WSG Crab Team ID Guide Crab Anatomy

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This guide was created to help Crab Team monitors identify the most common animals encountered during surveys. If you don't see your species in this guide, check the Monitor Toolbox at: wsg.washington.edu/crabteam for the species code, or email photos to *crabteam@uw.edu*.



- 1. Claw/Cheliped
- 2. Marginal teeth/
 - lateral spines
- 3. Walking legs
- 4. Dactyl
- 5. Rostrum
- 6. Carapace 7. Carapace width

European Green Crab

CAMA Carcinus maenas

- Carapace: oval to 90mm; 5 prominent marginal teeth, 3 rostral bumps
- · Claws: not rounded, occasionally with blue tips
- Walking legs: last pair slightly flattened
- · Color: green, brown, or reddish, often with orange joints

Red color type

Shore Crabs

Hairy Shore Crab

HEOR Hemigrapsus oregonensis

- Carapace: square to 50mm; 3 forward-pointing marginal teeth, 2 rostral bumps
- Claws: rounded, often w/ fleshy tufts, no polka dots /
- Walking legs: with fine sparse hairs
- · Color: variable, green, brown, yellow, white

Purple Shore Crab

HENU *Hemigrapsus nudus*

- Carapace: as HEOR above, but to 60mm marginal teeth rounded inward, 2 rostral bumps less pronounced than HEOR
- Claws: as HEOR, but often with polka dots
- Walking legs: no hairs
- Color: variable, purple, red, yellow, green

Lined Shore Crab

PACR Pachygrapsus crassipes

- Carapace: square to 48mm, with only 2 marginal teeth, 2 reduced rostral bumps
- Claws: as HEOR
- Walking legs: mostly bare but coarse spine-like hairs on tips of legs
- Color: dark red-purple with green lines

Expected Encounter Type

We have coded species that are only likely to be encountered: as molts (M); at coastal sites (C); at inland sites (I). If you think you have found an exception to these expectations, please provide Crab Team with additional photos and details with your data.

Dave Cowle



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Cancrid Crabs

Dungeness Crab

MEMA *Cancer* (*Metacarcinus*) *magister*

- Carapace: oval to 230mm; 10 marginal teeth and widest at pronounced 10th tooth Claws: serrations on outside of dactyl
- Walking legs: Long light-colored with hairs
- Color: light reddish-brown

Graceful Crab

MEGR Cancer (Metacarcinus) gracilis

- Carapace: as MEMA but to 115mm and widest at 9th tooth. 10th tooth appears as a notch behind widest point.
- Claws: no serrations on upper edge of dactyl
- Walking legs: long, purplish, hairless
- Color: light reddish-brown to purple

Red Rock Crab

CAPR Cancer productus

- Carapace: fan to 200mm; 10 rounded blunt marginal teeth, 5 bumps on protruding rostrum
- Claws: large with black tips
- · Walking legs: small and thin
- Color: red to brown; variable patterns in juveniles including stripes and blotches

Pacific Rock Crab

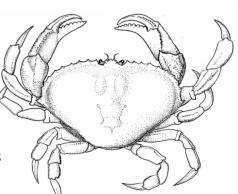
ROAN Cancer (Romaleon) antennarius

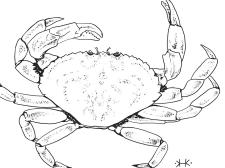
- Carapace: fan to 178mm; 10 curved marginal teeth more pointed than CAPR
- Claws: large, muscular, with black tips
- Walking legs: hairy, similar length as CAPR
- Color: reddish brown to brown; red spots on underside are diagnostic

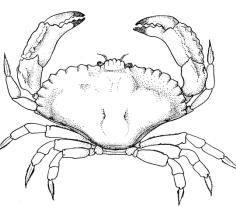
Pygmy Rock Crab

GLOR Cancer (Glebocarcinus) oregonensis

- Carapace: circular to 53mm; 10 distinct but petite marginal teeth, widest at 7th or 8th
- Claws: very large and rounded with black tips
- Walking legs: hairy
- Color: brownish red









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Less Common Crabs

Hairy Helmet Crab

TECH Telmessus cheiragonus

- Carapace: diamond to 100mm; 6 prominent marginal teeth widest at the 5th; hairy
- Claws: small similar to walking legs; hairy
- Walking legs: long and hairy
- Color: olive green to yellow; orange-brown hairs

Hairy Hermit Crab

PAHI Pagurus hirsutiusculus

- Often in very small shells, and may abandon shell when disturbed
- White bands on walking legs; most consistent on 2nd to last segment
- Banded antennae
- · Typically hairs cover legs

Black-clawed Crab

LOBE Lophopanopeus bellus

- Carapace to 40mm; pentagonal with 3 indistinct marginal teeth
- · Large, black-tipped claws
- · Hairs on walking legs
- Greyish-purple with white and brown







Spider Crabs

SPID Multiple species of the family Majidae: (e.g., Pugettia producta, P. gracilis, Scyra acutifrons)

- Carapace: longer front-back than wide with rostrum protruding far beyond eyes
- Claws: long and thin
- Walking legs: long with sharp tips
- Color: variable, dark green to reddish brown; "kelpcolored"

Grainy Hermit Crab

PAGR Pagurus granosimanus

- Often inhabits very large shells and can retract fully, but will not abandon shell when disturbed
- White to blue tubercules on claws and legs, giving a "grainy" appearance
- Orange, unbanded
 antennae



Pea Crab M

PEAS Multiple species of the family Pinnotheridae

- Carapace to 11mm; oblong oval; smooth with no marginal teeth; no rostrum
- · Claws small and indistinct
- Color variable, generally pale



Porcelain Crab M

PORC Multiple species of the family Porcellanidae

- Carapace to 19mm; circular; no marginal teeth
- Dorso-ventrally flattened
- 3 pairs of walking legs
- Flattened claws
- Long antennae



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Gastropods and Shrimps

Asian Mud Snail

- **BAAT** Batillaria attramentaria
- Long conical shell to 45mm, but most individuals 20-30mm
- Circular aperture and operculum
- · Color dark brown with fine bands, wider bands sometimes also apparent.
- Where present, often found in very high densities

Nassa Snail

NASS Nassarius mendicus, N. fraterculus

- Shell oval, football-shaped to 25mm with oval operculum.
- · Vertical ribs on shell, and whorls more distinct than BAAT.
- Color variable, light tan, gray, sometimes banded
- Long siphon often extended when crawling

Bubble Shells

BUBB Multiple species of genus Haminoea

- Slug-like body up to 33mm with clear thin shell nearly covered by body
- May contract to a ball when handled
- Color ranges from beige to olive green to black, with fine spots

Eastern Mud Snail 🧿

ILOB Ilyanassa obsoleta

- Football-shaped shell to 30mm
- Rounded spire and oval operculum and aperture
- Shell black and finely beaded when young, but appears gray and smooth when worn/aged





Brokenback Shrimps

BROK Multiple species of the families Pandalidae and Hippolytidae

- · Laterally compressed
- Prominent rostrum
- Obvious hump shape to abdomen gives appearance of "broken" back.
- Small indistinct claws
- Long walking legs
- Color variable

Sand Shrimps

SAND Multiple species of the family Crangonidae

- Dorso-ventrally compressed
- Indistinct rostrum
- Flattened back
- Small subchelate claws
- Short walking legs
- · Color and pattern light brown/gray and "sandy"





Burrowing Shrimps

BURR Multiple species of infraorder Thalassinidea

- Dorso-ventrally compressed Large abdomen with broad
- tail fan
- Color pale white, pink, or gray



Asian Shrimp

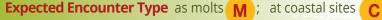
PAMA Palaemon macrodactylus

- Laterally compressed as BROK
- Very long thin claws, long walking legs
- Prominent rostrum

; at inland sites

- 2nd antennae longer than body
- Color translucent or pale brown/gray





© Linda Schroeder

Hairy walking legs



Most Common Fishes

Staghorn Sculpin

LEAR Leptocottus armatus

- Flattened body; large rounded head
- Large, forked antler-like spines in front of gill covers, may erect when agitated
- Large lobe-shaped pectoral fins with concentric black stripes
- Up to 460mm (~18")

Prickly Sculpin

COAS Cottus asper

- Similar large, rounded head and flattened body as LEAR
- Short unbranched spines on gill covers
- Circular pectoral fins with sturdy, stippled rays. Often holds dorsal fin erect
- Up to 300mm (~12")

Tidepool Sculpin

OLMA Oligocottus maculosus

- Head more pointed than LEAR, long slender body
- Two white saddle patches (behind gill and in front of tail) typically apparent
- Pectoral fins weaker, triangular compared to LEAR
- Small forked spine on gill cover
- Up to 90mm (~3.5")

Shiner Perch

CYAG Cymatogaster aggregata

- Deep-bodied, narrow football shape, similar to a goldfish
- Color silver and greenish-black sides with 3 broad yellow vertical bars
- Up to 203mm (~8")

Three-spined Stickleback

GAAC Gasterosteus aculeatus

- Elongate, cigar-shaped body
- Three spines on front of dorsal fin, may be erected if agitated
- Pair of spines in pelvic fins
- Color greenish silver, may be reddish orange
- Up to 75mm (~3')

Eel-like Fishes

 $\ensuremath{\mathsf{ELFS}}$ Multiple species of Pholidae and Stichaeidae

- Very elongated body, appearing like an eel
- Pectoral fins smaller than sculpin, larger than CYAG or GAAC, caudal fin may appear continuous with body
- Colors variable by species with varied spotting and banding patterns
- Up to 200 300mm (~8 12') depending on species













Crabdomen Guide



Individual abdomens can vary in shape and color. This guide covers the typical shape associated with each sex (widely rounded for females, and elongated for males) and species.

Shore Crabs

Hairy Shore Crab

HEOR Hemigrapsus oregonensis





Purple Shore Crab HENU Hemigrapsus nudus

Lined Shore Crab

PACR Pachygrapsus crassipes

Abdominal shape of native shore crabs is similar among species, but ID can be complicated by the occasional infection by a parasite that feminizes male crabs, making them difficult to distinguish from juvenile females *Record these crabs by their true sex.*

Juvenile female vs. feminized male







Prepuberty female Fem

Feminized male

Other Crabs European Green Crab

CAMA Carcinus maenas





Red Rock Crab





Graceful Crab MEGR Cancer (Metacarcinus) gracilis





Spider Crabs SPID Multiple species grouped from the family Majidae







Hairy Helmet Crab





