

Intertidal Animals & Plants - The GSA Master List

Protected Waters Version

- gr stands for GROUP and may include one Genus and species when these are difficult to identify in the field
- UID (unidentified) groups are for critters that are sometimes recognizable (like a gunnel you get a really good look at, or a juvenile sea star) but often aren't
- if an exposure or tide height field is blank it is because the literature isn't clear

The headings for the columns (from left to right) are:

Common Name – where it's a group it will end with "gr" and be in bold

Genus - within sections, species are sorted by genus; where a + sign is present there it represents a clumping of more than one genus – these will be listed in the field marks heading

Species – the species name; if more than one species is involved there may be a + (for specific species, so to speak) or just sp. Where the number of species is known this will be in brackets after.

Photographic reference

ww – Whelks to Whales (Harbo)
bg – Beachcomber's Guide to Seashore Life (Sept)
sl – Seashore Life of the Northern Pacific Coast (Kozloff)
cf – Coastal Fishes of the Pacific Northwest (Lamb & Edgell)
ps – Pacific Seaweeds (Druehl)

Exposure using codes:

P – protected waters
W – in or near exposed areas (West Coast & inside areas with large fetch)
B – found in most areas (both)
C – areas of high current
M – either high current or wave action

Tide Height using:

1 – high intertidal or lower
2 – mid intertidal or lower
3 – low intertidal

On Sheet is this species or group presently on our sheets?

N – no
 P – primary
 S – secondary
 B – both

Field Marks – tips to help distinguish species or groups

Sponges (Am)

There are at least 14 species to be on the lookout for; the genera Cliona and Halichondria probably have 2 or more species that are difficult to separate and have been left as genera. There are a number of lookalike encrusting red sponges (velvety red sponge) – these have been clumped.

sponge, aggregated vase	Polymastia	pacifica	ww	3	N	mat of creamy 1cm nipples
sponge, bread crumb	Halichondria	sp	ww	3	N	yellow to dull green; prominent oscula in ridges; odor
sponge, bristly vase	Leucandra	heathi	ww	3	N	11cm hi; pear shaped, white or gray, fringe of long bristles
sponge, hermit crab	Suberites	suberea	ww	3	N	firm, dense gray brown orange; hermit inside
sponge, orange ball	Tethya	californiana	ww	3	N	firm, firmly attached ball; orange to yellow to green
sponge, orange finger	Neoesperiopsis	rigida	ww	P 3	N	20cm, orange to yellow, flexible fingers
sponge, purple encrusting	Haliclona	permollis	ww	B 3	N	gray or pale violet, rocks or holdfasts; volcano pores
sponge, red encrusting gr	Ophlitaspongia+	var	ww	1	S	thin, red to mustard; velvety; oft nudibranch
sponge, salt & pepper	Penares	cortius	ww	3	N	firm white/gray/brown ridges with bright oscula
sponge, stalked	Leucilla	nuttingi	ww	3	N	5cm hi; stalked, slender vases in clusters; current
sponge, tennis ball	Craniella	villosa	ww	3	N	15cm round gray ball, firmly attached
sponge, tube	Leucosolenia	nautilia	ww	P 3	N	thin white 3mm tubes in loose, irregular aggregation
sponge, tube ball	Leucosolenia	eleanor	ww	3	N	thin white 3mm tubes clustered in compact ball; oft in surge
sponge, yellow boring	Cliona	sp	ww	3	N	yellow patches on scallops and other mollusc shells

Anemones (Ba)

There are at least 17 species; several are rare or hard to see. Common names are a mess and scientific names aren't much better. Note genus name change (Tealia is now Urticina). The genus Epiactis has several which are clumped into the brooding group, which also includes Cnidocarpus ritteri, an indistinct small anemone rare in unexposed areas. The two Metridium species are lumped - intertidal id, particularly for young specimens, would be difficult.

anemone, aggregate green	Anthopleura	elegantissima	ww	B 3	P	8cm; colonial green disc clear tentacles w purple tips
anemone, brooding gr	Epiactis+	var	ww	B 3	N	also Cnidocarpus; 5cm; var colors w white lines on disc & column; broods young on column
anemone, buried	Urticina	coriacea	ww	B 3	S	15cm; buried with blunt, stubby banded tentacles
anemone, buried green	Anthopleura	artemisia	ww	B 3	N	10cm; buried, attached column to 25cm; slender pink or greenish tentacles; w white bands
anemone, lined	Haliplanella	luciae (lineata)	ww	3	N	4cm; olive column w pale, lengthwise stripes

anemone, little mud	Nematostella	vectensis	sl	P	3	N	1.5cm; approx 16 pale tentacles; burrows & retracts in bays & marshes; fresh tolerant; hard to see
anemone, painted	Urticina	crassicornis	ww	B	3	S	15cm; column usu red w green or yellow; short thick light banded tentacles; may be solid yellow to red
anemone, plumose	Metridium	sp	ww		3	N	base to 10cm; white/brown/orange with numerous tentacles
anemone, strawberry	Corynactis	californica	ww		3	N	2cm hi; white to lavender with white knobbed tentacles; colonial
anemone, ten tentacled	Halcampa	decemtentaculata	bg		3	N	6mm disc; just ten tentacles; in mud or eelgrass roots
zoanthids	Epizoanthus	scotinus	ww		3	N	5cm hi; colonial; orange yellow polyps from common mat; slender tentacles

Hydroids (Bd)

At least 10 species, most of which are difficult beyond genus. Feather like hydroids including sea fir and ostrich plume (Abietinaria, Aglaophenia) are clumped into the sea plume group. Fuzzy hydroids of various lengths (Obelia, Hydractinia, Plumularia) are included in the fuzzy group.

Photos: at least one rep in WlkW; more in SeaL & BGSL

hydroid, fuzzy gr	Hydractinia+	var	ww		3	N	incl Obelia, Plumularia, others; fuzzy mats or beards; often on shells, crabs
hydroid, orange	Garveia	annulata	ww		3	N	clusters to 15cm; bright orange stem, tiny polyps
hydroid, pink mouth	Ectopleura	crocea	ww		3	N	12cm; single pinkish polyp w "grapes" on long stem; groups clustered
hydroid, sea plume gr	Abietinaria+	var	ww		3	N	incl Aglaophenia; Sertularia, Sertularella; feather or fern like
hydroid, solitary pink mouth *	Ectopleura	marina	ww		3	N	8cm; single pink orange polyp on solitary, slender stalk; no grapes

Jellies including Ctenophores (Bj)

Numerous species, most of which would be hard to identify and in the process of dying when trapped on a beach. A couple common ones are listed, plus general clumps for comb jellies (which have rows of cilia) and miscellaneous or unidentifiable jellies.

Photos: WlkW

comb jelly gr	Pleurobrachia+	var	ww	B	1	N	incl Beroe, Bolinopsis, others; rows of cilia
jelly, clinging	Gonionemus	vertens	ww	B	3	N	3cm; reddish, cross shaped gonads; long, sticky tentacles that attach to kelp & eelgrass
jelly, misc gr	Polyorchis+	var	ww	B	1	N	many families; any blob that doesn't fit or is unidentifiable
jelly, moon	Aurelia	aurita	ww	B	1	N	20cm; 4 horseshoe shaped gonads; scalloped bell; short tentacles
jelly, sea blubber	Cyanea	capillata	ww	B	1	N	50cm+; 8 lobes, wine colored w long tentacles
jelly, water	Aequorea	victoria	ww	B	1	N	13cm diameter; numerous white canals; very short tentacles

Misc Cnidarians (Bm)

There are at least five species of miscellaneous cnidarians that might be found intertidally, though most are more common subtidally in current and surge areas. The hydrocorals (*Allopora* or *Stylanthea*?) are not well described and kept together, whether encrusting or branching (which may just be a form). Others are fairly easy to id but rare.

Photos: WlkW

cup coral, orange	<i>Balanophyllia</i>	<i>elegans</i>	ww	3	N	1cm; bright orange disc, clear tentacles
sea pen, orange	<i>Ptilosarcus</i>	<i>gurneyi</i>	ww	3	N	45cm; orange stalk w many branches, in sand
soft coral, pale	<i>Clavularia</i>	sp	ww	C	3	N firm, cream to pink colonies w stolons; rare intertidal
soft coral, rasperry	<i>Gersemia</i>	<i>rubiformes</i>	ww	C	3	N lumpy red colonies w fleshy masses of tentacles; rare intertidal

Free Range Worms (Cf)

Flatworms (Platyhelminthes) are clumped into one group – the polyclads. Most others would be microscopic. There are at least eight ribbon worms (Nemertea); they are reasonably easy to identify except the two Amphiporous species which are kept together. Watch out for *Micrura*, the tube ribbon worm – it is in this section for simplicity but might be mistaken for an annelid tube worm (it is not segmented). Peanut worms (*Sipuncula*) are clumped into one group. There are at least 18 free ranging segmented worms (Annelida), several of which can be commensal on sea stars, limpets or other invertebrates. Though careful examination could help discern many, there is no easy reference for doing this and pictures are scattered throughout the field guides. Therefore, they have mostly been clumped. The clamworm type burrowers (incl *Nereis*, *Nephtys*, *Lumbrinensis*, *Notomastus* and *Arabella*, most with multiple species) are clumped; pictures of most genera are in *Seashore Life*. Many of these worms are abundant in mud but would be a rare find in our studies. Scaleworms and lookalikes (which are often commensal) are also clumped, including *Arctone*, *Halosydna*, *Ophiodromus* and *Harmothoe*, though *Arctone pulchra* is left separate because it is distinctly red. *Euzona* (often called bloodworms) is left as a genera; the species are difficult to distinguish in the field.

Photos:

flatworm, polyclad gr	<i>Kaburakia+</i>	var	bg	B	2	S	1-5+cm; very thin, usually drab, oval & amoeba like
lugworm, pacific	<i>Abarenicola</i>	<i>pacifica</i>	bg		1	N	15cm; light orange (green if dry) ; mud castings from J shaped burrow
ribbon worm, green & yellow	<i>Emplectonema</i>	<i>gracile</i>	ww	B	1	S	15cm; occ to 50cm; dark green back; yellow under; pale head
ribbon worm, lined	<i>Tubulanus</i>	<i>sexlineatus</i>	ww	B		N	20cm; occ to 1m; brown w white stripes & rings
ribbon worm, pale	<i>Amphiporus</i>	sp (2)	sl	B		S	to 30cm; white or pale pink; numerous eyespots on head
ribbon worm, primitive	<i>Tubulanus</i>	<i>polymorphus</i>	ww	B	3	S	to 3m; often coiled; bright orange; rounded head
ribbon worm, purple	<i>Paranemertes</i>	<i>peregrina</i>	sl	B		S	15cm; dark purple upper; pale yellow under; white border head
ribbon worm, tube	<i>Micrura</i>	<i>verrilli</i>	sl	B		N	papery tubes under rocks; dark purple w white lines; orange head, white underside
ribbon worm, two spotted	<i>Amphiporus</i>	<i>bimaculatus</i>	bg	B	3	N	to 12cm; broad, leach like, reddish; head has 2 dark triangles
worm, clam gr	<i>Nereis+</i>	var	ww		3	B	incl <i>Nephtys</i> , <i>Lumbrineris</i> , <i>Arabella</i> , <i>Glycera</i> ; <i>Hemipodus</i> , <i>Notomastus</i> ; 15-40cm; occ to 1.5m; iridescent blue green gray; large feet; burrows
worm, euzonus	<i>Euzonus</i>	sp	bg		2	N	4cm; bright red; burrowers; oft tiny holes indicate

worm, peanut gr	Phascolosoma+	var	bg	B	2	S	firm, w narrow extendable neck
worm, red commensal scale	Arctonoe	pulchra	bg			N	7cm; brick red; on limpet; chiton, leather & sunstar; ca cuke
worm, scale gr	Arctonoe+	sp (2)	ww			N	incl Halosydna, Harmothoe, Ophiodromus; 10cm; free or on stars, limpets etc.

Tube Worms (Ct)

At least 15 species distributed throughout the field guides; 5 worms in this category rely on Kozloff's Seashore Life for pictures. Most are reasonably easy to distinguish. The spaghetti worms (also called terebellids, or medusa worms) are clumped.

Photos: WW, BG & SL

tube worm, calcaerous	Serpula	vermicularis	ww	B	3	P	10cm hardened white tube; red cirri
tube worm, cemented	Sabellaria	cementarium	ww		3	N	7cm long tubes of dark cemented sand; holes more randomly spaced; clusters; hairlike cirri
tube worm, coralline fringed	Dodecaceria	concharum	ww		3	N	3mm; dark worm burrowed into coralline algae & shells
tube worm, even spaced	Phragmatopoma	californica	sl		3	N	3mm regularly spaced holes in dark cemented sand; clusters
tube worm, fibre	Pista	elongata	ww		3	N	7cm hi tube; in crevice or surfgrass roots; round hood of fibres forms plug
tube worm, forked	Schizobranchia	insignis	sl		3	N	multicolored, branched cirri
tube worm, fringed	Dodecaceria	fewkesi	ww		3	N	3mm wide; clusters of small white tubes; worms are dark
tube worm, N feather duster	Eudistylia	vancouveri	ww		3	S	1x60cm parchment tube; banded purple green plumes
tube worm, slime	Myxicolla	infundibulum	ww		3	N	3cm partially united jellylike circle of cirri in slime tube
tube worm, solitary cemented	Idanthyrsus	ornamentatus	sl		3	N	0.3cm hole in dark cemented sand; solitary
tube worm, spiral	Spirobis	sp	bg		3	S	6mm diamter; tiny white spiral tubes
tube worm, thin parchment	Phyllochaetopterus	prolifera	sl		3	N	1mm wide, long skinny parchment tubes in dense clusters from crevice;
tube worm, unforked	Potamilla	occelata	sl		3	N	light tan, unforked cirri w dark eyespots
worm, spaghetti gr	Thelepus+	var	bg		3	S	15cm; pinkish w long white tentacles; mud tube; also Eupolymnia heterobranchia, Neoamphitrite robusta, Cirratulus spectabilis

Bryozoans (Db)

Numerous species (230), many poorly described. Five of the more common and distinctive intertidal species are listed; bushy, encrusting and lichen like bryozoans each have a clump.

Photos: all but 1 in ww; bg.

bryozoan, bushy gr	Bugula+	var	ww		3	N	usually bushy spiral whorls; several genera
bryozoan, encrusting gr	Schizoporella+	various	ww		3	B	incl Eurystomella; orange, brown, yellow crusts
bryozoan, kelp lace	Membranipora	sp	ww		3	N	1mm crust on algae esp kelp; tiny whitish boxes
bryozoan, lacy	Phidolopora	labiata	ww		3	N	6cm hi; stiff pinkish lattice formation
bryozoan, leather	Flustrellidra	corniculata	ww		3	N	to 10cm hi; leathery, tan, seaweed like branching colony; short spines
bryozoan, lichen gr	Dendrobeatia+	var	bg		3	N	incl Hippodiplosia; fluted, lichen like colonies

bryozoan, staghorn	Heteropora	magna	ww	3	N	5cm; greenish, branching colonies w no uniting branches
bryozoan, united staghorn	Heteropora	pacifica	ww	3	N	5cm hi; greenish, branching colonies w branches that unite

Bivalves (Eb)

clam, mahogany (varnish)	Nuttallia	obscurata	ww	B	1	6cm; thin clam covered by brown periostracum
clam, northwest ugly	Entodesma	navicula	ss	B		split, orangish siphon doesn't completely retract; often under rocks
lampshell	Terebratalia	transversa	ww	B	3	3cm; smooth or ribbed, crooked mouth, attached on stalk
mussel, pacific blue	Mytilus	edulis	ww	P	2 P	15cm; blue or tan
oyster, Olympia	Ostrea	conchaphila	bg	P	2 N	9cm; usually near freshwater; not fluted, grayish
oyster, pacific	Crassostera	gigas	ww	P	2 P	30cm; fluted edge; flattish top fitting into cemented bottom
false-jingle, green	Pododesmus	macroschisma	ww	B	3	13cm; gray white w faint lines, larger upper shell
scallop, rock	Crassadoma	gigantea	ww	B	3	25cm; thick, round, often encrusted shell
shipworm	Bankia	setacea	ww	B	1	burrowed into wood

Chitons (Ec)

There are upwards of 20 species which might be intertidal but no guide covers that many – Sept's Beachcombers guide has the 15 with good pictures. A couple Mopalia species and a couple Tonicella species have been clumped because they are not easy to tell apart – there is also a UID group for little ones that includes a common but small and variable species.

Photos: Beachcomber's Guide is best; also Whelks to Whales, Shells & Shellfish and Seashore Life

chiton, black katy	Katharina	tunicata	ww	B	2	S	8cm; smooth black girdle covering most of whitish plates
chiton, giant pacific	Cryptochiton	stelleri	ww		3	N	35cm; reddish brown, granular girdle cover plates completely
chiton, hairy gr	Mopalia	ciliata+	ww	B	2	N	incl M.hindsii and any uid hairy looking chiton; 7cm; notched girdle has SOFT, dark "hairs" on edge; variable colors
chiton, lined gr	Tonicella	lineata+	ww	B	3	B	incl T.undocaerulea; 5cm; colorful w zigzags
chiton, merten's	Lepidozonia	mertensii	bg		3	N	5cm; brown to purple w white lines; tiny sandpaper like knobs
chiton, mossy	Mopalia	mucosa	ww		3	B	7cm; notched girdle w stiff hairs; dull dark colors
chiton, painted dendro-	Dendrochiton	flectens	bg		3	N	3cm; girdle oft orange; smooth w distinctive long, individual hairs
chiton, red flecked mopalia	Mopalia	spectabilis	bg		3	N	7cm; olive valves w red zizags, maybe blue; notched hairy girdle
chiton, stretched	Stenoplax	fallax	sl		3	N	5cm; usuallly smaller, dark reds; nearly 3 times longer than wide
chiton, swan's mopalia	Mopalia	swanii	bg		3	N	6cm; variable colors; wide, soft velvety mottled notched girdle
chiton, three rib	Lepidozonia	trifida	bg		3	N	6cm; redorange valves have 2 radiating lines
chiton, uid baby gr	Lepidozonia+	dentiens	bg		2	N	1.3cm; a tiny, variable species that may be confused with juveniles of others
chiton, white lined	Tonicella	insignis	bg		3	N	5cm; distinctive red valves with zigzagging white lines
chiton, woody	Mopalia	lignosa	bg		3	N	7cm; variable colors but stiff hairs arise from light spots on girdle

Nudibranchs & Sea Slugs (En)

There are oodles of species, most of which are subtidal. Common names are a mishmash mess, and there have been a number of scientific name changes as well (watch especially *Coryphella* to *Flabellina*). You will probably never see some of the ones on this list, and you might just come across one that is supposed to be subtidal up in a quadrat. One clump includes the difficult to separate yellow margin dorids. When in doubt, refer to Pacific Coast Nudibranchs.

Photos: Most in *Whelks to Whales*; a couple in *Beachcomber's Guide*, the rest in *Pacific Coast Nudibranchs*.

dendronotid, variable	<i>Dendronotus</i>	<i>diversicolor</i>	ww	3	5cm; white to lilac; fewer tufts than albus, back stripe runs from last tufts
dendronotid, white	<i>Dendronotus</i>	<i>albus</i>	ww	3	3.5cm; white w white striped tufts & white stripe down back from 4th tufts
dirona, gold	<i>Dirona</i>	<i>aurantia</i>	ww	B 3	13cm; orangish, w large white edged cerata
dirona, white lined	<i>Dirona</i>	<i>albolineata</i>	ww	B 3	18cm; large, flat, white edged cerata
dorid, clown	<i>Triopha</i>	<i>catalinae</i>	ww	B 3	15cm; bright white w orange tips
dorid, cockerell's	Laila	<i>cockerelli</i>	pn	B 3	3cm; white w orange tips; no body spots like <i>Triopha</i>
dorid, giant white	<i>Archidoris</i>	<i>odhneri</i>	ww	3	20cm; bright white, bumpy looking
dorid, leopard	<i>Diaulula</i>	<i>sandiegensis</i>	ww	3	7cm; white, gritty, w dark ringed spots
dorid, red gilled	<i>Acanthodoris</i>	<i>nanaimoensis</i>	ww	3	3cm; white w yellow margin; maroon on gills & rhinos
dorid, yellow margin gr	<i>Cadlina+</i>	var	ww	B 3	incl <i>C.luteomarginata</i> , <i>C.flavomaculata</i> , <i>Acanthodoris hudsoni</i> ; 5cm; white body w yellow margin & yellow tipped tubercles
leather limpet sea slug	<i>Onchidella</i>	<i>borealis</i>	bg	1	1.5cm; drab mottled; limpet like shape
nudibranch, barnacle	<i>Onchidoris</i>	<i>bilamellata</i>	ww	B 3	P 2cm; cream with brown pattern on back
nudibranch, cryptic	<i>Doridella</i>	<i>steinbergae</i>	bg	B 3	2cm; on & resembles kelp encrusting bryozoan; no notch simple rhino
nudibranch, freckled	<i>Anisodoris</i>	<i>lentiginosa</i>	pn	3	18cm; white & gritty w brown blotches
nudibranch, hooded	Melibe	<i>leonina</i>	ww	3	10cm; clear with paddles and large head; bizarre looking
nudibranch, needle	Janolus	<i>fuscus</i>	pn	B 3	3cm; long cerata tipped w orange, then white
nudibranch, obelia eating gr	<i>Eubranchus</i>	sp	pn	B 3	1cm; a few swollen cerata; 2 similar sp; <i>E.olivaceous</i> is common on <i>Obelia</i>
nudibranch, opalescent	<i>Hermisenda</i>	<i>crassicornis</i>	ww	B 3	5cm; colorful, white tipped cerata; orange line between rhinos; common
nudibranch, pacific corambe	Corambe	<i>pacifica</i>	pn	B 3	1.5cm; on & resembles kelp encrusting bryozoan; anterior is notched (see <i>Doridella</i>)
nudibranch, red sponge	<i>Rostanga</i>	<i>pulchra</i>	ww	B 3	1.5cm; orange/red like the sponge it is found on
nudibranch, shaggy mouse	<i>Aeolidia</i>	<i>papillosa</i>	ww	3	6cm; bare back with crowded gray cerata on edges; bare triangle near head
nudibranch, three lined	<i>Flabellina</i>	<i>trilineata</i>	ww	3	3.5cm; slender, white w clustered red cerata; common
sea lemon, flatspotted	<i>Anisodoris</i>	<i>nobilis</i>	ww	3	20cm; yellow or orange w dark spots between tubercles
sea lemon, monterey	<i>Archidoris</i>	<i>montereyensis</i>	ww	B 3	P 15cm; yellow to orange with dark spots on tubercles themselves
tritonia, diamond back	<i>Tritonia</i>	<i>festiva</i>	ww	3	10cm; white with wide head veil & tufts down the sides

Limpets (Ep)

abalone, northern	Haliotis	kamtschatkana	ww	3	N	18cm; irregular, red green shell w 3-6 raised holes
limpet, file	Lottia	limatula	bg	2	N	5cm; flattish w fine, toothed ribs; apex off center
limpet, keyhole h puncturella	Cranopsis	cucullata	bg	3	N	4cm; white w raised ribs, top has slit and oft hooked
limpet, keyhole, rough	Diodora	aspera	ww B	3	N	7cm; grayish, banded, rough looking shell w hole in top
limpet, ribbed	Lottia	digitalis	ww	1	P	2cm; anterior apex and ribs w undulating margin
limpet, seaweed	Tectura	insessa	sl	3	N	2cm; on feather boa; dark brown, shiny, relatively tall & narrow
limpet, shield/mask/plate gr	Tectura+	var	ww B	1	B	incl Lottia pelta and any juvenile limpets; 5cm; variable markings & shapes
limpet, unstable	Lottia	instabilis	bg		N	4cm; dark brown w saddle shaped edge for riding kelp
limpet, whitecap	Acmaea	mitra	ww	3	N	3x3cm; round, thick, tall shell usually covered in coralline algae

Snails etc (Es)

dogwinkle gr	Nucella	sp (3)	ww B	2	P	5-8cm; gray, white or banded; smooth or frilled
leafy hornmouth	Ceratostoma	foliatum	ww B	3	P	large tooth, 3 winglike frills
moonsnail, lewis's	Polinices	lewisii	ww B	3		large, rounded shell with extended foot
periwinkle, checkered	Littorina	scutulata	ww P	1	P	shell more slender; often white checkered; purplish interior
periwinkle, sitka	Littorina	sitkana	ww P	1	P	squat shell w large, circular aperture; brown or orange interior
snail, black turban	Tegula	funnebralis	ww B	1		3 cm; thick, purple black shell oft white top
snail, mudflat	Batillaria	zonalis	ww P	1		3cm; long w beaded ridges; on mud
snail, uid gr	Var+	var	ww P	1		any juvenile or difficult to identify snail
triton, oregon	Fusitriton	oregonensis	ww B	3		12cm; big, hairy looking snail
wentletrap gr	Opalia+	sp	bg B			incl Epitonium; white, elongated shell with whorls and ridges

Barnacles (Fb)

Five species that are occasionally difficult to identify when young or clumped closely together. Pelagic goose barnacles (*Lepas*) won't be counted as they will only be found attached to transient flotsam. Shell barnacles (*Solidobalanus hesperius*) will also be ignored as they are very rare intertidally and difficult to distinguish.

Photos: all in ww except little brown; in bg

barnacle, acorn	Balanus	glandula	ww B	1	P	2cm; whitish; cross wiggles up & close
barnacle, brown	Chthamalus	dalli	bg	1	P	.5cm; brownish; cross wiggles faint, more lateral
barnacle, giant	Balanus	nubilus	ww B	3		10cm; bright tissue near beak like plates
barnacle, thatched	Semibalanus	cariosus	ww	2	P	6cm; prominent ridges & projections; squiggle, not cross

Crabs & Hermits (Fc)

Numerous species, many of which are tricky but not impossible to identify. Some of these would be unlikely geographically or as high as 1.0m. Hermit crabs are clumped apart from two of the larger, easier to identify species. Pea crabs, which are small and often commensal, are clumped. The two *Pachycheles* (thick clawed porcelain crabs) are stuck together, as are the three “kelp” crabs of the genus *Pugettia*. All the others can be identified with the help of photographs – unfortunately, three books worth.

Photos: ww, bg, Pacific Coast Crabs & Shrimps (most comprehensive, though beware common names)

crab, black clawed shore	<i>Lophopanopeus</i>	<i>bellus</i>	ww	B	3	4cm; thick, smooth; dark claws; variable colors
crab, brown box	<i>Lopholithodes</i>	<i>foraminatus</i>	ww		3	20cm; bumpy, square, tan to red brown; stubby legs
crab, butterfly	<i>Crptolithodes</i>	<i>typicus</i>	ww		3	7cm; legs hidden; variable colors; rostrum narrows
crab, decorator gr	<i>Oregonia+</i>	var	ww	B	3	incl <i>Mimulus</i> ; possibly others; 4cm; spiderlike but usually covered in sponges etc
crab, dungeness	<i>Cancer</i>	<i>magister</i>	ww		3	25cm; grayish w purple; white tipped claws
crab, flat porcelain	<i>Petrolisthes</i>	<i>cinctipes</i>	bg	B	1	3cm; flattened, variable colors; red on mouth and claw
crab, green	<i>Carcinus</i>	<i>maenas</i>	cs			9cm; 5 large teeth after eye; back legs flattish; usu mottle green; REPORT
crab, hairy	<i>Cancer</i>	<i>oregonensis</i>	ww		3	5cm; dull red, circular carapace, black tipped claws, hairy legs
crab, hairy shore	<i>Hemigraspus</i>	<i>oregonensis</i>	ww		3	P 5cm; usually greenish with no spots, hairy legs
crab, helmet	<i>Telmessus</i>	<i>cheiragonus</i>	ww		3	10cm; buried in eelgrass or algae; hairy, large carapace teeth; yellowish
crab, kelp gr	<i>Pugettia</i>	sp (3)	ww	B	3	to 9cm; smooth carapaces with long legs
crab, pea gr	<i>Fabia+</i>	var	bg	B	2	N incl <i>Scleroplax</i> , <i>Pinnixa</i> ; <3cm; often in clams, mussels or worm burrows
crab, porcelain	<i>Petrolisthes</i>	<i>erionerus</i>	ww	B	3	2cm; flattened w brown body and blue on wide claws & mouth
crab, purple shore	<i>Hemigraspus</i>	<i>nudus</i>	ww		3	P 5cm; usually purplish with spotted claws, smooth legs
crab, red fur	<i>Acantholithodes</i>	<i>hispidus</i>	ww		3	6cm; brownish red & hairy all over; bright red claws; sand mud
crab, red rock	<i>Cancer</i>	<i>productus</i>	ww		3	20cm; brick red; black tip pincers
crab, sharp nosed	<i>Scyra</i>	<i>acutafrons</i>	ww	B	3	leaf like horns, very long claws; oft decorated
crab, slender cancer	<i>Cancer</i>	<i>gracilis</i>	ww		3	11cm; teeth outlined in white; purplish claws w white tips
crab, thickclaw porcelain gr	<i>Pachycheles</i>	sp (2)	ww	C	3	<i>P. rudis</i> , <i>pubescens</i> ; 2cm; large, bumpy, unequal claws, scattered or dense hairs
crab, umbrella	<i>Cryptolithodes</i>	<i>sitchensis</i>	ww	B	3	10cm; legs hidden; variable colors, rostrum flares
hermit crab, misc gr	<i>Pagurus</i>	sp (6+)	ww	B		B various species in shells and occ. sponges
hermit crab, orange	<i>Elassochirus</i>	<i>gilli</i>	ww		3	N 4cm; bright orange red smooth; white spots at joints
hermit crab, tubeworm	<i>Discorsopagarus</i>	<i>schmitti</i>	cs		3	N .6cm; banded legs; lives in <i>Serpula</i> tubes; disappears quickly
hermit crab, widehand	<i>Elassochirus</i>	<i>tenuimanus</i>	ww	P	3	N 4cm; large, flattened right claw, reddish brown; usu in triton shell
lithode, hairy	<i>Hapalogaster</i>	<i>mertensii</i>	ww	C	3	4cm; flattened, hairy brown, soft abdomen

Miscellaneous Crustaceans (Fm)

These miscellaneous, buggy little crustaceans are next to impossible to identify to species in the field. Some of the obvious clumps are listed along with an unidentified group to add anything that doesn't seem to fit.

Photos: scattered through ww, bg and sl

beach hopper gr	Traskorchestia+	traskiana	ww	B	1	N	incl Megalorchestia; 3cm; amphipod, long antenna; "kelp flea" in seaweed
crustacean, uid little gr	Var+	var	sl	B	1		any buggy little crustacean that doesn't fit with the other clumps
isopod gr	Idotea	sp	ww	B	2	P	variable colors and sizes; 7 pairs of feet, buglike
mite, red velvet	Neomolgus	littoralis	bg		1		3mm, vibrant red little mite
ocean pill bug gr	Gnorimosphaeroma+		var	sl		1	P incl Ligia, Cirolana; isopods that look like pill bugs; can curl up in ball
shrimp, skeleton gr	Caprella	sp	bg		3		5cm; elongated, green brown body w short legs

Shrimps (Fs)

There are numerous species of shrimp, especially at the very low intertidal – many are well camouflaged and/or hidden by day, small and quick to dart away. If in doubt, use the unidentified shrimp group which contains some of the more obscure species as well as juveniles and anything else that isn't easy. If you get a good look, use the photographs to id; unfortunately they are scattered amongst the guides.

Photos: ww, bg, Pacific Coast Crabs & Shrimps (most comprehensive, though beware common names)

shrimp, (spot) prawn	Pandalus	platyceros	ww		3		25cm; red w big white spots on abdomen; white bars on carapace
shrimp, bay ghost	Neotrypaea	californienses	ww		2		10cm; whitish w pink/orange; enlarged claw; volcano burrows in mud
shrimp, bay gr	Crangon	sp (5)	bg	B	2		8cm; speckled, sand colored; torpedo shaped
shrimp, blue mud	Upogebia	pugettensis	bg		2		15cm; gray or grayblue; even claws; lives in burrow in mud flats
shrimp, coonstripe	Pandalus	danae	ww		3		14cm; clear w redish stripes, thin white lines, tiny blue spots
shrimp, sitka	Heptacarpus	sitchensis	bg		2		3cm; greenish w red stripes blue dots; long rostrum
shrimp, stout coastal	Heptacarpus	brevirostris	ww	B	2		6cm; short, pointed rostrum, usu green or brownish; common
shrimp, uid gr	Mesocrangon+	munitella	cs	B	2		incl Sclerocrangon, Betaeus, Eualus, Heptacarpus, Hippolyte

Brittle Stars (Gb)

Five species, reasonably easy to identify. The gray brittlestar is extremely rare intertidally.

Photos: 3 in Whelks to Whales, 2 in Beachcombers Guide

brittlestar, black & white	Amphipholis	pugetana	bg		1	N	1cm disc; arms 8-10x; white & gray, occ banded
brittlestar, daisy	Ophiopholis	aculeata	ww		3	S	2.2cm scalloped disc; long, wide rays w blunt spines; var colors
brittlestar, dwarf	Amphipholis	squamata	bg		1	N	5mm disc white spot base of rays; gray tan orange; short (3-4x) arms
brittlestar, gray	Ophiura	lutkeni	ww		3	N	2cm disc; grayish w dark bands on rays
brittlestar, long arm	Amphioda	urtica	ww		3	N	2cm smooth disc; very long arms; yellow brown

Sea Cucumbers (Gc)

Seven species but the two Eupentacta are indistinguishable in the field. The others are reasonably easy though pale orange versions of C.pallida could be mistaken for C.miniata. P.bidiscum would be rare intertidally.

Photos: Whelks to Whales

sea cuke, california	Parastichopus	californicus	ww	3	N	50cm; large, fleshy nubs; mottled brown red; juveniles red
sea cuke, creeping pedal	Psolus	chitonoides	ww	3	S	7cm; yellow/orange dome shaped w overlapping plates; bright red tentacles
sea cuke, orange	Cucumaria	miniata	ww	3	S	20cm; 10 equal, orange/brown bushy tentacles; orange body w rows of brown tube feet
sea cuke, pale	Cucumaria	pallida	ww	3	S	25cm; 10 equal, wispy whitish tentacles occ pale orange; body pale orange
sea cuke, pale creeping pedal	Psolidium	bidiscum	ww	3	S	3cm; pinkish w small overlapping plates, translucent, blotchy tentacles
sea cuke, white gr	Eupentacta	sp (2)	ww	3	S	10cm; only 8 large tentacles; white body

Sea Stars (Gs)

Sixteen possible species though three (Asterina, Ceramaster & Luidia) would be extremely unlikely in our study area. All are reasonably easy to identify as adults – there is a UID group for tiny juveniles.

Photos: Whelks to Whales

star, arctic cookie	Ceramaster	arcticus	ww	3	N	r5cm; firm, pale orange w wide disc; rare
star, blood	Henricia	leviuscula	ww	B	3	P r15cm; thin arms, usually small & bright red
star, giant pink	Pisaster	brevispinus	ww	3	N	r32cm; 5 large, stiff rays; pink to gray
star, leather	Dermasterias	imbricata	ww	P	3	P r15cm; smooth, slick, garlic smell
star, morning sun	Solaster	dawsoni	ww	3	N	r20cm; broad disc; 8-15 long rays; brown/orange; occ mottled
star, mottled	Evasterias	troschellii	ww	3	P	r28cm; variable mottling; smaller disc, longer more tapered arms
star, northern sun	Solaster	endeca	ww	3	N	r20cm; broad disc; usu 9-11 fattish looking rays; usu red/orange; occ w stripes
star, ochre	Pisaster	ochraceus	ww	B	2	P r18cm; purple through orange; thick, stiff body
star, painted	Orthasterias	koehleri	ww	3	N	r25cm; 5 arms w red/white banding, prominent spines
star, rose	Crossaster	papposus	ww	3	N	r18cm; 8-16 rays; spiny looking w concentric rings of color
star, six armed	Leptasterias	sp	ww	1	B	r5cm; highly variable, usually drab mottled
star, spiny mud	Luidia	foliolata	ww	3	N	r30cm; 5 arms; dull gray or brown w white marginal spines; tube feet yellow/orange
star, striped sun	Solaster	stimpsoni	ww	3	N	r25cm; 9-10 slim rays w dark stripe; usually orange/blue
star, sunflower	Pycnopodia	helianthoides	ww	3	N	r46cm; up to 24 rays; soft, spiny; mottled orange purple gray
star, uid juvenile	Var	var	ww	B	1	N small, difficult to identify juveniles; var colors & # of arms
star, vermillion	Mediaster	aequalis	ww	3	N	r10cm; large disc; tapered arms; bright red

Sea Urchins (Gu)

Three species – though purple urchins are seldom far from exposed shores. Easy to identify by color and relative length of spines.

Photos: Whelks to Whales

sand dollar	Dendraster	excentricus	ww	B	3	round, flattened, usually buried in sand
urchin, green	Strongylocentrotus	droebachiensis	ww	B	3	S greenish; short spines (<1/3 test)
urchin, red	Strongylocentrotus	franciscanus	ww	B	3	S large, reddish w long spines (1/2 test)

Colonial Tunicates; Ascidians (Hc)

There are quite a few colonial and social tunicates, most of which grow in crusts that might be mistaken for sponges or bryozoans. Use the pictures and the patterns of the zooids to help identify what you've got and try to narrow it down to one of these species or groups; several of these will be rare in our quadrats.

Photos: all in Whelks to Whales except on in Seashore Life

ascidian, compound	Diplosoma	listerianum	ww		3	N 3mm encrusting transparent sheets; sometimes lumped; raised opening; yellow to gray brown
ascidian, harbor star	Botryllus	schlosseri	ww		3	N 3mm thick; variable colors; star shaped group around opening
ascidian, lined compound gr		Botryllus+	sp	ww	3	N also Botrylloides; thin sheet, zooids in lines or patterns; dark orange
ascidian, mushroom	Distaplia	occidentalis	ww	M	3	N 10cm colony; usually mushroom shaped colony; variable colors
ascidian, pacific white crust	Didemnum	carnulentum	ww		3	N 6mm thick, flattish colonies; white gray pink orange; many tiny holes, a few larger ones
ascidian, red	Aplidium	solidium	ww	C	3	N bright red to orange brown; zooids clustered
ascidian, sea pork	Aplidium	californicum	ww	M	3	S encrusting; yellow, gray, white or clear
ascidian, white glove leather	Didemnum+	albidum	ww		3	N also Tridemnum sp; white with small dark holes
social ascidian, orange	Metandrocarpa	taylori	ww	C	3	N 6mm; bright orange joined by thin stolon
social ascidian, sea grapes	Perophora	annectens	ww	C	3	N 6mm; yellow green & round; clustered; sometimes attached

Solitary Tunicates; Sea Squirts (Hs)

Shape, color and texture will all help you identify larger, solitary tunicates. Several of these would be rare in our quadrats.

Photos: Whelks to Whales (note Beachcomber's guide update on Corella)

sea squirt, broadbase	Cnemidocarpa	finmarkiensis	ww		3	B 8cm; bright shiny orange, but hides in crevices
sea squirt, brooding transp	Corella	inflata	bg		3	N 5cm; intertidal version; compressed, clear and clumped
sea squirt, flattened	Ascidia	callosa	ww	C	3	N 3cm wide; flattened, smooth tan translucent small siphons
sea squirt, glassy	Ascidia	paratropa	ww	C	3	N 15cm; clear tunic w large siphons, spines
sea squirt, hairy	Boltenia	villosa	ww		3	N 4cm high; red orange on stalk, spiny hairs
sea squirt, horseshoe	Chelyosoma	productum	ww		3	N 6cm; oval, whitish body w short siphons; often clumped
sea squirt, peanut	Styela	gibbsii	ww	P	3	N 4cm; wrinkled, orange; distinct but in groups
sea squirt, sea vase	Ciona	intestinalis	ww		3	N 15cm; narrow, vase like, translucent

sea squirt, spiny	Halocynthia	igaboja	ww	3		10cm dia; solitary w cross like reddish siphons, very spiny
sea squirt, wrinkled	Pyura	haustor	ww	3	S	8cm; slender red siphon from warty brown base; common

Algal Crusts (Ic)

crusts, algal	Ralfsia+	var	ps	B	1	B	incl Ralfsia Ananlipus (brown) Mastocarpus Hildenbrandia; may be brown, deep red, blackish, orangish
crusts, calcified epiphytic	Melobesia+	var	ps	B	2		incl Mesophyllum; pinkish round spots on seagrass & other reds
crusts, calcified rock	Pseudolithophyllum+		var	ps	B	1	pinkish or reddish, rocky texture

Blades (Id)

kelp, bull	Nereocystis	luetkeana	ps	B	3	N	long stipe, large single float
kelp, five rib	Costaria	costata	ps	B	3	N	3+2 midribs; contorted blade
kelp, triple rib	Cymathere	triplicata	ps		3	N	1m blade w disc holdfast & 3 folds in blade
kelp, winged	Alaria	sp (7)	ps	B	2	N	long stipe & blade; midrib; winglike sporophylls near base
little brown blades gr	Petalonia+	var	ps	B	2		incl Puntaria, Phaeostrophion; small, smooth brown blades from crust or disc; often clustered
rockweed gr	Fucus+	var	ps	B	1	P	incl Pelvetiopsis, Hesperophycus, Dictyota; brown, dichotomous branching, oft inflated tips, common
cauliflower gr	Leathesia+	var	ps	B	2		incl Soranthera, Colpomenia, Colidesme; brownish, round or convoluted sacs, often epiphytic
sea cabbage	Hedophyllum	sessile	ps	B	2	N	no stipe; cabbage like, convoluted & torn or wrinkled depending on exposure
tangle	Laminaria	sp	ps	B	3		includes sugar kelp (L.saccharina); long brown blades, possibly split or wrinkled, from stipe & fingery holdfast
grass, eel	Zostera	sp (2)	ps	P	3	P	relatively wide (5mm) blades from rhizomes
green string lettuce	Enteromorpha	sp (7)	ps	B	1	P	near freshwater seeps, bright yellow/green; shredded or ribbon like
sea lettuce gr	Ulva+	var	ps	B	1	P	incl Ulvaria; thin bright green blades
crisscrossed red gr	Polyneura+	var	ps	B	2		incl Cryptopleura, Hymenena, Botryoglossum; blades with networks of veins
laver, purple	Porphyra	sp (22)	ps	B	1	P	incl Smithora; thin blades various colors; oft high, conspicuous
rainbow leaf	Mazzaella	sp	ps	B	3	P	leafy iridescent, stretchy
red ribbon	Palmaria	var	ps	B	3		thick, not slimy, deeply divided blades
turkish towel gr	Chondracanthus+	var	ps	B	2	P	incl Mastocarpus; to 30cm; tough blade w bumps; red to yellow
winged rib	Delesseria	decipiens	ps	B	3		delicate, branched blades w midrib & bladelets on one side

Filaments & Fuzzes (If)

fir branch	Analipus	japonicus	ps	B	1		like needles on a twig; to 30cm from conspicuous crust
soda straws gr	Scytosiphon+	var	ps	B	3		incl Melanosiphon; to 50cm; long, brownish; oft like sausage links or coiled

green fish line	Lola	lubrica	ps	P	2	oft >20cm; unbranched, often just tangled in other seaweeds; looks and feels like its name
green rope & filament gr	Acrosiphonia+	sp	ps	B	1	incl green filaments Ulothrix, Ulospora; long green filaments may be tangled together in ropelike strands
green tuft	Cladophora	sp	ps	B	3	bright green; loose clumps or extensive mats, moss like
sea moss	Endocladia	muricata	ps	B	1	P dark little abrasive bushes
fuzzy algae gr	Antithamnionella+	var	ps	B		incl any fine, fuzzy looking reddish algae plus browns like Sphacelaria & Ectocarpus
red spaghetti gr	Gracilaria+		ps	B		incl Nematium; reddish, spaghetti like masses

Branched (Ir)

bladder leaf	Cystoseira	geminata	ps		3	looks like Sargassum but has pointed floats
coral seaweed gr	Corallina+	var	ps		3	P incl Bossiella & Calliarthon; jointed, stony, pink
dead man's fingers	Halosaccion	glandiforme	ps	B	2	P yellow to red tubes like a rubber glove - that squirt
japanese weed	Sargassum	muticum	ps	B	3	many branches, oft dense, smooth rounded floats
string acid hair	Desmarestia	sp	ps	B	3	large, highly branched, can be wiry or with blade like branches; small, disc holdfast
sea staghorn/spongy cushion	Codium	sp (5)	ps	B	3	N lo; dark green spongy; encrusting and branched species; nearly pencil thick
bleach weed	Prionitis	sp (9)	ps	B	2	thick, tough yellow to red, bleachy when squished
bushy red gr	Neorhodomela+	var	ps	B	2	incl Odonthalia, Gelidium; bushy, looking reds; some look like larch

Fish (Jm)

Most intertidal fish live through low tides in tidepools (which we don't survey) or under rocks (which we do). Handle gently, with wet hands, or carefully scoop with a clear tray for id. If it gets away or is a sculpin, use the two groups.

Photos: Coastal Fishes of the Pacific Northwest

clingfish, northern	Gobiesox	maeandricus	cf		3	S 16cm; drab, tadpole like w sucker on belly
cockscorb, high	Anoplarchus	purpureus	cf		3	S 20cm; eel like; fleshy crest & distinct fin; common
fish, skinny uid	Var	var	cf	B	2	any long, skinny fish too small or slippery to positively identify
gunnel, crescent	Pholis	laeta	cf		3	N 25cm; crescent markings along dorsal fin
gunnel, penpoint	Apodichthys	flavidus	cf		3	S 46cm; oft dark bar below eye; oft row of spots
gunnel, rockweed	Xerorpes	fucorum	cf		3	N 23cm; bright, uniform color; tiny pecs
gunnel, saddleback	Pholis	ornata	cf		3	N 30cm; u shaped marks along back
midshipman, plainfin	Porichthys	notatus	cf		3	N 38cm; flat head, bulging eyes; rows of white spots; under rocks
prickleback, black	Xiphister	atropurpureus	cf	B	3	N 30cm; eel like; dark bands w light margins from eyes; white bar at base of tail
prickleback, rock	Xiphister	mucosus	cf		3	N 58cm; eel like; dark bands from eyes; tale merges w anal; common
sculpin gr	Oligocottus+	maculosus +	ww			incl Artedius, others; mottled w large pectoral fins; variable
snailfish, spotted	Liparis	callyodon	cf		3	N 13cm; same as tidepool w dull spots
snailfish, tidepool	Liparis	florae	cf		3	N 13cm; uniform, changeable color; loose skin, small suction disk

