

Log of the Deep Sea

Macro-invertebrates of deep waters

Class	Subclass	Species	Depth (meters)	San Marcial	Las Ánimas	Marisla	San Dieguito	El Cochi	annotations		
PORIFERA		<i>Acanthascus</i> sp.	180–400			X			✓		
		<i>Farrea</i> sp.	180–400			X			✓		
		Class Hexactinellida sp.	200–400			X			✓		
CNIDARIA	Hidrozoa	Suborder Conica sp.1	200–300			X					
		Suborder Conica sp.2	200–300			X					
		<i>Tubularia</i> sp.	80–160			X					
	Octocorallia	<i>Anthomastus</i> sp.	200–400			X			✓		
		<i>Paragorgia</i> sp.	170–400			X			✓		
		<i>Eugorgia</i> n. sp.	60–120			X	X		★		
		<i>Leptogorgia</i> n. sp.	60–140			X	X		★H		
		<i>Leptogorgia chilensis</i>	60–120			X	X		✓H		
		<i>Pacifigorgia gracilis</i>	20–60	X		X			↓		
		<i>Pacifigorgia</i> n. sp.2	50–70			X	X		★		
		<i>Muricea fruticosa</i>	20–100	X	X	X			↓H		
		<i>Muricea</i> n. sp.3	60–150			X	X		★		
		<i>Heterogorgia verrucosa</i>	50–80	X	X	X			↓H		
		<i>Psammogorgia teres</i>	50–100			X	X		↓		
		<i>Ellisella limbaughi</i>	60–150			X	X		H		
		<i>Cavernulina</i> sp.	60					X	✓		
		<i>Ptilosarcus</i> sp.	100			X	X		H		
		<i>Virgularia</i> sp.	60–100	X	X						
		Order Pennatulacea sp.	100	X		X			✓		
		Hexacorallia	cf. <i>Antiparactis</i> sp.	60–120			X	X		S	
	<i>Epizoanthus</i> sp.		50–100	X	X	X			↓		
	Family Dendrophylliidae sp.1		150–300				X				
		Family Dendrophylliidae sp.2	150–300				X				
	Family Dendrophylliidae sp.3	150–300									
	<i>Antipathes galapagensis</i>	50–120	X	X	X			↓H			
	<i>Miyriopathes</i> cf. <i>ulex</i>	50–150			X	X		★			
ANNELIDA	Polychaeta	<i>Chloeia</i> sp.	200			X			C		
		<i>Paleonotus</i> sp.	200			X			C		
		<i>Eunice vittata</i>	200			X			C		
		Family Nereididae sp.	200			X	X		C		
		<i>Aricia pacifica</i>	200			X			C		
		<i>Eulalia bilineata</i>	200			X			C		
		Subfamily Harmothoinae sp.	200			X	X		C		
		<i>Syllis armillaris</i>	200			X			C		
		<i>Loimia medusa</i>	200			X			C		
		<i>Eupolymnia</i> sp.	200			X			C		
		<i>Thelepus</i> sp.	200			X			C		
		<i>Pista</i> sp.	200			X			C		
		<i>Thelepodinae</i> sp.	200			X			C		
		MOLLUSCA	Gastropoda	<i>Hexaplex</i> sp.	60			X			
				<i>Hytissa hyotis</i>	50–100		X	X			↓
<i>Megathura crenulata</i>	150–200					X			✓		
<i>Neosimnia</i> cf. <i>barbarensis</i>	100					X			S		
	Order Opisthobranchia sp.1	100			X			★			
CRUSTACEA	Cephalopoda	<i>Octopus rubescens</i>	50–150	X	X	X					
	Caridea	<i>Chacella tricornuta</i>	50–100						↓S		
		Subfamily Pontiinae n. sp.1	60–140			X	X		★S		
		Subfamily Pontiinae n. sp.2	60–140			X	X		★S		
		<i>Alpheus bellimanus</i>	100			X					
	Anomura	<i>Munida mexicana</i>	100–200			X	X				
		Family Galatheididae sp.	50–200	X	X	X					
	Brachyura	<i>Maiopsis pamamensis</i>	60–300			X					
		<i>Stenorhynchus</i> sp.	50–200			X	X				
		<i>Stenorhynchus debilis</i>	100			X					
	Cirripedia	<i>Oxynaspis</i> cf. <i>rossi</i>	50–150			X	X				
ECHINODERMATA	Asteroidea	<i>Amphiaster insignis</i>	20–190	X	X						
		<i>Astropecten ornatissimus</i>	190–295			X	X				
		<i>Henricia</i> sp.	190			X					
		<i>Henricia clarkii</i>	190–200			X					
		<i>Henricia nana</i>	170–200			X					
		<i>Luidia ludwigi</i>	190	X							
	<i>Luidia phragma</i>	190	X								

		<i>Narcissia gracilis</i>	75–190	X	X			
		<i>Coronaster marchenus</i>	75–190		X	X		
		<i>Tethyaster gigas</i>	295			X		
	Ophiuroidea	<i>Astrodictyum panamense</i>	60		X			
		<i>Astrocaneum spinosum</i>	190	X				
		<i>Ophiacantha sp</i>	170–180			X		
		<i>Ophiacantha sp.1</i>	170			X		
		<i>Ophiacantha sp.2</i>	170			X		
		<i>Ophiacantha n. sp.</i>	190			X		★
		<i>Ophiactis sp.</i>	200			X		
		<i>Ophiolephis crassa</i>	190	X				
		<i>Ophiostigma sp.1</i>	200			X		
		<i>Ophiostigma sp.2</i>	170			X		
		<i>Ophiothela mirabilis</i>	75–170				X	X
		<i>Ophiothrix galapagensis</i>	100–170		X	X		
		Order Ophiurida n. sp	170–200			X		★
	Echinoidea	<i>Hesperocidaris perplexa</i>	190–295		X	X		
		<i>Metalia espatangus</i>	190		X	X		
	Holothuroidea	Order Aspidochirotida	190			X		
		<i>Holothuria zacaе</i>	100–190	X		X		X

★ New species

↕ Extension of depth range

✓ New record for the Gulf of California

H Symbiotic host

S Symbiont (symbiotic guest)

C Associated to black coral exoskeleton

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Log of the Deep Sea

Macro-invertebrates of shallow waters

Class	Subclass	Species	Depth (meters)	San Marcial	El Danzante	Las Ánimas	Marisla	San Dieguito	El Cochi	annotations
PORIFERA		<i>Aplysina cf. fistularis</i>	5–20	X	X			X		H
		<i>Aplysina gerardogreeni</i>	20–40	X		X	X	X	X	H
CNIDARIA	Hydrozoa	<i>Aglaophenia</i> sp.	5–20	X	X	X	X	X	X	
		<i>Lytocarpus nuttingi</i>	5–30	X	X	X	X	X		
		<i>Obelia</i> sp.	10–20	X		X			X	
		<i>Plumularia</i> sp.	5–30					X		
		<i>Janaria mirabilis</i>	20–50	X	X	X	X		X	H
	Octocorallia	<i>Eugorgia auriantiaca</i>	20–30			X	X		X	H
		<i>Eugorgia multifida</i>	10–30	X		X	X			
		<i>Eugorgia rubens</i>	5–10		X			X		
		<i>Leptogorgia rigida</i>	0–10			X		X		H
		<i>Pacifigorgia agassizii</i>	10–30	X		X	X	X	X	
		<i>Pacifigorgia media</i>	15–50	X		X		X		
		<i>Pacifigorgia gracilis</i>	20–50	X		X				
		<i>Pacifigorgia</i> n. sp.1	10–30	X		X	X			★
		<i>Muricea appressa</i>	15–50	X		X	X		X	
		<i>Muricea austera</i>	10–40	X	X	X	X		X	
		<i>Muricea fruticosa</i>	20–50	X		X	X			H
		<i>Muricea</i> n. sp.1	20–50	X		X	X			★
		<i>Muricea</i> n. sp.2	30–40	X						★
		<i>Heterogorgia verrucosa</i>	20–50	X		X	X			H
		<i>Psammogorgia teres</i>	20–50	X		X				
	Hexacorallia	<i>Epizoanthus</i> sp.	20–50			X	X		X	
		<i>Pavona gigantea</i>	5–20	X	X	X				
		<i>Pocillopora elegans</i>	5–20	X	X	X	X	X		
		<i>Porites panamensis</i>	5–20		X	X	X	X	X	
		<i>Tubastrea coccinea</i>	10–40	X		X	X	X		
		<i>Antipathes galapagensis</i>	20–50	X		X	X		X	H
ANNELIDA	Polychaeta	Family Amphinomidae sp.	5–40		X	X	X	X		
		<i>Eurythoe complanata</i>	5–40		X	X				
		<i>Chloeia viridis</i>	15–40			X				
		Family Cirratulidae sp.	5–40		X	X		X		
		Family Dorvilleidae sp.	15–40			X		X		
		Family Eunicidae sp.1	5–40	X	X	X	X	X	X	
		Family Eunicidae sp.2	5–40	X	X	X	X	X	X	
		Family Flabelligeridae sp.	20–40			X				
		Family Glyceridae sp.	20–40			X		X		
		Family Hesionidae sp.	20–40	X		X		X		
		Family Maldanidae sp.	10–20						X	
		Family Nereididae sp.1	surface							epitoke1
		Family Nereididae sp.2	surface							epitoke2
		Family Nereididae sp.3	10–40			X		X	X	
		Family Oeonidae sp.	20–40			X		X		
		Family Onuphidae sp.	5–40	X	X	X	X	X	X	
		Family Phyllodocidae sp.	15–40	X		X	X	X	X	
		Family Pilargidae sp.	15–40	X		X				
		Family Polynoidae sp.1	5–40	X	X	X	X	X	X	
		Family Polynoidae sp. 2	10		X					S
		<i>Bispira monroi</i>	5–30		X	X		X	X	
		Family Sabellidae sp.1	5–40	X	X	X	X	X	X	
		Family Sabellidae sp.2	5–40	X	X	X	X	X	X	
		<i>Salmacina</i> sp.	5–15		X			X		
		Family Serpulidae sp.1	5–30		X	X	X			
		Family Sigalionidae sp.	5–40		X	X				
		Family Spionidae sp.	5–40		X	X				
		Family Syllidae sp.	5–40	X	X	X	X	X	X	
		Family Terebellidae sp.	5–40		X	X	X	X		
MOLLUSCA	Bivalvia	<i>Hyotissa hyotis</i>	20–50	X		X	X			
		<i>Ostrea</i> sp.	10–20	X	X	X	X			
		<i>Pinctada mazatlanica</i>	0–15		X			X	X	H
		<i>Pinna rugosa</i>	10–20		X			X	X	
		<i>Pteria sterna</i>	20–50	X		X	X			
		<i>Spondylus calcifer</i>	0–15		X	X		X		
	Gastropoda	<i>Conus</i> sp.	10		X	X		X		
		<i>Epidendrium billeeanum</i>	10–30	X		X	X	X		S
		<i>Hexaples princeps</i>	20–40	X		X	X	X	X	
		<i>Melanella townsendi</i>	10–30	X	X	X	X			S
		<i>Neosimnia aequalis</i>	0–10			X		X		S

CRUSTACEA	Stomatopoda Caridea	<i>Phestilla melanobrachia</i>	10–30			X	X			S	
		<i>Thais</i> sp.	20	X		X		X	X		
		<i>Thyca callista</i>	0–20	X	X	X		X		S	
		<i>Tylodina fungina</i>	0–10		X	X				S	
		<i>Neogonadactylus zacaе</i>	10					X			
		<i>Allopontonia iaini</i>	15–20			X				S	
		<i>Alpheus lottini</i>	5–20	X	X	X	X	X		S	
		<i>Chacella tricornuta</i>	20–50	X	X	X	X			S	
		<i>Fennera chacei</i>	5–20	X	X	X	X			S	
		<i>Harpiliopsis depressa</i>	5–20	X	X	X	X	X		S	
		<i>Harpiliopsis spinigera</i>	5–20	X	X	X	X	X		S	
		<i>Palaemonella</i> cf. <i>asymmetrica</i>	20							X	
		<i>Periclimenes soror</i>	5–20			X	X			S	
		<i>Pomagnathus corallinus</i>	5–20	X	X	X	X			S	
		<i>Pontonia margarita</i>	5–10		X	X	X			S	
		<i>Pseudoveronia laevifrons</i>	10–40	X		X	X			S	
		<i>Synalpheus</i> sp.	10					X			
		<i>Synalpheus charon</i>	5–20	X	X	X	X			S	
		<i>Tuleariocaris holthuisi</i>	10–30			X	X			S	
		Anomura	<i>Aniculus elegans</i>	20–40		X	X				
			<i>Manucomplanus varians</i>	20–50	X	X	X	X		X	S
			<i>Panulirus inflatus</i>	10–40		X	X				
		Brachyura	<i>Hapalocarcinus marsupialis</i>	5–20	X	X	X	X			S
			<i>Microphrys branchialis</i>	5		X					
			<i>Paractea sulcata</i>	10					X		
			<i>Percnon gibbesi</i>	20–40			X		X		
			<i>Pilumnus</i> sp.	30	X						
			<i>Podochela veleronis</i>	10					X		
			<i>Quadrella nitida</i>	20–100	X	X	X	X			S
			<i>Trapezia corallina</i>	5–20	X	X	X	X	X		S
			<i>Trapezia bidentata</i>	5–20	X	X	X	X	X		S
			ECHINODERMATA	Asteroidea	<i>Acanthaster planci</i>	5–10		X			
		<i>Amphiaster insignis</i>			30			X			
		<i>Asteropsis spinosa</i>			5–10		X				
		<i>Astrometis sertulifera</i>			10–30			X			X
		<i>Heliaster kubiniji</i>			5–10		X				
		<i>Mithrodia bradleyi</i>			5–10		X			X	
<i>Narcissia gracilis</i>	5–30				X	X					
<i>Nidorellia armata</i>	10–30	X				X		X	X		
<i>Pentacaster cumingi</i>	30	X									
<i>Pharia pyramidatus</i>	5–30	X			X			X	X		
<i>Phataria unifascialis</i>	20–30	X				X					
<i>Leiaster teres</i>	10–30	X						X	X		
Ophiuroidea	<i>Astrocaneum spinosum</i>	30					X				
	<i>Ophiacantha</i> n. sp.	30						X		★	
	<i>Ophiactis</i> sp.	5–10				X					
	<i>Ophiactis simplex</i>	20–30			X		X	X			
	<i>Ophiactis savignyi</i>	5–30			X	X	X	X	X		
	<i>Ophiocoma alexandri</i>	5–10			X						
	<i>Ophioderma</i> n. sp.	10						X	★		
	<i>Ophioderma vansyoci</i>	30				X					
	<i>Ophioderma variegatum</i>	10–30				X		X			
	<i>Ophionereis perplexa</i>	5–10			X			X			
Echinoidea	<i>Ophionereis annulata</i>	5–10			X			X			
	<i>Ophiothela mirabilis</i>	30				X					
	<i>Ophiothrix spiculata</i>	30					X				
	<i>Arbacia incisa</i>	5–30			X		X				
	<i>Eucidaris thouarsii</i>	5–30			X		X	X			
	<i>Diadema mexicana</i>	5–30			X		X				
	<i>Hesperocidaris perplexa</i>	30					X				
	<i>Toxopneustes roseus</i>	10–30		X				X			
	<i>Tripneustes ventricosus</i>	5–10			X						
	<i>Brissus obesus</i>	10–20				X		X			
Holothuroidea	<i>Lovenia cordiformis</i>	10–10					X				
	<i>Euapta godeffroyi</i>	5–10			X						
	<i>Holothuria arenicola</i>	5–10			X						
	<i>Holothuria fuscocinerea</i>	5–10			X						
	<i>Holothuria imitans</i>	10						X			
	<i>Holothuria impatiens</i>	10–20			X		X	X			
	<i>Holothuria inhabilis</i>	5–10		X		X					
	<i>Isostichopus fuscus</i>	5–40	X	X	X	X					
	UROCHORDATA	Ascidae	<i>Eudistoma pachecae</i>	10–60	X		X	X			

★ New species

H Symbiotic host

S Symbiont (symbiotic guest)

Log of the Deep Sea Fishes

Order	Family	Species	Depth (meters)	San Marcial	Las Ánimas	Marisla	San Dieguito	El Cochi
Anguilliformes	Congridae	<i>Ariosoma gilberti</i>	100	X				X
		<i>Paraconger californiensis</i>	70				X	
	Ophichthidae	<i>Bascanichthys cylindricus</i>	120		X			
		<i>Pisodonophis daspilotus</i>	150	X				
		<i>Quassiremus notochir</i>	50–80	X	X			
Aulopiformes	Synodontidae	<i>Synodus evermanni</i>	90–180	X	X	X		
Carcharhiniformes	Carcharhinidae	<i>Carcharinus limbatus</i>	10–15		X			
	Scylirhinidae	<i>Cephaloscyllium ventriosum</i>	100–200		X	X		
Gadiformes	Moridae	<i>Physiculus rastrelliger</i>	100–200	X		X		
Lamniformes	Alopiidae	<i>Alopias</i> sp.	10–15				X	
Lophiiformes	Antennariidae	<i>Antennarus avalonis</i>	100–200			X		
	Lophiidae	<i>Lophiodes caulinaris</i>	100–200	X		X		
		<i>Lophiodes spilurus</i>	100–200	X	X	X		
		<i>Ophidiidae</i> n. sp.	120–200			X		
Ophidiiformes	Ophidiidae	<i>Ophidiidae</i> n. sp.	120–200			X		
Perciformes	Apogonidae	<i>Apogon pacificus</i>	50–90	X	X	X		
	Callinimidae	<i>Synchiropus atrilabiatus</i>	100–150		X	X		X
	Carangidae	<i>Caranx caballus</i>	100				X	
		<i>Seriola rivoliana</i>	30–200		X	X		
	Chaetodontidae	<i>Prognathodes falcifer</i>	50–200		X	X		X
	Embiotocidae	<i>Zalemnius rosaceus</i>	90–150					X
	Labridae	<i>Decodon melasma</i>	80–220	X	X	X		X
		<i>Halichoeres raisneri</i>	80–120	X				
		<i>Semicossyphus pulcher</i>	50–150		X	X		X
		<i>Hoplopagrus guentheri</i>	100					X
	Lutjanidae	<i>Lutjanus argentiventris</i>	10–90		X	X		X
		<i>Lutjanus guttatus</i>	100–120				X	
		<i>Lutjanus peru</i>	40–80		X			
	Malacanthidae	<i>Caulolatilus affinis</i>	80–150	X	X			X
	Mullidae	<i>Mulloidichthys dentatus</i>	5–110	X	X	X		
	Muraenidae	<i>Muraena argus</i>	80–120	X		X		
	Ophistognathidae	<i>Ophistognathidae</i> n. sp.	100		X			
	Pomacentridae	<i>Chromis limbaughi</i>	120					X
	Priacanthidae	<i>Pristigenys serrula</i>	120–250	X	X	X		X
	Serranidae	<i>Diplectrum</i> sp.	50–120		X	X		
		<i>Epinephelus niphobles</i>	100–250			X		
		<i>Hemanthias signifer</i>	150–210	X	X	X		X
		<i>Liopropoma multifasciatum</i>	20–100		X	X		X
		<i>Mycteroperca jordani</i>	100					X
		<i>Mycteroperca prionura</i>	20–90		X	X		
		<i>Mycteroperca rosacea</i>	5–100					X
		<i>Paralabrax auroguttatus</i>	30–120					X
		<i>Paranthias colonus</i>	5–120	X	X	X		X
		<i>Pronotogrammus multifasciatus</i>	100–250	X	X	X		X
Pleuronectiformes	Paralichthyidae	<i>Cyclopsetta panamensis</i>	120			X		
		<i>Syacium ovale</i>	90	X				X
Rajiformes	Myliobathidae	<i>Mobula</i> sp.	220			X		
	Narcinae	<i>Diplobatis ommata</i>	100–150					X
	Rajidae	<i>Raja inornata</i>	180			X		
		<i>Rhinobatidae</i>	<i>Zapteryx exasperata</i>	30–200	X	X	X	X
	Urobatidae	<i>Urobatis concentricus</i>	5–120	X	X	X	X	X
		<i>Urobatis maculatus</i>	90					X
Scorpaeniformes	Scorpaenidae	<i>Pontinus clemensi</i>	250			X		
		<i>Pontinus furcirhinus</i>	80–250	X	X	X		X
		<i>Scorpaena histrio</i>	80–200	X	X	X		
		<i>Scorpaena mystes</i>	5–100	X	X	X	X	X
	Triglidae	<i>Bellator xenisma</i>	100–150	X	X	X		