



the OREGON NEARSHORE STRATEGY



Appendices E - G



2016



Oregon Department
of Fish and Wildlife



OregonConservationStrategy.org

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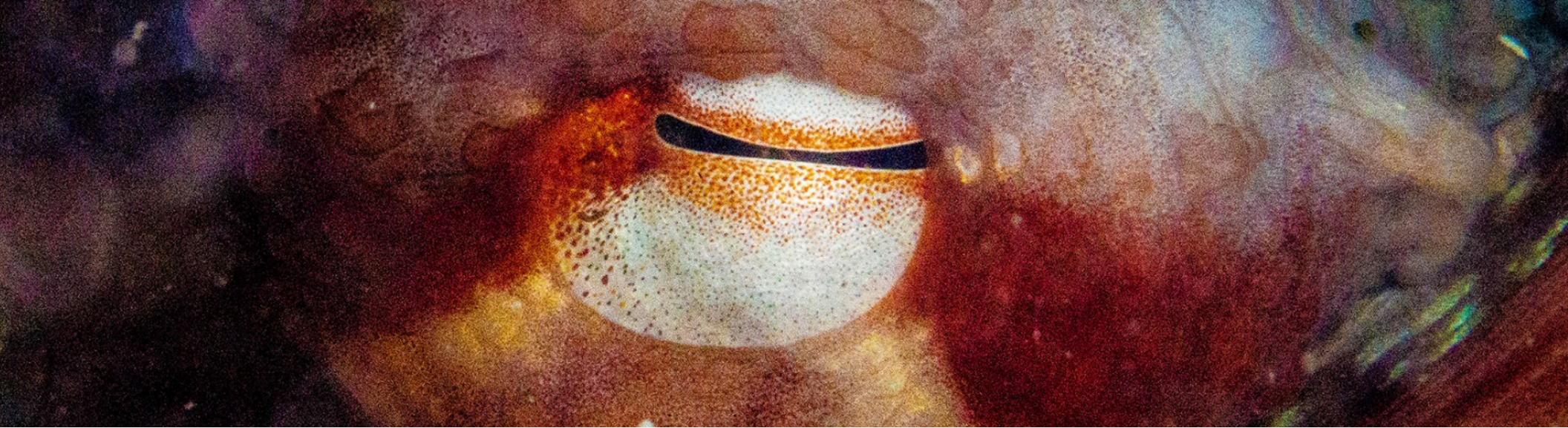


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NEARSHORE APPENDICES E - G

NEARSHORE APPENDIX E: WATCH LIST SPECIES HABITAT ASSOCIATIONS

Watch List Species	Rocky Shore	Sandy Beach	Rocky Subtidal	Soft Bottom Subtidal	Neritic	Estuarine	Habitat Unknown	Comments
Brandt's Cormorant <i>Phalacrocorax penicillatus</i>	X		X	X	X	X		Utilizes rocky cliffs and islands for nesting. Forages in nearshore habitats.
Cassin's Auklet <i>Ptychoramphus aleuticus</i>	X			X				Nests in burrows on offshore islands with no mammalian predators.

Watch List Species	Rocky Shore	Sandy Beach	Rocky Subtidal	Soft Bottom Subtidal	Neritic	Estuarine	Habitat Unknown	Comments
Common Murre <i>Uria aalge</i>	X		X	X	X	X		Central place forager while nesting in colonies on rocky headlands and offshore islands. Can dive deeply while foraging
Pelagic Cormorant <i>Phalacrocorax pelagicus</i>	X		X		X			Utilizes rocky cliffs and islands for nesting. Forages in nearshore habitats.
Pigeon Guillemot <i>Cephus columba</i>	X		X	X	X			Nests in burrows or crevices. Forages in nearshore habitats.
Sanderling <i>Calidris alba</i>		X						Forages in intertidal areas during migration.
Rhinoceros Auklet <i>Cerohinca monocerata</i>	X				X			Nests in burrows on offshore islands. Forages in nearshore waters while nesting.
Black-and-yellow rockfish <i>Sebastes chrysomelas</i>	X		X		X			Spawning not known to occur in OR waters. Juveniles not known to occur over soft bottom habitats in OR.
Blue shark <i>Prionace glauca</i>					X			Predominately found offshore.
Bocaccio <i>Sebastes paucispinis</i>			X	X	X	X	X	
Brown Irish lord <i>Hemilepidotus spinosus</i>	X		X					Mid to low intertidal.
Brown smoothhound <i>Mustelus henlei</i>				X		X		Found from Coos Bay to Gulf of CA. Schooling fish.
Buffalo sculpin <i>Enophrys bison</i>			X	X				Usually found inshore.

Watch List Species	Rocky Shore	Sandy Beach	Rocky Subtidal	Soft Bottom Subtidal	Neritic	Estuarine	Habitat Unknown	Comments
Butter sole <i>Isopsetta isolepis</i>				X				
California halibut <i>Paralichthys californicus</i>				X				Usually near structures: rocks, holdfasts, etc.
California skate <i>Raja inornata</i>				X		X		
Common thresher <i>Alopias vulpinus</i>					X			Likely to be highly migratory.
Curlfin turbot (sole) <i>Pleuronichthys decurrens</i>				X				Also called Curlfin sole; true turbot native to North Atlantic and Mediterranean.
English sole <i>Parophrys vetulus</i>		X		X		X		Juveniles found predominately nearshore. Adults found predominately offshore.
Flathead sole <i>Hippoglossoides elassodon</i>				X				
Giant wrymouth <i>Cryptacanthodes giganteus</i>				X				
Gopher rockfish <i>Sebastes carnatus</i>	X		X	X	X			Will inhabit artificial reefs. Pelagic juveniles not known to occur in OR waters. Spawning and larvae not known to occur in OR.
Leopard shark <i>Triakis semifasciata</i>			X	X		X		Schooling fish. Predominately found nearshore.
Monkeyface pricklepack <i>Cebidichthys violaceus</i>	X		X					High, mid, and low intertidal. Tidepools and shallow subtidal. Jetties and breakwaters. Central OR is northern extent of range.

Watch List Species	Rocky Shore	Sandy Beach	Rocky Subtidal	Soft Bottom Subtidal	Neritic	Estuarine	Habitat Unknown	Comments
Pacific angel shark <i>Squatina californica</i>			X	X				Uncommon north of CA.
Pacific sanddab <i>Citharichthys sordidus</i>				X		X		
Pacific sandfish <i>Trichodon trichodon</i>				X				
Pacific sardine <i>Sardinops sagax</i>					X			Schooling fish. Occurs offshore.
Pacific staghorn sculpin <i>Leptocottus armatus</i>		X		X		X		Most common in estuaries. Recently hatched fish often recruit into fresh water for a short time.
Red Irish lord <i>Hemilepidotus hemilepidotus</i>	X		X					Mid to low intertidal. Wharves and pilings.
Rock sole <i>Pleuronectes bilineatus</i>				X				Prefers sandy or gravel bottoms.
Salmon shark <i>Lamna ditropis</i>					X			
Sand sole <i>Psettichthys melanostictus</i>				X				
Shortfin mako (Bonito) shark <i>Isurus oxyrinchus</i>					X			Predominantly found offshore.
Southern shark <i>Galeorhinus galeus</i>				X	X			Schooling fish. Females found shallower than males.
Southern rock sole <i>Lepidopsetta bilineata</i>			X	X		X		Pebble or semi-rocky bottom. Also occurs offshore.

Watch List Species	Rocky Shore	Sandy Beach	Rocky Subtidal	Soft Bottom Subtidal	Neritic	Estuarine	Habitat Unknown	Comments
Spotted ratfish <i>Hydrolagus colliei</i>			X	X				Common in shallower waters in northern part of range.
White shark <i>Carcharodon carcharias</i>					X		X	
Butter clam <i>Saxidomus gigantea</i>						X		
California sea cucumber <i>Parastichopus californicus</i>			X	X				Generally prefers protected areas.
Cockle clam <i>Clinocardium nuttallii</i>						X		
Coonstripe (Dock) shrimp <i>Pandalus danae</i>			X	X				
Fat gaper clam <i>Tresus capax</i>						X		
Flat-tipped piddock <i>Penitella penita</i>	X		X					Mid to low intertidal. Commonly bores into stiff clay, sandstone, shale, and concrete.
Market squid <i>Doryteuthis opalescens</i>				X	X			School and spawn on muddy sand in shallow, protected, inshore areas.
Oregon triton <i>Fusitriton oregonensis</i>			X	X				Occasionally intertidal.
Pacific sand (mole) crab <i>Emerita analoga</i>		X						Mid and low intertidal.
Red rock crab <i>Cancer productus</i>				X		X		
Sea otter <i>Enhydra lutris</i>			X		X			Sporadic visitors to Oregon.

NEARSHORE APPENDIX F: OTHER/COMMONLY ASSOCIATED SPECIES LIST

Appendix F. Commonly associated species and habitats found in Oregon’s nearshore environment.

Species	Habitat				Comments		
	Rocky Shore	Sandy Beach	Rocky Subtidal	Soft Bottom Subtidal			
Birds							
California gull <i>Larus californicus</i>				X	X		
Glaucous-winged gull <i>Larus glaucescens</i>	X	X		X	X	Colonial nester.	
Pacific loon <i>Gavia pacifica</i>				X	X	Winters near coastal waters.	
Red-necked phalarope <i>Phalaropus lobatus</i>				X		Concentrates around oceanic upwellings and edges of kelp beds.	
Red throated loon <i>Gavia stellata</i>				X	X	Winters near coastal waters.	
Sooty shearwater <i>Puffinus griseus</i>				X		Concentrates around oceanic upwellings and over the continental shelf.	
Surf scoter <i>Melanitta perspicillata</i>				X	X		
Western gull <i>Larus occidentalis</i>	X	X		X	X	Colonial nester.	
Western grebe <i>Aechmophorus occidentalis</i>					X		
White-winged scoter <i>Melanitta fusca</i>				X	X	X	Common in shallow water over shellfish beds.

Appendix F. Commonly associated species and habitats found in Oregon’s nearshore environment.

Species	Habitat					Comments	
	Rocky Shore	Sandy Beach	Rocky Subtidal	Soft Bottom Subtidal	Neritic Estuarine		Unknown
Fishes							
Bald sculpin <i>Clinocottus recalvus</i>	X		X				Tidepools. Shallow subtidal. Brookings, OR is northern extent of range
Bat ray <i>Myliobatis californica</i>		X	X	X	X		Low intertidal.
Black prickleback <i>Xiphister atropurpureus</i>	X		X				Under rocks, in gravel areas. Shallow subtidal
Bonehead sculpin <i>Artedius notospilotus</i>	X		X				
Calico sculpin <i>Clinocottus embryum</i>	X						Mid to low intertidal.
Calico surfperch <i>Amphistichus koelzi</i>		X		X			Shallow subtidal.
Coralline sculpin <i>Artedius corallinus</i>	X		X				Shallow subtidal.
Crescent gunnel <i>Pholis laeta</i>	X		X				Tidepools.
Decorated warbonnet <i>Chirolophis decoratus</i>			X				Usually among algae.
Fluffy sculpin <i>Oligocottus snyderi</i>	X		X				Tidepools. Shallow subtidal. Often in algae.
Grunt sculpin <i>Rhamphocottus richardsonii</i>	X		X	X			Tidepools.

Appendix F. Commonly associated species and habitats found in Oregon’s nearshore environment.

Species	Habitat						Comments
	Rocky Shore	Sandy Beach	Rocky Subtidal	Soft Bottom Subtidal	Neritic	Estuarine	
High cockscomb <i>Anoplarchus purpurescens</i>	X		X				Usually intertidal.
Jacksmelt <i>Atherinopsis californiensis</i>			X		X	X	Yaquina Bay, OR is northern extent of range.
Kelp poacher <i>Agonomalus mozinoi</i>			X				Shallow subtidal.
Kelp surfperch <i>Brachyistius frenatus</i>			X				
Longfin gunnel <i>Pholis clemensi</i>			X				
Longfin sculpin <i>Jordania zonope</i>	X		X				
Lumptail searobin <i>Prionotus stephanophrys</i>				X			Deep subtidal.
Manacled sculpin <i>Synchirus gilli</i>	X		X				Tidepools.
Mosshead sculpin <i>Clinocottus globiceps</i>	X		X				Tidepools. Shallow subtidal.
Mosshead warbonnet <i>Chirolophis nugator</i>			X				
Night smelt <i>Spirinchus starksi</i>		X			X		Spawn on beaches.
Northern clingfish <i>Gobiesox maeandricus</i>	X		X				Shallow subtidal.

Appendix F. Commonly associated species and habitats found in Oregon’s nearshore environment.

<i>Species</i>	Habitat					Comments
	Rocky Shore	Sandy Beach	Rocky Subtidal	Soft Bottom Subtidal	Neritic Estuarine	
Pacific electric ray <i>Torpedo californica</i>			X	X		
Pacific hooker (Hookhorn) sculpin <i>Artediellus pacificus</i>				X		
Padded sculpin <i>Artedius fenestralis</i>	X		X			Shallow subtidal.
Painted greenling <i>Oxylebius pictus</i>	X		X			Shallow subtidal.
Penpoint gunnel <i>Apodichthys flavidus</i>	X					Tidepools and in algae.
Pricklebreast poacher <i>Stellerina xyosterna</i>				X		
Puget Sound sculpin <i>Ruscarius meanyi</i>	X		X			
Pygmy poacher <i>Odontopyxis trispinosa</i>				X		
Red brotula <i>Brosmophycis marginata</i>			X			
Red gunnel <i>Pholis schultzi</i>	X		X			Shallow subtidal. Exposed surge areas.
Ribbon prickleback <i>Phytichthys chirus</i>	X		X			Shallow subtidal.

Appendix F. Commonly associated species and habitats found in Oregon’s nearshore environment.

Species	Habitat				Comments
	Rocky Shore	Sandy Beach	Rocky Subtidal	Soft Bottom Subtidal	
Rock prickleback <i>Xiphister mucosus</i>	X		X		Intertidal, found among algae. Shallow subtidal.
Rockhead <i>Bothragonus swanii</i>	X		X		Shallow subtidal.
Rockweed gunnel <i>Apodichthys fucorum</i>	X		X		Common among algae in tidepools and shallow subtidal.
Rosylip sculpin <i>Ascelichthys rhodorus</i>	X		X		Tidepools.
Roughback sculpin <i>Chitonotus pugetensis</i>		X		X	
Saddleback gunnel <i>Pholis ornata</i>				X	
Saddleback sculpin <i>Oligocottus rimensis</i>	X		X		Tidepools in low intertidal.
Sailfin sculpin <i>Nautichthys oculofasciatus</i>			X	X	Pilings. Soft bottoms near rubble.
Scalyhead sculpin <i>Artedius harringtoni</i>	X		X		Shallow subtidal. Pilings.
Sharpnose sculpin <i>Clinocottus acuticeps</i>	X		X	X	Shallow subtidal.
Sharpnose surfperch <i>Phanerodon atripes</i>			X		
Silver surfperch <i>Hyperprosopon ellipticum</i>			X	X	Surf zone down to deep subtidal.

Appendix F. Commonly associated species and habitats found in Oregon’s nearshore environment.

Species	Habitat						Comments
	Rocky Shore	Sandy Beach	Rocky Subtidal	Soft Bottom Subtidal	Neritic	Estuarine	
Silverspotted sculpin <i>Blepsias cirrhosus</i>	X		X				Often among algae.
Slender cockscomb <i>Anoplarchus insignis</i>			X				
Smooth alligatorfish <i>Anoplagonus inermis</i>			X				
Smoothhead sculpin <i>Artedius lateralis</i>	X		X				Shallow subtidal.
Snake prickleback <i>Lumpenus sagitta</i>					X	X	
Speckled sanddab <i>Citharichthys stigmaeus</i>				X			
Spotfin surfperch <i>Hyperprosopon anale</i>				X			Surf zone down to deep subtidal.
Sturgeon poacher <i>Podothecus accipenserinus</i>				X			Deep subtidal.
Tidepool sculpin <i>Oligocottus maculosus</i>	X						Tidepools.
Tube-nose poacher <i>Pallasina barbata</i>	X		X				Often among algae.
Tubesnout <i>Aulorhynchus flavidus</i>			X	X			
Walleye surfperch <i>Hyperprosopon argenteum</i>			X	X	X		Shallow subtidal. Artificial reefs and pilings.

Appendix F. Commonly associated species and habitats found in Oregon’s nearshore environment.

Species	Habitat							Comments
	Rocky Shore	Sandy Beach	Rocky Subtidal	Soft Bottom Subtidal	Neritic	Estuarine	Unknown	
White surfperch <i>Phanerodon furcatus</i>			X	X	X	X		Artificial reefs, pilings, and docks.
Whitebait smelt <i>Allosmerus elongatus</i>					X	X		
Y-prickleback <i>Lumpenopsis hypochroma</i>							X	
Marine Mammals								
California sea lion <i>Zalophus californianus</i>	X	X	X	X	X	X		Males seasonally migrate to Oregon.
Invertebrates								
Acorn barnacle <i>Sessilia spp.</i>	X							Low intertidal.
Aggregating anemone <i>Anthopleura elegantissima</i>	X					X		Mid intertidal.
Barnacle <i>Chthamalus spp.</i>	X							High and mid intertidal. Common on rocks and pier pilings.
Black katy chiton <i>Katharina tunicata</i>	X							Mid to low intertidal. Areas of strong wave action.
Brown rock crab <i>Cancer antennarius</i>	X		X	X				Low intertidal. Soft bottom; gravel.
Channeled dog winkle (Whelk) <i>Nucella canaliculata</i>	X							Mid intertidal. Common on rocks and in mussel beds.

Appendix F. Commonly associated species and habitats found in Oregon’s nearshore environment.

Species	Habitat					Comments
	Rocky Shore	Sandy Beach	Rocky Subtidal	Soft Bottom Subtidal	Neritic Estuarine	
Cockle clam <i>Clinocardium nuttallii</i>		X		X	X	Low intertidal.
Fingered limpet <i>Lottia digitalis</i>	X					High intertidal.
Giant green anemone <i>Anthopleura xanthogrammica</i>	X		X		X	Low intertidal.
Gooseneck barnacle <i>Pollicipes polymerus</i>	X					Mid intertidal. Sometimes mixed with California mussels (<i>Mytilus californianus</i>)
Gumboot chiton <i>Cryptochiton stelleri</i>	X		X			Low intertidal.
Hermit crabs <i>Pagurus spp.</i>	X		X	X		High and low intertidal. Tidepools. Rock and gravel bottoms subtidally.
Kelp crab <i>Pugettia producta</i>	X		X			Low intertidal of protected outer coast.
Keyhole limpet <i>Diodora aspera</i>	X					Low intertidal.
Newcomb’s littorine snail <i>Littorina subrotunda</i> (<i>Algamorda newcombiana</i>)	X					High intertidal.
Nudibranchs Nudibranchia	X		X			Low intertidal.
Pacific sand dollar <i>Dendraster excentricus</i>				X	X	

Appendix F. Commonly associated species and habitats found in Oregon’s nearshore environment.

Species	Habitat					Comments
	Rocky Shore	Sandy Beach	Rocky Subtidal	Soft Bottom Subtidal	Neritic Estuarine	
Pinto (Northern) abalone <i>Haliotis kamtschatkana</i>	X		X			Low intertidal.
Porcelain crab <i>Petrolisthes cinctipes</i>	X					Mid to low intertidal.
Purple shore crab <i>Hemigrapsus nudus</i>	X				X	Mid to low intertidal.
Rock dwelling purple whelk <i>Nucella emarginata</i>	X					High to mid intertidal. Often among mussel beds and barnacles.
Sabellid worm <i>Myxicola infundibulum</i>				X	X	
Shield limpet <i>Lottia pelta</i>	X		X			Mid to low intertidal.
Sponges Porifera	X		X			
Spot prawn <i>Pandalus platyceros</i>	X		X	X	X	Low intertidal to 487 m. Larvae are planktonic.
Tube worm <i>Neosabellaria cementarium</i>	X		X			Low intertidal.
Turban snails <i>Tegula spp.</i>	X		X			Low intertidal.
Upper intertidal barnacle <i>Balanus glandula</i>	X				X	High to mid intertidal.
Wrinkled amphissa <i>Amphissa columbiana</i>	X		X			Low intertidal.

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Species	Habitat						Comments
	Rocky Shore	Sandy Beach	Rocky Subtidal	Soft Bottom Subtidal	Neritic	Estuarine	
Wrinkled purple whelk <i>Nucella lamellosa</i>	X						Low intertidal.
Plants and Algae							
Agarophytes & Carrageenophytes <i>Gelidium spp.</i>	X		X				Shallow subtidal.
Agarophytes & Carrageenophytes <i>Gracilaria sp.</i>	X		X		X		Low intertidal.
Agarophytes & Carrageenophytes <i>Gracilariopsis sp.</i>	X		X		X		Low intertidal.
Agarophytes & Carrageenophytes <i>Mastocarpus spp.</i>	X						High to mid intertidal.
Agarophytes & Carrageenophytes <i>Mazzaella spp.</i>	X						
Agarophytes & Carrageenophytes <i>Pterocladia spp.</i>	X		X				Low intertidal, shallow subtidal.
Agarophytes & Carrageenophytes <i>Sarcodiotheca sp.</i>	X		X				Low intertidal. Subtidal on rocks near sandy habitats.

Appendix F. Commonly associated species and habitats found in Oregon’s nearshore environment.

Species	Habitat					Comments
	Rocky Shore	Sandy Beach	Rocky Subtidal	Soft Bottom Subtidal	Neritic Estuarine	
Coralline red algae <i>Bosiella spp.</i>	X		X			Low intertidal.
Coralline red algae <i>Calliarthron sp.</i>	X		X			Low intertidal.
Coralline red algae <i>Corallina spp.</i>	X		X			Mid to low intertidal.
Coralline red algae <i>Lithothamnium spp.</i>	X					Mid intertidal. Tidepools.
Costaria <i>Costaria sp.</i>	X		X			Low intertidal and shallow subtidal.
Dilsea <i>Dilsea californica</i>	X		X			Low intertidal.
Dwarf rockweed <i>Pelvetiopsis limitata</i>	X					High intertidal.
Endocladia <i>Endocladia muricata</i>	X					High intertidal.
Feather boa kelp <i>Egregia menziesii</i>	X		X			Low intertidal, shallow subtidal.
Filamentous greens <i>Enteromorpha-type</i>	X					High intertidal.
Fucus (Rockweed) <i>Fucus spp.</i>	X					Mid to low intertidal.
Giant kelp <i>Macrocystis pyrifera</i>			X			

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Species	Habitat					Comments
	Rocky Shore	Sandy Beach	Rocky Subtidal	Soft Bottom Subtidal	Neritic Estuarine	
Hedophyllum <i>Hedophyllum sessile</i>	X					Mid to low intertidal.
Kelp <i>Macrocystis integrifolia</i>	X		X			Low intertidal.
Kelp <i>Laminaria bongardiana</i>	X		X			
Kelp <i>Laminaria ephemera</i>	X		X			
Kelp <i>Laminaria setchellii</i>	X		X			
Kelp <i>Laminaria sinclairii</i>	X					
Lessoniopsis <i>Lessoniopsis littoralis</i>	X					Low intertidal in areas exposed to high surf action.
Odonthalia <i>Odonthalia spp.</i>	X					
Pleurophycus <i>Pleurophycus sp.</i>	X		X			Low intertidal and shallow subtidal.
Porphyra <i>Porphyra spp.</i>	X		X			Intertidal and shallow subtidal.
Prionitis <i>Prionitis spp.</i>	X		X			Intertidal and shallow subtidal.
Sea fern <i>Cystoseira osmundacea</i>	X		X			Low intertidal and shallow subtidal. Tidepools and on rocks.

Appendix F. Commonly associated species and habitats found in Oregon’s nearshore environment.

<i>Species</i>	Habitat						Comments
	Rocky Shore	Sandy Beach	Rocky Subtidal	Soft Bottom Subtidal	Neritic	Estuarine	
Southern sea palm <i>Eisenia arborea</i>	X		X				Low intertidal.
Stalked kelp <i>Pterygophora californica</i>			X				
Ulvoids <i>Ulva spp.</i>	X		X				Mid to low intertidal and shallow subtidal.
Winged kelp <i>Alaria marginata</i>	X		X				Low intertidal and shallow subtidal.

NEARSHORE APPENDIX G: NON-NATIVE AND INVASIVE SPECIES

Non-native and invasive species can alter and degrade habitats, increase threats to native species, and in some cases impact local economies or cause extensive problems for marine coastal systems of Oregon. Non-native species can be transported locally, regionally, or around the world and introduced to Oregon’s nearshore systems by way of several mechanisms such as, hitch-hiking in ballast water or in ocean currents. Once a species has been introduced it can affect food sources, alter habitats, expose native communities to diseases or toxins, or act as parasites of juvenile and adult members of coastal fisheries species. For many introduced species, the severity of the potential ecological threat is not yet known. Many of these species could be deemed invasive in the future, but further efforts to assess impacts are needed. These efforts are a priority for conservation of natural systems because invasions become more complicated to address over time and management measures that respond to the first arriving individuals are most effective.

Efforts have begun to assess available data regarding existing or potential future threats to Oregon’s nearshore and estuarine communities. The Oregon Department of Fish and Wildlife’s Marine Resources Program reviewed available online data and consulted with experts at Oregon State University, the Environmental Protection Agency Western Ecology Division, United States Geological Survey Western Fisheries Research Center, and Williams College in 2012 and updated this information in 2015. Based on information gleaned from these sources, a list of non-native species known to occur in the nearshore waters of Oregon and neighboring states was developed. For each species, habitat information was collected and species were identified as being primarily associated with nearshore marine and/or estuarine systems.

Non-Native Species	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-native ^d	3: WA or CA Invasive (not known in OR) ^e
Bony Fishes					
American shad <i>Alosa sapidissima</i>	X		X		
Amur goby <i>Rhinogobius bunneus</i>	X	X		X	
Atlantic salmon <i>Salmo salar</i>	X				X
Brown trout <i>Salmo trutta</i>	X				X
Chameleon goby <i>Tridentiger trigonocephalus</i>		X			X
Inland silverside <i>Menidia beryllina</i>		X			X

Non-Native Species	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-native ^d	3: WA or CA Invasive (not known in OR) ^e
Rainwater killifish <i>Lucania parva</i>		X		X	
Shimofuri goby <i>Tridentiger bifasciatus</i>		X			X
Shokifaze goby <i>Tridentiger barbatus</i>		X			X
Striped bass <i>Morone saxatilis</i>	X		X		
Threadfin shad <i>Dorosoma petenense</i>	X			X	
Western mosquito fish <i>Gambusia affinis</i>		X		X	
Yellowfin goby <i>Acanthogobius flavimanus</i>		X			X
Invertebrates					
Acorn barnacle <i>Amphibalanus improvisus</i>	X	X		X	
Ambiguous bryozoan <i>Anguinella palmata</i>		X			X
American Atlantic sponge <i>Prosuberites sp.</i>		X			X
Amethyst gem clam <i>Gemma gemma</i>		X			X
Amphipod <i>Ampelisca abdita</i>		X			X
Amphipod <i>Ampithoe lacertosa</i>	X	X		X	
Amphipod <i>Ampithoe valida</i>		X		X	
Amphipod <i>Chelura terebrans</i>	X				X
Amphipod <i>Corophium alienense</i>		X			X
Amphipod <i>Eobrolgus spinosus</i>		X		X	

Non-Native Species	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-native ^d	3: WA or CA Invasive (not known in OR) ^e
Amphipod <i>Erichthonius brasiliensis</i>		X		X	
Amphipod <i>Gammarus daiberi</i>		X			X
Amphipod <i>Grandidierella japonica</i>	X	X		X	
Amphipod <i>Incisocalliope derzhavini</i>	X			X	
Amphipod <i>Leucothoe sp.</i>		X			X
Amphipod <i>Melita nitida</i>		X		X	
Amphipod <i>Melita sp.</i>		X			X
Amphipod <i>Microdeutopus gryllotalpa</i>		X			X
Amphipod <i>Monocorophium acherusicum</i>	X	X		X	
Amphipod <i>Monocorophium insidiosum</i>	X	X			X
Amphipod <i>Monocorophium uenoi</i>		X			X
Amphipod <i>Paradexamine sp.</i>		X			X
Amphipod <i>Parapleustes derzhavini</i>		X		X	
Amphipod <i>Ptilohyale littoralis</i>		X		X	
Amphipod <i>Sinocorophium heteroceratum</i>					X
Amphipod <i>Stenothoe valida</i>		X			X
Amphipod <i>Transorchestia enigmatica</i>					X
Amur River clam <i>Corbula amurensis</i>					X

Non-Native Species	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-native ^d	3: WA or CA Invasive (not known in OR) ^e
Asian calanoid copepod <i>Pseudodiaptomus inopinus</i>		X		X	
Asian calanoid copepod <i>Sinocalanus doerrii</i>		X		X	
Asian clam <i>Corbicula fluminea</i>		X	X		
Asian copepod <i>Acartiella sinensis</i>		X			X
Asian copepod <i>Limnoithona sinensis</i>		X		X	
Asian copepod <i>Tortanus dextrilobatus</i>		X			X
Asian cumacean <i>Nippoleucon hinumensis</i>		X		X	
Asian lanternshell <i>Laternula marilina</i>		X			X
Asian sea-squirt <i>Styela clava</i>		X	X		
Asian semele <i>Theora lubrica</i>		X			X
Atlantic oyster <i>Crassostrea virginica</i>		X			X
Atlantic oyster drill <i>Urosalpinx cinerea</i>		X			X
Australasian burrowing isopod <i>Sphaeroma quoianum</i>		X	X		
Australian spotted jellyfish <i>Phyllorhiza punctata</i>	X				X
Australian tubeworm <i>Ficopomatus enigmaticus</i>		X			X
Baltic clam <i>Macoma petalum</i>		X			X
Bamboo worm <i>Sabaco elongatus</i>		X			X

Non-Native Species	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-native ^d	3: WA or CA Invasive (not known in OR) ^e
Black Sea jellyfish <i>Blackfordia virginica</i>		X		X	
Black Sea jellyfish <i>Maeotias marginata</i>		X			X
Blacktip shipworm <i>Lyrodus pedicellatus</i>		X			X
Blue mussel <i>Mytilus complex</i>	X				X
Bonnet limpit <i>Sabia conica</i>	X			X	
Brackish water snail <i>Assiminea parasitologica</i>		X		X	
Brown bryozoan <i>Bugula neritina</i>		X		X	
Bryozoan <i>Bugula stolonifera</i>		X			X
Bryozoan <i>Cryptosula pallasiana</i>	X	X		X	
Bryozoan <i>Victorella pavida</i>		X			X
Bryozoan <i>Watersipora arcuata</i>		X			X
Bryozoan <i>Watersipora subtorquata</i>		X		X	
Bryozoan <i>Zoobotryon verticillatum</i>		X			X
Capitellid worm <i>Capitella telata</i>		X		X	
Channeled whelk <i>Busycotypus canaliculatus</i>		X			X
Chinese mitten crab <i>Eriocheir sinensis</i>		X			X
Ciliate <i>Mirofolliculina limnoriae</i>		X			X
Colonial tunicate <i>Didemnum vexillum</i>		X	X		

Non-Native Species	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-native ^d	3: WA or CA Invasive (not known in OR) ^e
Common Atlantic slippersnail <i>Crepidula fornicata</i>		X			X
Common sea grape <i>Molgula manhattensis</i>		X		X	
Convex slippersnail <i>Crepidula convexa</i>		X			X
Copepod <i>Amphiascus parvus</i>		X			X
Copepod <i>Corycaeus anglicus</i>		X		X	
Copepod <i>Coullana canadensis</i>		X		X	
Copepod <i>Limnoithona tetraspina</i>		X		X	
Copepod <i>Oithona davisae</i>		X		X	
Copepod <i>Oithona similis</i>		X		X	
Copepod <i>Pseudodiaptomus forbesi</i>		X			X
Copepod <i>Pseudodiaptomus marinus</i>		X			X
Copepod <i>Pseudomyicola spinosus</i>		X			X
Copepod <i>Stephos pacificus</i>		X			X
Copepod <i>Tortanus sp.</i>		X			X
Creeping bryozoan <i>Bowerbankia "gracilis"</i>	X	X		X	
Crumb-of-bread sponge <i>Halichondria bowerbanki</i>	X	X		X	
Crustacean <i>Deltamysis holmquistae</i>		X			X
Crustacean <i>Eochelidium sp.</i>		X			X

Non-Native Species	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-native ^d	3: WA or CA Invasive (not known in OR) ^e
Crustacean <i>Eusarsiella zostericola</i>		X			X
Crustacean <i>Hyperacanthomysis longirostris</i>		X			X
Crustacean <i>Sinelobus sp.</i>		X		X	
Delphaeid planthopper <i>Prokelsia marginata</i>		X			X
Eastern mudsnail <i>Ilyanassa obsoleta</i>		X			X
Eastern white slipper shell <i>Crepidula plana</i>		X			X
European green shore crab <i>Carcinus maenas</i>	X			X	
False anglewing <i>Petricolaria pholadiformis</i>		X			X
Flat okenia <i>Okenia plana</i>		X			X
Flatworm <i>Koinostylochus ostreophagus</i>		X			X
Foolish mussel <i>Mytilus (trossulus x galloprovincialis)</i>	X				X
Foram <i>Trochammina hadai</i>		X			X
Freshwater hydroid <i>Cordylophora caspia</i>		X		X	
Golden star tunicate <i>Botryllus schlosseri</i>		X		X	
Griffen's isopod <i>Orthione griffenis</i>	X	X	X		
Hard shell clam <i>Mercenaria mercenaria</i>		X			X
Harris mud crab <i>Rhithropanopeus harrisi</i>		X		X	

Non-Native Species	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-native ^d	3: WA or CA Invasive (not known in OR) ^e
Hydroid <i>Moerisia sp.</i>		X			X
Hydroid <i>Corymorpha sp.</i>		X			X
Isopod <i>Dynoides dentisinus</i>		X			X
Isopod <i>Eurylana arcuata</i>		X			X
Isopod <i>Iais californica</i>		X		X	
Isopod <i>Paranthura sp.</i>		X			X
Isopod <i>Pseudosphaeroma sp.</i>		X		X	
Isopod <i>Spharoma quoianum</i>		X	X	X	
Isopod <i>Synidotea laevidorsalis</i>		X			X
Japanese clam <i>Neotrapezium</i> <i>liratum</i>		X			X
Japanese false cerith <i>Batillaria attramentaria</i>		X			X
Japanese littleneck clam <i>Venerupis philippinarum</i>	X	X		X	
Japanese mussel <i>Musculista senhousia</i>		X			X
Japanese nassa <i>Hima fratercula</i>		X			X
Japanese oyster drill <i>Ocenebrellus inornatus</i>		X	X		
Japanese skeleton shrimp <i>Caprella mutica</i>		X		X	
Lacy crust bryozoan <i>Conopeum tenuissimum</i>		X		X	
Lagoon sea slug <i>Tenellia adspersa</i>		X		X	

Non-Native Species	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-native ^d	3: WA or CA Invasive (not known in OR) ^e
Lake Merritt cuthona <i>Cuthona perca</i>		X			X
Manchurian cecina <i>Cecina manchurica</i>		X			X
Marsh snail <i>Myosotella myosotis</i>		X		X	
Mediterranean blue mussel <i>Mytilus galloprovincialis</i>	X				X
Misaki balloon aeolis <i>Eubranchus misakiensis</i>		X			X
Moon jelly <i>Aurelia sp.</i>	X	X			X
Mysid <i>Orientomysis aspera</i>		X			X
Naval shipworm <i>Teredo navalis</i>		X		X	
New Zealand amphipod <i>Paracorophium sp.</i>		X			X
New Zealand mudsnail <i>Potamopyrgus antipodarum</i>		X	X		
New Zealand sea slug <i>Philine auriformis</i>	X	X		X	
Nodding head <i>Barentsia benedeni</i>		X		X	
Orange anemone <i>Diadumene cincta</i>		X			X
Orange-striped green anemone <i>Diadumene lineata</i>		X		X	
Oriental shrimp <i>Palaemon macrodactylus</i>		X		X	
Oyster redworm <i>Mytilicola orientalis</i>		X		X	
Pacific oyster <i>Crassostrea gigas</i>		X		X	

Non-Native Species	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-native ^d	3: WA or CA Invasive (not known in OR) ^e
Pacific transparent sea squirt <i>Ciona savignyi</i>		X		X	
Pile worm <i>Neanthes succinea</i>		X		X	
Pink mouth hydroid <i>Ectopleura crocea</i>		X		X	
Polychaete worm <i>Boccardia claparedei</i>		X		X	
Polychaete worm <i>Boccardiella hamata</i>	X			X	
Polychaete worm <i>Boccardiella ligerica</i>		X			X
Polychaete worm <i>Dipolydora quadrilobata</i>		X		X	
Polychaete worm <i>Eumida sanguinea</i>		X			X
Polychaete worm <i>Eusyllis japonica</i>		X			X
Polychaete worm <i>Heteromastus filiformis</i>	X			X	
Polychaete worm <i>Hobsonia florida</i>		X		X	
Polychaete worm <i>Manayunkia aestuarina</i>		X		X	
Polychaete worm <i>Polydora cornuta</i>		X		X	
Polychaete worm <i>Polydora limicola</i>		X		X	
Polychaete worm <i>Polydora neocaeca</i>		X		X	
Polychaete worm <i>Proceraea okadai</i>		X		X	
Polychaete worm <i>Pseudopolydora bassarginensis</i>		X		X	

Non-Native Species	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-native ^d	3: WA or CA Invasive (not known in OR) ^e
Polychaete worm <i>Pseudopolydora kempfi</i>		X		X	
Polychaete worm <i>Pseudopolydora paucibranchiata</i>		X		X	
Polychaete worm <i>Rhynchospio foliosa</i>		X		X	
Polychaete worm <i>Streblospio benedicti</i>		X		X	
Polychaete worm <i>Syllis cornuta</i>		X		X	
Polyp aeolis <i>Cumanotus sp.</i>		X		X	
Purple acorn barnacle <i>Amphibalanus amphitrite</i>		X			X
Purple varnish clam <i>Nuttallia obscurata</i>	X	X	X		
Red beard sponge <i>Clathria prolifera</i>		X			X
Red-gilled Marphysa <i>Marphysa sanguinea</i>		X			X
Red-gilled mud worm <i>Marenzelleria viridis</i>		X			X
Ribbed mussel <i>Geukensia demissa</i>		X			X
Root-arm medusa <i>Cladonema radiatum</i>		X			X
Rope grass hydroid <i>Garveia franciscana</i>		X		X	
Rough periwinkle <i>Littorina saxatilis</i>		X			X
San Francisco anemone <i>Diadumene franciscana</i>		X			X
Sea grape <i>Molgula citrina</i>		X		X	

Non-Native Species	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-native ^d	3: WA or CA Invasive (not known in OR) ^e
Sea squirt <i>Diplosoma listerianum</i>		X		X	
Sessile hydrozoan <i>Gonothyrea loveni</i>		X		X	
Single horn bryozoan <i>Schizoporella japonica</i>		X		X	
Skeleton shrimp <i>Caprella drepanochir</i>		X		X	
Starlet sea anemone <i>Nematostella vectensis</i>		X		X	
Steamer clam <i>Mya arenaria</i>		X		X	
Transparent sea squirt <i>Ciona intestinalis</i>		X			X
Tube amphipod <i>Jassa marmorata</i>	X			X	
Tubificid worm <i>Limnodriloides monotheucus</i>		X			X
Tubificid worm <i>Tubificoides brownae</i>		X		X	
Tubificid worm <i>Tubificoides diazi</i>		X		X	
Tubificid worm <i>Tubificoides wasselli</i>	X				X
Tunicate <i>Ascidia zara</i>		X			X
Tunicate <i>Botrylloides perspicuum</i>		X			X
Tunicate <i>Botryllus schlosseri</i>		X		X	
Tunicate <i>Ciona savignyi</i>	X				X
Tunicate <i>Didemnum vexillum</i>		X	X		
Tunicate <i>Diplosoma listerianum</i>	X	X		X	

Non-Native Species	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-native ^d	3: WA or CA Invasive (not known in OR) ^e
Tunicate <i>Perophora japonica</i>		X			X
Tunicate <i>Styela clava</i>		X		X	
Two-groove odostome <i>Odetta bisuturalis</i>		X			X
Violet tunicate <i>Botrylloides violaceus</i>		X		X	
White anemone <i>Diadumene leucolena</i>		X		X	
White-tentacled japanese aeolis <i>Sakuraeolis enosimensis</i>		X			X
Wood boring gribble <i>Limnoria quadripunctata</i>	X	X			X
Wood boring gribble <i>Limnoria tripunctata</i>	X	X		X	
Plants and Algae					
American sea rocket <i>Cakile edentula</i>		X		X	
Awosa <i>Ulva pertusa</i>		X		X	
Brass buttons <i>Cotula coronopifolia</i>		X		X	
Caulerpa seaweed <i>Caulerpa taxifolia</i>		X		X	
Coast barbgrass <i>Parapholis incurva</i>		X		X	
Common cordgrass <i>Spartina anglica</i>		X			X
Dead man's fingers <i>Codium fragile subsp. fragile</i>		X			X
Dense-flowered cordgrass <i>Spartina densiflora</i>		X		X	

Non-Native Species	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-native ^d	3: WA or CA Invasive (not known in OR) ^e
English cordgrass <i>Spartina anglica</i>		X		X	
Eurasian water-milfoil <i>Myriophyllum spicatum</i>		X		X	
European sand spurry <i>Spergularia salina</i>		X		X	
European sea rocket <i>Cakile maritime</i>		X		X	
Japanese eelgrass <i>Zostera japonica</i>		X	X		
Japanese kelp <i>Undaria pinnatifida</i>	X				X
Japanese seaweed <i>Sargassum muticum</i>	X		X		
Marsh fleabane <i>Pluchea odorata odorata</i>		X			X
Red algae <i>Caulacanthus ustulatus</i>	X				X
Red algae <i>Ceramium kondoi</i>		X		X	
Red algae <i>Lomentaria hakodatensis</i>	X				X
Red algae <i>Polysiphonia brodiei</i>		X		X	
Redtop <i>Agrostis stolonifera</i>		X		X	
Salt meadow cordgrass <i>Spartina patens</i>		X		X	
Saltmarsh rush <i>Juncus gerardi</i>		X		X	
Sargassum <i>Sargassum muticum</i>	X				X
Smooth cordgrass <i>Spartina alterniflora</i>		X		X	
Spiny naiad <i>Najas marina</i>		X			X

Non-Native Species	Nearshore ^a	Estuarine ^b	1: OR Invasive ^c	2: OR Non-native ^d	3: WA or CA Invasive (not known in OR) ^e
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Surf diatom

Attheya armatum

X

X

^a Nearshore = species is primarily associated with the nearshore marine habitat, between the high tide line and the territorial sea boundary.

^b Estuarine = species is primarily associated with estuarine habitat.

^c 1: OR Invasive = non-native species is present in Oregon and is considered invasive for posing a threat to native species.

^d 2: OR Non-native = non-native species is present in Oregon and the threat to native species is unknown

^e 3: WA or CA Invasive = species is present in states adjacent to Oregon and is considered invasive.

Species listed here are associated with nearshore and estuarine west coast habitats, as determined by analysis of data and expert review provided by James T. Carlton, Williams College; John Chapman, Oregon State University; Debbie Reusser, U.S. Geological Survey – Western Fisheries Research Center; Henry Lee, U.S. Environmental Protection Agency – Western Ecology Division; and Gayle Hansen, Oregon State University.