

Species List for Puerto Penasco

Here is a list of organisms you are likely to see during your visit to Rocky Point. Try to recognize phylum characteristics as you observe the organisms. Also try to decipher feeding methods, type of prey, body symmetry and defensive strategies. You can glean much information through careful observation of living animals on the reef; reference books in the CEDO library are another resource. Pay attention to animal behavior at night versus the day. The marked (Z1-Z4) organisms are zone indicator organisms; they indicate that you are in a particular elevation, or zone, in the intertidal set by the physical and biological factors that a species can tolerate. Zonation can be seen as a wide horizontal band of color on the reef.

Domain Eubacteria**KINGDOM MONERA****Phylum Cyanophyta (blue green bacteria)**cyanobacteria *Calothrix sp.***Domain Eukaryotes****KINGDOM PROTISTA****Division Phaeophyta (brown algae)**sargassum *Sargassum sp.*
zone fan algae *Padina durvillaei*
dictyota *Dictyota sp.*
bubble gum algae *Colpomenia sp.***Division Rhodophyta (red algae)**encrusting coralline algae *Lithophyllum sp.*
branched coralline algae *Amphiroa sp. & Jania sp.***Division Chlorophyta (green algae)**dead man's fingers *Codium sp.*
green turf algae *Cladophora sp.*
sea lettuce *Caulerpa sp.***KINGDOM ANIMALIA****Phylum Porifera (sponges)**boring sponge *Cliona celata*
white cored sponge *Geodina mesotriaena*
wandering sponge *Haliclona permollis*
slime sponge *Halisarca sp.*
bread crumb sponge *Leucetta losangelensis*
red spired sponge *Tedania nigrescens*
furrowed sponge *Ophlitaspongia pennata*
golf ball sponge *Tethya aurantia***Phylum Cnidaria, Class Hydrozoa (hydroids)**ostrich-plume hydroids *Aglaophenia diegensis*
stinging hydroids *Lytocarus nuttingi*
samurai hydroids *Samuraia tabularasa***Phylum Cnidaria, Class Anthozoa (corals & anemones)**naked warty anemone *Bunodosoma californica*
brown carpet anemone Z4 *Palythoa ignota*
collared anemone *Phyllactis bradleyi*
green colonial anemone *Zoanthus danae*
emerald coral *Porites californica***Phylum Platyhelminthes (flatworms)**slender grey flatworm *Alleena mexicana*
mexican skirt dancer *Pseudoceros mexicanus***Phylum Annelida (segmented worms)**feather duster worm *Bispira rugosa*
fire worm *Eurythoe complanata*
small spiral tube worm *Spirobis marioni***Phylum Mollusca, Class Polyplacophora (chitons)**green chiton *Chiton virgulatus*
black chiton *Chiton stokesii***Phylum Mollusca, Class Gastropoda (snails and slugs)**angelic tooth snail *Acanthina angelica*
panamic slender olive *Agaronia testacea*
speckled cerith *Cerithium maculosum*
fly-speck cerith *Cerithium stercusmuscarum*
inflated dove *Columbella fuscata*
periwinkle ***Littorina aspera***
miter snail *Mitrella guttata*
nerite *Nerita fumiculata*
pygmy olive *Olivella dama*
Marian's top snail *Tegula mariana*
wrinkled top snail *Tegula rugosa*
rock thais *Thais biserialis*
turban snail *Turbo fluctuosus*
tower snail *Turritella leucostoma*
coraline snail *Morula ferruginosa*
ringed limpet *Collisella acutapex*
keyhole limpet *Diodora inequalis*
apricot slug *Berthelina illisima*
california sea hare *Aplysia californica***Phylum Mollusca, Class Bivalvia (clam, mussel, oyster)**ark shell *Arca pacifica*
jewel box *Chama mexicana*
horse mussel *Modiolus capax*
oyster *Ostrea sp.*
swimming clam *Lima pacifica*
ringed clam *Chione sp.*
multicolored clam *Protothaca grata***Phylum Mollusca, Class Cephalopoda (octopus, squid)**twin-spotted octopus *Octopus bimaculatus*
small red octopus *Octopus fitchii*
cholla-bay octopus *Octopus digueti*

Phylum Arthropoda (barnacles, crabs, shrimp, isopods, amphipods)

small barnacle Z3	<i>Chthamalus anisopoma</i>
thatched roof barnacle Z2	<i>Tetraclita stalactifera</i>
rock louse	<i>Ligia occidentalis</i>
bread crumb sponge isopod	<i>Paracerceis sculpta</i>
beach pill bug Z1	<i>Tylos punctatus</i>
pistol shrimp	<i>Alpheus sp.</i>
tide pool shrimp	<i>Palaemon ritteri</i>
red-fingered hermit crab	<i>Clibanarius digueti</i>
lumpy claw crab	<i>Eriphia squamata</i>
porcelain crab	<i>Petrolisthes sp.</i>
small fiddler crab	<i>Uca crenulata</i>
blue fiddler crab	<i>Uca princeps</i>

Phylum Echinodermata, Class Asteroidea (seastars)

Heliaster	<i>Heliaster kubinijiil</i>
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Phylum Echinodermata, Class Ophiuroidea (brittle stars)

black spiny brittle star	<i>Ophiocoma aethiops</i>
banded brittle star	<i>Ophiocoma alexandrii</i>
ringed brittle star	<i>Ophionereis annulata</i>
panamic brittle star	<i>Ophioderma panamense</i>

Phylum Echinodermata, Class Echinoidea (urchins)

purple sea urchin	<i>Echinometra vanbrunti</i>
pencil urchin	<i>Eucidaris thouarsii</i>

Phylum Echinodermata, Class Holothuroidea (sea cucumbers)

sulphur sea cucumber	<i>Holothuria lubrica</i>
giant sea cucumber	<i>Isostichopus fuscus</i>
sandy sea cucumber	<i>Holothuria inhabilis</i>
bottled sea cucumber	<i>Holothuria impatiens</i>
transparent sea cucumber	<i>Chiridonta aponocrita</i>

Phylum Bryozoa (bryozoans)

black bryozoan	<i>Waterspora sp.</i>
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Phylum Chordata (chordates)

sergeant major	<i>Abedefduf trochelli</i>
tidepool clingfish	<i>Gobiesox pinniger</i>
sonoran goby	<i>Gobiosoma chiquita</i>
bay blenny	<i>Hypsoblennius gentilis</i>
tunicates	many

Vocabulary

Three domains of life (eubacteria, archaeobacteria, eukaryotes)
Five Kingdoms (Monera, Protista, Animalia, Fungi, Plantae)
basalt
coquina (lithified rock)
cyanobacteria
zonation
desiccation
herbivore
omnivore
carnivore
detritivore
chlorophyll A
fucoxanthin

phycobillins
calcium carbonate
holdfast
blade
stipe
pneumatocyst
nematocyst
filter feeder
isopod
spicules
polyp
asexual reproduction
clone
colonial
zooxanthellae
dinoflagellate
bilateral symmetry
radial symmetry
operculum
byssal threads
beak
cheliped
moultling
regeneration
encrusting
water vascular system
tube feet
pentaradial symmetry
Aristotle's lantern
evisceration
buccal podia
suspension feeding
neoteny
exoskeleton
anomuran crab
brachyuran crab
notochord
hollow dorsal nerve cord
foot
radula
setae
segments
parapodia
polychaete
mixed semi-diurnal tides
mucus - uses of in marine habitats

Life History Stories

bread crumb sponge and isopods
samurai hydroid invasion, barnacles, limpets,
algae and indirect effects between species
nerite snail and lumpy claw arms race
angelic tooth snail and bent vs. straight *Chthamalus*
Palythoa (brown carpet anemone) and zooxanthellae
Heliaster, coralline snails, keystone species, El Nino
Conservation of sea cucumber *Isostichopus*