus fragilis</i>	fragile sea urchin
<i>Alpheus bellimanus</i>	olive snapping shrimp
<i>Amphichondrius granulatus</i>	roughdisk brittlestar
<i>Amphiodia psara</i>	"brittlestar"
<i>Amphiodia sp</i>	"brittlestar"
<i>Amphiodia urtica</i>	red brittlestar
<i>Amphipholis squamata</i>	holdfast brittlestar
<i>Amphissa bicolor</i>	two-tone amphissa
<i>Amphiura arcystata</i>	"brittlestar"
<i>Anthoptilum grandiflorum</i>	feather boa sea pen
<i>Antiplanes catalinae</i>	Catalina turrid
<i>Antiplanes thalea</i>	"turrid"
<i>Aphrocallistes vastus</i>	cloud sponge
<i>Aphrodita armifera</i>	copper sea mouse
<i>Aphrodita castanea</i>	chestnut sea mouse
<i>Aphrodita refulgida</i>	green sea mouse
<i>Aphrodita sp</i>	"sea mouse"
<i>Aplysia californica</i>	purple sea hare
<i>Argopecten ventricosus</i>	Pacific calico scallop
<i>Arhynchite californicus</i>	"echiuran"
<i>Armina californica</i>	California armina
<i>Armina sp A</i>	"nudibranch"
<i>Asciacea sp SD2</i>	"tunicate"
<i>Asciacea sp SD3</i>	"tunicate"
<i>Asciacea sp SD4</i>	"tunicate"
<i>Asciacea sp SD5</i>	"tunicate"
<i>Asciacea sp SD6</i>	"tunicate"
<i>Asciacea sp SD7</i>	"tunicate"
<i>Asterina miniata</i>	bat star
<i>Asteronyx longifissus</i>	"ophiuroid"
<i>Astropecten armatus</i>	spiny sand star
<i>Astropecten ornatissimus</i>	orange sand star

**F4. (continued)**

Scientific Name	Common Name
<i>Astropecten</i> sp	"sand star"
<i>Astropecten verrilli</i>	California sand star
<i>Austrotrophon catalinensis</i>	Catalina forreria
<i>Babelomurex oldroydi</i>	Olyroyd coralsnail
<i>Bathypera feminalba</i>	"sea squirt"
<i>Berthella californica</i>	California sidegill slug
<i>Boltenia villosa</i>	spiny-headed tunicate
<i>Boreotrophon bentleyi</i>	"trophon"
<i>Brisaster latifrons</i>	northern heart urchin
<i>Brissopsis pacifica</i>	Pacific heart urchin
<i>Bugula neritina</i>	seaweed bryozoan
<i>Bulla gouldiana</i>	California bubble
<i>Calinaticina oldroydii</i>	delicate moonsnail
<i>Calliostoma gloriosum</i>	glorious topsnail
<i>Calliostoma platinum</i>	silvery topsnail
<i>Calliostoma supragranosum</i>	granulose topsnail
<i>Calliostoma tricolor</i>	tricolor topsnail
<i>Calliostoma turbinum</i>	spindle topsnail
<i>Calliostoma variegatum</i>	variegate topsnail
<i>Calocarides quinqueseriatus</i>	"lobster shrimp"
<i>Cancellaria cooperii</i>	Cooper nutmeg
<i>Cancellaria crawfordiana</i>	Crawford nutmeg
<i>Cancer antennarius</i>	Pacific rock crab
<i>Cancer anthonyi</i>	yellow rock crab
<i>Cancer branneri</i>	furrowed rock crab
<i>Cancer gracilis</i>	graceful rock crab
<i>Cancer jordani</i>	hairy rock crab
<i>Cancer productus</i>	red rock crab
<i>Cancer</i> sp	"rock crab"
<i>Cellaria mandibulata</i>	"bryozoan"
<i>Chama arcana</i>	secret jewelbox
<i>Chlamys hastata</i>	spiny scallop
<i>Chorilia longipes</i>	longhorn decorator crab
<i>Cidarina cidaris</i>	Adam spiny margarite
<i>Ciona intestinalis</i>	yellow-green sea squirt
<i>Ciona</i> sp	"sea squirt"
<i>Coenocyathus bowersi</i>	colonial cup coral
<i>Conus californicus</i>	California cone
<i>Corella willmeriana</i>	icy tunicate
<i>Corynactis californica</i>	strawberry corallimorpharian
<i>Crangon alaskensis</i>	Alaska bay shrimp
<i>Crangon alba</i>	stout crangon
<i>Crangon nigromaculata</i>	blackspotted bay shrimp
<i>Crangon</i> sp	"shrimp"
<i>Crassadoma gigantea</i>	giant rock scallop

#### F4. (continued)

Scientific Name	Common Name
<i>Crassispira semiinflata</i>	California drillia
<i>Crepidula onyx</i>	onyx slippersnail
<i>Crepidatella dorsata</i>	Pacific half-slippersnail
<i>Crossata californica</i>	California frogsnail
<i>Crucibulum spinosum</i>	spiny cup-and-saucer
<i>Cucumaria miniata</i>	orange sea cucumber
<i>Cucumaria piperata</i>	"sea cucumber"
<i>Cucumaria sp</i>	"sea cucumber"
<i>Cucumaria sp C11</i>	"sea cucumber"
<i>Cystodytes lobatus</i>	lobed tunicate
<i>Dendrodorididae</i>	"doris"
<i>Dendronotus iris</i>	giant frond-aeolis
<i>Diaperoforma californica</i>	coralline bryozoan
<i>Diaulula sandiegensis</i>	ringed doris
<i>Doriopsilla albopunctata</i>	salted yellow doris
<i>Doris (=Archidoris) montereyensis</i>	Monterey doris
<i>Dougaloplus amphacanthus</i>	"brittlestar"
<i>Dromalia alexandri</i>	sea dandelion
<i>Enallopaguropsis guatemoci</i>	"right-handed hermit"
<i>Epizoanthus induratus (=Epizoanthus induratum)</i>	luminescent zoanthid
<i>Erato vitellina</i>	appleseed erato
<i>Erileptus spinosus</i>	shortneck pear crab
<i>Eugorgia rubens</i>	purple gorgonian
<i>Euplexaura sp</i>	"sea fan"
<i>Euspira draconis</i>	Drake moonsnail
<i>Euspira lewisii</i>	Lewis moonsnail
<i>Euvola diegensis</i>	San Diego scallop
<i>Filicrisia sp</i>	"bryozoan"
<i>Flabellina iodinea</i>	Spanish shawl
<i>Florometra serratissima</i>	feather star
<i>Forreria belcheri</i>	giant chorus snail
<i>Fusinus barbarensis</i>	Santa Barbara spindle
<i>Galathea californiensis</i>	California squat lobster
<i>Gonatopsis borealis</i>	Boreopacific armhook squid
<i>Gorgonocephalus eucnemis</i>	basket star
<i>Halipteris californica</i>	"sea pen"
<i>Hamatoscalpellum californicum</i>	California blade barnacle
<i>Havelockia bentii</i>	"sea cucumber"
<i>Hemigrapsus oregonensis</i>	yellow shore crab
<i>Hemisquilla californiensis</i>	blueleg mantis shrimp
<i>Henricia aspera</i>	"sea star"
<i>Henricia leviuscula</i>	blood star
<i>Heptacarpus brevirostris</i>	stout coastal shrimp
<i>Heptacarpus palpator</i>	intertidal coastal shrimp
<i>Heptacarpus sp</i>	"coastal shrimp"

#### F4. (continued)

Scientific Name	Common Name
<i>Heptacarpus stimpsoni</i>	Stimpson coastal shrimp
<i>Heptacarpus taylori</i>	Taylor coastal shrimp
<i>Heptacarpus tenuissimus</i>	slender coastal shrimp
<i>Heterocrypta occidentalis</i>	sandflat elbow crab
<i>Heterogorgia sp</i>	"sea fan"
<i>Hippasteria spinosa</i>	spiny red star
<i>Hippodiplosia insculpta</i>	fluted bryozoan
<i>Hippopodina californica</i>	"bryozoan"
<i>Kelletia kelletii</i>	Kellet whelk
<i>Lamellaria diegoensis</i>	San Diego lamellaria
<i>Laqueus californianus</i>	California lamp shell
<i>Lepidozona sinudentata</i>	whitestripe chiton
<i>Leptasterias hexactis</i>	six-arm sea star
<i>Leptopecten latiauratus</i>	kelp scallop
<i>Leucilla nuttingi</i>	urn sponge
<i>Limaria hemphilli</i>	Hemphill fileclam
<i>Liponema brevicornis</i>	tentacle-shedding anemone
<i>Loligo opalescens</i>	California market squid
<i>Lophogorgia chilensis</i>	pink sea whip
<i>Lopholithodes foraminatus</i>	brown box crab
<i>Lophopanopeus bellus</i>	blackclaw crestleg crab
<i>Lophopanopeus frontalis</i>	molarless crestleg crab
<i>Lophopanopeus leucomanus</i>	knobknee crestleg crab
<i>Lophopanopeus sp</i>	"crestleg crab"
<i>Lovenia cordiformis</i>	sea porcupine
<i>Loxorhynchus crispatus</i>	moss crab
<i>Loxorhynchus grandis</i>	sheep crab
<i>Luidia armata</i>	mosaic sand star
<i>Luidia asthenosoma</i>	fringed sand star
<i>Luidia foliolata</i>	gray sand star
<i>Luidia sp</i>	"sand star"
<i>Lytechinus pictus</i>	white sea urchin
<i>Mediaster aequalis</i>	red sea star
<i>Megasurcula carpenteriana</i>	tower snail
<i>Megasurcula stearnsiana</i>	Stearns turrid
<i>Melibe leonina</i>	lion nudibranch
<i>Metacrangon spinosissima</i>	southern spinyhead
<i>Metridium farcimen</i>	gigantic anemone
<i>Microcosmus squamiger</i>	scaly tunicate
<i>Mimulus foliatus</i>	foliate kelp crab
<i>Mitra idae</i>	half-pitted miter
<i>Molgula pugetiensis</i>	"tunicate"
<i>Molgula regularis</i>	"tunicate"
<i>Molgula sp</i>	"tunicate"
<i>Molgula verrucifera</i>	warty tunicate

#### F4. (continued)

Scientific Name	Common Name
<i>Munida quadrispina</i>	northern squat lobster
<i>Munidopsis depressa</i>	"squat lobster"
<i>Musculista senhousia</i>	mat mussel
<i>Mytilus sp</i>	"mussel"
<i>Myxoderma platyacanthum</i>	"sea star"
<i>Nacospatangus laevis</i>	"heart urchin"
<i>Nassarius fossatus</i>	channeled nassa
<i>Nassarius insculptus</i>	smooth western nassa
<i>Nassarius perpinguis</i>	fat western nassa
<i>Nassarius tiarula</i>	western mud nassa
<i>Navanax inermis</i>	California aglaja
<i>Nellobia eusoma</i>	"echiuran"
<i>Neocrangon communis</i>	gray shrimp
<i>Neocrangon resima</i>	flagnose bay shrimp
<i>Neocrangon sp</i>	"shrimp"
<i>Neocrangon sp MEC1</i>	"shrimp"
<i>Neocrangon zacaе</i>	moustache bay shrimp
<i>Neosimnia barbarensis</i>	seapen spindlesnail
<i>Neosimnia loebbeckeana</i>	Loebbeck's simnia
<i>Neosimnia sp</i>	"spindle snail"
<i>Nymphon pixellae</i>	"pycnogonid"
<i>Octopus californicus</i>	orange bigeye octopus
<i>Octopus rubescens</i>	red octopus
<i>Octopus sp</i>	"octopus"
<i>Odontaster crassus</i>	"sea star"
<i>Ophiacantha diplasia</i>	"ophiuroid"
<i>Ophiacantha sp</i>	"ophiuroid"
<i>Ophionereis eurybrachioplax</i>	"brittlestar"
<i>Ophiopholis bakeri</i>	roughspine brittlestar
<i>Ophiopholis longispina</i>	"ophiuroid"
<i>Ophiopteris papillosa</i>	flatspine brittlestar
<i>Ophiosphalma jolliense</i>	"ophiuroid"
<i>Ophiothrix spiculata</i>	Pacific spiny brittlestar
<i>Ophiura luetkenii</i>	broken spine brittlestar
<i>Opisthoteuthis sp A</i>	"squid"
<i>Ostrea sp</i>	"oyster"
<i>Pachygrapsus crassipes</i>	striped shore crab
<i>Paguristes bakeri</i>	digger hermit
<i>Paguristes sp HYP1</i>	"hermit"
<i>Paguristes turgidus</i>	slenderclaw hermit
<i>Paguristes ulreyi</i>	furry hermit
<i>Paguroidea</i>	"hermit"
<i>Pagurus pilocarpus</i>	spotwrist hermit
<i>Pandalus danae</i>	dock shrimp
<i>Pandalus jordani</i>	ocean shrimp
<i>Pandalus platyceros</i>	spot shrimp
<i>Pannychia moseleyi</i>	sea cucumber



#### F4. (continued)

Scientific Name	Common Name
<i>Panulirus interruptus</i>	California spiny lobster
<i>Paraconchavus pacificus</i> (= <i>Balanus pacificus</i> )	Pacific acorn barnacle
<i>Paracyathus stearnsii</i>	brown cup coral
<i>Paralithodes californiensis</i>	California king crab
<i>Paralithodes rathbuni</i>	forknose king crab
<i>Parapagurodes laurentae</i>	spiny palm hermit
<i>Parapagurodes makarovi</i>	smooth palm hermit
<i>Parastichopus californicus</i>	California sea cucumber
<i>Parastichopus parvimensis</i>	warty sea cucumber
<i>Parastichopus</i> sp	"sea cucumber"
<i>Parastichopus</i> sp A	"sea cucumber"
<i>Paraxanthias taylori</i>	lumpy rubble crab
<i>Peltodoris nobilis</i>	"nudibranch"
<i>Pennatula californica</i>	"sea pen"
<i>Pentidotea resecata</i> (= <i>Idotea resecata</i> )	"kelp isopod"
<i>Phidolopora labiata</i>	lacy bryozoan
<i>Philine alba</i>	white paperbubble
<i>Philine auriformis</i>	New Zealand papperbubble
<i>Phimochirus californiensis</i>	porcelainclaw hermit
<i>Pinnixa franciscana</i>	innkeeper pea crab
<i>Pisaster brevispinus</i>	shortspined sea star
<i>Platydoris</i> sp	"nudibranch"
<i>Platymera gaudichaudii</i>	armed box crab
<i>Pleurobranchaea californica</i>	California sea slug
<i>Pleuroncodes planipes</i>	pelagic red crab
<i>Plumularia</i> sp	"seabristle"
<i>Podochela hemphillii</i>	Hemphill kelp crab
<i>Podochela lobifrons</i>	thinbeak neck crab
<i>Pododesmus macrochisma</i>	rock oyster or jingle shell
<i>Polyclinum planum</i>	elephant ear tunicate
<i>Porifera</i>	"sponge"
<i>Porifera</i> sp SD15	"sponge"
<i>Porifera</i> sp SD16	"sponge"
<i>Porifera</i> sp SD2	"sponge"
<i>Porifera</i> sp SD4	"sponge"
<i>Porifera</i> sp SD5	"sponge"
<i>Portunus xantusii</i>	Xantus swimming crab
<i>Protula superba</i>	chalktube worm
<i>Pseudarchaster pusillus</i>	"sea star"
<i>Pseudochama exogyra</i>	reversed chama
<i>Pseudocnus lubricus</i>	"sea cucumber"
<i>Psolidium</i> sp	"sea cucumber"
<i>Psolidium</i> sp SD1	"sea cucumber"
<i>Pteria sterna</i>	Pacific wing-oyster
<i>Pteropurpura festiva</i>	festive murex

#### F4. (continued)

Scientific Name	Common Name
<i>Pteropurpura vokesae</i>	wrinkle-wing murex
<i>Ptilosarcus gurneyi</i>	fleshy sea pen
<i>Pugettia dalli</i>	spined kelp crab
<i>Pugettia producta</i>	northern kelp crab
<i>Pugettia richii</i>	cryptic kelp crab
<i>Pycnopodia helianthoides</i>	sunflower star
<i>Pylopagurus holmesi</i>	"right-handed hermit"
<i>Pyromaia tuberculata</i>	tuberculate pear crab
<i>Randallia ornata</i>	globose sand crab
<i>Rathbunaster californicus</i>	California sun star
<i>Renilla koellikeri</i>	purple sea pansy
<i>Rictaxis painei</i>	barrel snail
<i>Rocinela angustata</i>	"isopod"
<i>Rossia pacifica</i>	eastern Pacific bobtail
<i>Scabrotrophon grovesi</i>	"trophon"
<i>Schizoporella inarmata</i>	"bryozoan"
<i>Schmittius politus</i>	polished mantis shrimp
<i>Sclerasterias heteropaes</i>	banded sea star
<i>Scyra acutifrons</i>	sharpnose crab
<i>Sicyonia ingentis</i>	ridgeback rock shrimp
<i>Spatangus californicus</i>	California heart urchin
<i>Spirontocaris holmesi</i>	slender blade shrimp
<i>Spirontocaris sica</i>	offshore blade shrimp
<i>Stachyptilum superbum</i>	"sea pen"
<i>Stephanauge annularis</i>	signet ring anemone
<i>Stomphia vinosa</i>	"anemone"
<i>Strongylocentrotus franciscanus</i>	red sea urchin
<i>Strongylocentrotus purpuratus</i>	Pacific purple urchin
<i>Styela clava</i>	tuberculate sea squirt
<i>Styela coriacea</i>	pimpled sea squirt
<i>Styela montereyensis</i>	longstalk sea squirt
<i>Styela plicata</i>	cobblestone sea squirt
<i>Styela sp</i>	"sea-squirt"
<i>Stylasterias forreri</i>	fish-eating star
<i>Stylatula elongata</i>	slender sea pen
<i>Suberites suberea</i>	hermitcrab sponge
<i>Taliepus nuttallii</i>	globose kelp crab
<i>Tegula aureotincta</i>	gilded turban
<i>Telesto californica</i>	"soft coral"
<i>Telesto nuttingi</i>	"anemone"
<i>Terebratalia transversa</i>	red lamp shell
<i>Terebratulina crossei</i>	white lamp shell
<i>Terebratulina unguicula</i>	"lamp shell"
<i>Tethya californiana (=Tethya aurantium)</i>	orange ball sponge
<i>Tetilla arb</i>	gray puffball sponge

**F4. (continued)**

Scientific Name	Common Name
<i>Thalamoporella californica</i>	chambered bryozoan
<i>Thalamoporella sp</i>	"bryozoan"
<i>Thesea sp B</i>	yellow sea twig
<i>Thrissacanthias penicillatus</i>	"sea star"
<i>Tochuina tetraquetra</i>	giant orange tochui
<i>Triopha catalinae</i>	sea-clown triopha
<i>Triopha maculata</i>	maculated triopha
<i>Tritonia diomedea</i>	rosy tritonia
<i>Trivia ritteri</i>	"gastropod"
<i>Tubularia crocea</i>	pink-mouth hydroid
<i>Turcica coffea</i>	two-tooth topsnail
<i>Virgularia agassizi</i>	"sea pen"
<i>Virgularia californica</i>	California sea pen
<i>Zooanthidae sp A</i>	"zoanthid"
<i>Zooanthidae sp B</i>	"zoanthid"
<i>Zoobotryon verticillatum</i>	spaghetti moss-animal

**F5. Alphabetic list by common name of megabenthic invertebrates collected at depths of 2-476 m on the southern California shelf and upper slope, July-October 2003.**

Common Name	Scientific Name
"anemone"	<i>Actinostola sp A</i>
"anemone"	<i>Stomphia vinosa</i>
"anemone"	<i>Telesto nuttingi</i>
"brittlestar"	<i>Amphiodia psara</i>
"brittlestar"	<i>Amphiodia sp</i>
"brittlestar"	<i>Amphiura arcystata</i>
"brittlestar"	<i>Dougaloplus amphacanthus</i>
"brittlestar"	<i>Ophionereis eurybrachiplx</i>
"bryozoan"	<i>Cellaria mandibulata</i>
"bryozoan"	<i>Filicrisia sp</i>
"bryozoan"	<i>Hippopodina californica</i>
"bryozoan"	<i>Schizoporella inarmata</i>
"bryozoan"	<i>Thalamoporella sp</i>
"coastal shrimp"	<i>Heptacarpus sp</i>
"crestleg crab"	<i>Lophopanopeus sp</i>
"doris"	<i>Dendrodorididae</i>
"echiuran"	<i>Arhynchite californicus</i>
"echiuran"	<i>Nellobia eusoma</i>
"gastropod"	<i>Trivia ritteri</i>
"heart urchin"	<i>Nacospatangus laevis</i>
"hermit"	<i>Paguristes sp HYP1</i>
"hermit"	<i>Paguroidea</i>
"hydroid"	<i>Abietinaria sp</i>
"hydroid"	<i>Aglaophenia sp</i>
"isopod"	<i>Aega lecontii</i>
"isopod"	<i>Rocinela angustata</i>
"kelp isopod"	<i>Pentidotea resecata</i>
"lamp shell"	<i>Terebratulina unguicula</i>
"lobster shrimp"	<i>Calocarides quinqueseriatu</i>
"long sea pen"	<i>Virgulariidae</i>
"mussel"	<i>Mytilus sp</i>
"nudibranch"	<i>Armina sp A</i>
"nudibranch"	<i>Peltodoris nobilis</i>
"nudibranch"	<i>Platydoris sp</i>
"octopus"	<i>Octopus sp</i>
"ophiuroid"	<i>Asteronyx longifissus</i>
"ophiuroid"	<i>Ophiacantha diplasia</i>
"ophiuroid"	<i>Ophiacantha sp</i>
"ophiuroid"	<i>Ophiopholis longispina</i>
"ophiuroid"	<i>Ophiosphalma jolliense</i>
"oyster"	<i>Ostrea sp</i>
"pyncgonid"	<i>Nymphon pixellae</i>
"right-handed hermit"	<i>Enallopaguroopsis guatemoci</i>

**F5. (continued)**

Common Name	Scientific Name
"right-handed hermit"	<i>Pylopagurus holmesi</i>
"rock crab"	<i>Cancer sp</i>
"sand star"	<i>Astropecten sp</i>
"sand star"	<i>Luidia sp</i>
"sea anemone"	<i>Anthozoa</i>
"sea cucumber"	<i>Cucumaria piperata</i>
"sea cucumber"	<i>Cucumaria sp</i>
"sea cucumber"	<i>Cucumaria sp C11</i>
"sea cucumber"	<i>Havelockia bentii</i>
"sea cucumber"	<i>Parastichopus sp</i>
"sea cucumber"	<i>Parastichopus sp A</i>
"sea cucumber"	<i>Pseudocnus lubricus</i>
"sea cucumber"	<i>Psolidium sp</i>
"sea cucumber"	<i>Psolidium sp SD1</i>
"sea fan"	<i>Euplexaura sp</i>
"sea fan"	<i>Heterogorgia sp</i>
"sea mouse"	<i>Aphrodita sp</i>
"sea pen"	<i>Halipteris californica</i>
"sea pen"	<i>Pennatula californica</i>
"sea pen"	<i>Stachytilum superbum</i>
"sea pen"	<i>Virgularia agassizi</i>
"sea squirt"	<i>Bathypora feminalba</i>
"sea squirt"	<i>Ciona sp</i>
"sea star"	<i>Henricia aspera</i>
"sea star"	<i>Myxoderma platyacanthum</i>
"sea star"	<i>Odontaster crassus</i>
"sea star"	<i>Pseudarchaster pusillus</i>
"sea star"	<i>Thrissacanthias penicillatus</i>
"seabristle"	<i>Plumularia sp</i>
"sea-squirt"	<i>Styela sp</i>
"shrimp"	<i>Crangon sp</i>
"shrimp"	<i>Neocrangon sp</i>
"shrimp"	<i>Neocrangon sp MEC1</i>
"slim sea pen"	<i>Virgularia sp</i>
"soft coral"	<i>Telesto californica</i>
"spindle snail"	<i>Neosimnia sp</i>
"sponge"	<i>Porifera</i>
"sponge"	<i>Porifera sp SD15</i>
"sponge"	<i>Porifera sp SD16</i>
"sponge"	<i>Porifera sp SD2</i>
"sponge"	<i>Porifera sp SD4</i>
"sponge"	<i>Porifera sp SD5</i>
"squat lobster"	<i>Munidopsis depressa</i>
"squid"	<i>Opisthoteuthis sp A</i>
"trophon"	<i>Boreotrophon bentleyi</i>

**F5. (continued)**

Common Name	Scientific Name
"trophon"	<i>Scabrotrophon grovesi</i>
"tunicate"	<i>Asciaceae sp SD2</i>
"tunicate"	<i>Asciaceae sp SD3</i>
"tunicate"	<i>Asciaceae sp SD4</i>
"tunicate"	<i>Asciaceae sp SD5</i>
"tunicate"	<i>Asciaceae sp SD6</i>
"tunicate"	<i>Asciaceae sp SD7</i>
"tunicate"	<i>Molgula pugetiensis</i>
"tunicate"	<i>Molgula regularis</i>
"tunicate"	<i>Molgula sp</i>
"tunicates"	<i>Asciaceae</i>
"turrid"	<i>Antiplanes thalea</i>
"zoanthid"	<i>Zooanthidae sp A</i>
"zoanthid"	<i>Zooanthidae sp B</i>
Adam spiny margarite	<i>Cidarina cidaris</i>
Alaska bay shrimp	<i>Crangon alaskensis</i>
appleseed erato	<i>Erato vitellina</i>
armed box crab	<i>Platymera gaudichaudii</i>
banded sea star	<i>Sclerasterias heteropaes</i>
barrel snail	<i>Rictaxis painei</i>
basket star	<i>Gorgonocephalus eucnemis</i>
bat star	<i>Asterina miniata</i>
blackclaw crestleg crab	<i>Lophopanopeus bellus</i>
blackspotted bay shrimp	<i>Crangon nigromaculata</i>
blood star	<i>Henricia leviuscula</i>
blueleg mantis shrimp	<i>Hemisquilla californiensis</i>
Boreopacific armhook squid	<i>Gonatopsis borealis</i>
brokenspine brittlestar	<i>Ophiura luetkenii</i>
brown box crab	<i>Lopholithodes foraminatus</i>
brown cup coral	<i>Paracyathus stearnsii</i>
brown spiny doris	<i>Acanthodoris brunnea</i>
California aglaja	<i>Navanax inermis</i>
California armina	<i>Armina californica</i>
California blade barnacle	<i>Hamatoscalpellum californicum</i>
California bubble	<i>Bulla gouldiana</i>
California cone	<i>Conus californicus</i>
California drillia	<i>Crassispira semiinflata</i>
California frogsnail	<i>Crossata californica</i>
California heart urchin	<i>Spatangus californicus</i>
California king crab	<i>Paralithodes californiensis</i>
California lamp shell	<i>Laqueus californianus</i>
California market squid	<i>Loligo opalescens</i>
California sand star	<i>Astropecten verrilli</i>
California sea cucumber	<i>Parastichopus californicus</i>
California sea pen	<i>Virgularia californica</i>

**F5. (continued)**

Common Name	Scientific Name
California sea slug	<i>Pleurobranchaea californica</i>
California sidegill slug	<i>Berthella californica</i>
California spiny lobster	<i>Panulirus interruptus</i>
California squat lobster	<i>Galathea californiensis</i>
California sun star	<i>Rathbunaster californicus</i>
Catalina forreria	<i>Austrotrophon catalinensis</i>
Catalina turrid	<i>Antiplanes catalinae</i>
chalktube worm	<i>Protula superba</i>
chambered bryozoan	<i>Thalamoporella californica</i>
channeled nassa	<i>Nassarius fossatus</i>
chestnut sea mouse	<i>Aphrodita castanea</i>
cloud sponge	<i>Aphrocallistes vastus</i>
cobblestone sea squirt	<i>Styela plicata</i>
colonial cup coral	<i>Coenocyathus bowersi</i>
Cooper nutmeg	<i>Cancellaria cooperii</i>
copper sea mouse	<i>Aphrodita armifera</i>
coralline bryozoan	<i>Diaperoforma californica</i>
Crawford nutmeg	<i>Cancellaria crawfordiana</i>
cryptic kelp crab	<i>Pugettia richii</i>
delicate moonsnail	<i>Calinaticina oldroydii</i>
digger hermit	<i>Paguristes bakeri</i>
dock shrimp	<i>Pandalus danae</i>
Drake moonsnail	<i>Euspira draconis</i>
eastern Pacific bobtail	<i>Rossia pacifica</i>
elephant ear tunicate	<i>Polyclinum planum</i>
fat western nassa	<i>Nassarius perpinguis</i>
feather boa sea pen	<i>Anthoptilum grandiflorum</i>
feather star	<i>Florometra serratissima</i>
festive murex	<i>Pteropurpura festiva</i>
fish-eating star	<i>Stylasterias forreri</i>
flagnose bay shrimp	<i>Neocrangon resima</i>
flatspine brittlestar	<i>Ophiopteris papillosa</i>
fleshy sea pen	<i>Ptilosarcus gurneyi</i>
fluted bryozoan	<i>Hippodiplosia insculpta</i>
foliate kelp crab	<i>Mimulus foliatus</i>
forknose king crab	<i>Paralithodes rathbuni</i>
fragile sea urchin	<i>Allocentrotus fragilis</i>
fringed sand star	<i>Luidia asthenosoma</i>
furrowed rock crab	<i>Cancer branneri</i>
furry hermit	<i>Paguristes ulreyi</i>
giant chorus snail	<i>Forreria belcheri</i>
giant frond-aeolis	<i>Dendronotus iris</i>
giant orange tochui	<i>Tochuina tetraquetra</i>
giant rock scallop	<i>Crassadoma gigantea</i>
gigantic anemone	<i>Metridium farcimen</i>

**F5. (continued)**

Common Name	Scientific Name
gilded turban	<i>Tegula aureotincta</i>
globose kelp crab	<i>Taliepus nuttallii</i>
globose sand crab	<i>Randallia ornata</i>
glorious topsnail	<i>Calliostoma gloriosum</i>
graceful rock crab	<i>Cancer gracilis</i>
granulose topsnail	<i>Calliostoma supragranosum</i>
gray puffball sponge	<i>Tetilla arb</i>
gray sand star	<i>Luidia foliolata</i>
gray shrimp	<i>Neocrangon communis</i>
green sea mouse	<i>Aphrodita refulgida</i>
hairy rock crab	<i>Cancer jordani</i>
half-pitted miter	<i>Mitra idae</i>
Hemphill fileclam	<i>Limaria hemphilli</i>
Hemphill kelp crab	<i>Podochela hemphillii</i>
hermitcrab sponge	<i>Suberites suberea</i>
holdfast brittlestar	<i>Amphipholis squamata</i>
Hudson spiny doris	<i>Acanthodoris hudsoni</i>
icy tunicate	<i>Corella willmeriana</i>
innkeeper pea crab	<i>Pinnixa franciscana</i>
intertidal coastal shrimp	<i>Heptacarpus palpator</i>
Kellet whelk	<i>Kelletia kelletii</i>
kelp scallop	<i>Leptopecten latiauratus</i>
knobknee crestleg crab	<i>Lophopanopeus leucomanus</i>
lacy bryozoan	<i>Phidolopora labiata</i>
Lewis moonsnail	<i>Euspira lewisii</i>
lion nudibranch	<i>Melibe leonina</i>
lobed tunicate	<i>Cystodytes lobatus</i>
Loebbeck's simnia	<i>Neosimnia loebbeckeana</i>
longhorn decorator crab	<i>Chorilia longipes</i>
longstalk sea squirt	<i>Styela montereyensis</i>
luminescent zoanthid	<i>Epizoanthus induratus</i>
lumpy rubble crab	<i>Paraxanthias taylori</i>
maculated triopha	<i>Triopha maculata</i>
mat mussel	<i>Musculista senhousia</i>
molarless crestleg crab	<i>Lophopanopeus frontalis</i>
Monterey doris	<i>Doris montereyensis</i>
mosaic sand star	<i>Luidia armata</i>
moss crab	<i>Loxorhynchus crispatus</i>
moustache bay shrimp	<i>Neocrangon zacae</i>
New Zealand papperbubble	<i>Philine auriformis</i>
northern heart urchin	<i>Brisaster latifrons</i>
northern kelp crab	<i>Pugettia producta</i>
northern squat lobster	<i>Munida quadrispina</i>
ocean shrimp	<i>Pandalus jordani</i>
offshore blade shrimp	<i>Spirontocaris sica</i>



**F5. (continued)**

Common Name	Scientific Name
olive snapping shrimp	<i>Alpheus bellimanus</i>
Olyroyd coralsnail	<i>Babelomurex oldroydi</i>
onyx slippersnail	<i>Crepidula onyx</i>
orange ball sponge	<i>Tethya californiana</i>
orange bigeye octopus	<i>Octopus californicus</i>
orange gorgonian	<i>Adelogorgia phyllosclera</i>
orange sand star	<i>Astropecten ornatissimus</i>
orange sea cucumber	<i>Cucumaria miniata</i>
Pacific acorn barnacle	<i>Paraconcaucus pacificus</i>
Pacific calico scallop	<i>Argopecten ventricosus</i>
Pacific half-slippersnail	<i>Crepidatella dorsata</i>
Pacific heart urchin	<i>Brissopsis pacifica</i>
Pacific purple urchin	<i>Strongylocentrotus purpuratus</i>
Pacific rock crab	<i>Cancer antennarius</i>
Pacific spiny brittlestar	<i>Ophiothrix spiculata</i>
Pacific wing-oyster	<i>Pteria sterna</i>
pelagic red crab	<i>Pleuroncodes planipes</i>
pimpled sea squirt	<i>Styela coriacea</i>
pink sea whip	<i>Lophogorgia chilensis</i>
pink-mouth hydroid	<i>Tubularia crocea</i>
polished mantis shrimp	<i>Schmittius politus</i>
porcelainclaw hermit	<i>Phimochirus californiensis</i>
purple gorgonian	<i>Eugorgia rubens</i>
purple sea hare	<i>Aplysia californica</i>
purple sea pansy	<i>Renilla koellikeri</i>
red brittlestar	<i>Amphiodia urtica</i>
red lamp shell	<i>Terebratalia transversa</i>
red octopus	<i>Octopus rubescens</i>
red rock crab	<i>Cancer productus</i>
red sea star	<i>Mediaster aequalis</i>
red sea urchin	<i>Strongylocentrotus franciscanus</i>
reversed chama	<i>Pseudochama exogyra</i>
ridgeback rock shrimp	<i>Sicyonia ingentis</i>
ringed doris	<i>Diaulula sandiegoensis</i>
rock oyster or jingle shell	<i>Pododesmus macrochisma</i>
rosy tritonia	<i>Tritonia diomedea</i>
roughdisk brittlestar	<i>Amphichondrius granulatus</i>
roughspine brittlestar	<i>Ophiopholis bakeri</i>
salted yellow doris	<i>Doriopsilla albopunctata</i>
San Diego lamellaria	<i>Lamellaria diegoensis</i>
San Diego scallop	<i>Euvola diegensis</i>
sandflat elbow crab	<i>Heterocrypta occidentalis</i>
Santa Barbara spindle	<i>Fusinus barborensis</i>
scaly tunicate	<i>Microcosmus squamiger</i>
sea cucumber	<i>Pannychia moseleyi</i>

**F5. (continued)**

Common Name	Scientific Name
sea dandelion	<i>Dromalia alexandri</i>
sea porcupine	<i>Lovenia cordiformis</i>
sea-clown triopha	<i>Triopha catalinae</i>
seapen spindlesnail	<i>Neosimnia barbarensis</i>
seaweed bryozoan	<i>Bugula neritina</i>
secret jewelbox	<i>Chama arcana</i>
shag-rug aeolis	<i>Aeolidia papillosa</i>
sharpnose crab	<i>Scyra acutifrons</i>
sheep crab	<i>Loxorhynchus grandis</i>
shortneck pear crab	<i>Erileptus spinosus</i>
shortspined sea star	<i>Pisaster brevispinus</i>
signet ring anemone	<i>Stephanauge annularis</i>
silvery topsnail	<i>Calliostoma platinum</i>
six-arm sea star	<i>Leptasterias hexactis</i>
slender blade shrimp	<i>Spirontocaris holmesi</i>
slender coastal shrimp	<i>Heptacarpus tenuissimus</i>
slender sea pen	<i>Stylatula elongata</i>
slenderclaw hermit	<i>Paguristes turgidus</i>
smooth western nassa	<i>Nassarius insculptus</i>
smoothpalm hermit	<i>Parapagurodes makarovi</i>
southern spinyhead	<i>Metacrangon spinosissima</i>
spaghetti moss-animal	<i>Zoobotryon verticillatum</i>
Spanish shawl	<i>Flabellina iodinea</i>
spindle topsnail	<i>Calliostoma turbinum</i>
spined kelp crab	<i>Pugettia dalli</i>
spiny cup-and-saucer	<i>Crucibulum spinosum</i>
spiny red star	<i>Hippasteria spinosa</i>
spiny sand star	<i>Astropecten armatus</i>
spiny scallop	<i>Chlamys hastata</i>
spiny-headed tunicate	<i>Boltenia villosa</i>
spiny palm hermit	<i>Parapagurodes laurentae</i>
spot shrimp	<i>Pandalus platyceros</i>
spotwrist hermit	<i>Pagurus spilocarpus</i>
Stearns turrid	<i>Megasurcula stearnsiana</i>
Stimpson coastal shrimp	<i>Heptacarpus stimpsoni</i>
stout coastal shrimp	<i>Heptacarpus brevirostris</i>
stout crangon	<i>Crangon alba</i>
strawberry corallimorpharian	<i>Corynactis californica</i>
striped shore crab	<i>Pachygrapsus crassipes</i>
sunflower star	<i>Pycnopodia helianthoides</i>
Taylor coastal shrimp	<i>Heptacarpus taylori</i>
tentacle-shedding anemone	<i>Liponema brevicornis</i>
thinbeak neck crab	<i>Podocheila lobifrons</i>
tower snail	<i>Megasurcula carpenteriana</i>
trailtip sea pen	<i>Acanthoptilum sp</i>

**F5. (continued)**

Common Name	Scientific Name
tricolor topsnail	<i>Calliostoma tricolor</i>
tuberculate pear crab	<i>Pyromaia tuberculata</i>
tuberculate sea squirt	<i>Styela clava</i>
two-tone amphissa	<i>Amphissa bicolor</i>
two-tooth topsnail	<i>Turcica caffee</i>
urn sponge	<i>Leucilla nuttingi</i>
variegate topsnail	<i>Calliostoma variegatum</i>
warty sea cucumber	<i>Parastichopus parvimensis</i>
warty tunicate	<i>Molgula verrucifera</i>
western mud nassa	<i>Nassarius tiarula</i>
white lamp shell	<i>Terebratulina crossei</i>
white paperbubble	<i>Philine alba</i>
white sea urchin	<i>Lytechinus pictus</i>
whitestripe chiton	<i>Lepidozona sinudentata</i>
wrinkle-wing murex	<i>Pteropurpura vokesae</i>
Xantus swimming crab	<i>Portunus xantusii</i>
yellow rock crab	<i>Cancer anthonyi</i>
yellow sea twig	<i>Thesea sp B</i>
yellow shore crab	<i>Hemigrapsus oregonensis</i>
yellow-green sea squirt	<i>Ciona intestinalis</i>