

CRAB ABUNDANCE MONITORING PROGRAM Identification Guide

FISH SPECIES

Chinook salmon – fingerling

Onchorhynchus tshawytscha

- Length 2 4 cm
- Dorsal fin with dark leading edge and white tip
- Parr marks prominent, above and below lateral line



Chum salmon - fingerling

Onchorhynchus keta

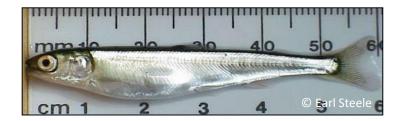
- Length 3.5 4 cm
- Slender body with faint parr marks above lateral line
- Dorsal surface dark green, ventral surface and sides silver



Pink salmon – fingerling

Oncorhynchus gorbuscha

- Length 3 6 cm
- Slender body with no parr marks
- Dorsal surface dark green, ventral surface and sides silver



Surf smelt – juvenile

Hypomesus pretiosus

- Length 3 6 cm
- Elongate body with rounded adipose fin, short lateral line and a small mouth
- Olive green dorsal surface with silver band in the area of the lateral line



Pacific sand lance – juvenile

Ammodytes hexapterus

- Length 3 6 cm
- Elongated pointed body with no adipose fin
- · Gray to green dorsal surface, silver sides.
- Post-larval sand lance appear transparent



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FISH SPECIES

Penpoint gunnel

Apodichthys flavidus

- Adult length 10 20 cm
- Vary in shades of green or maroon or brown with dark bar below eyes
- Generally have a row of dark and/or pale spots along mid-body
- Commonly series of short, pale bar-like markings extend down from top of dorsal fin

Longfin gunnel

Pholis clemensi

- Adult length 7 12 cm
- Brilliant red to maroon, orange, orange-ish brown or reddish brown often with silver markings, belly pale
- Numerous pale, narrow saddles across dorsal fin and back with dark specks on back

Crescent gunnel

Pholis laeta

- Adult length 7 12 cm
- Vary in shades of yellow-green to yellow-brown, orange-brown or brown
- Series of prominent, roundish pale blotches with black outlines along upper back and base of dorsal fin
- Row of pale bars or large spots along mid-body

Saddleback gunnel

Pholis ornata

- Adult length 10 22 cm
- Vary in shades of olive-green to yellow-brown, brown and tan above
- Series of U to V shaded, alternating light to dark, markings on dorsal fin and upper back
- Row of dusky to dark rectangular blotches along side

Quillfish

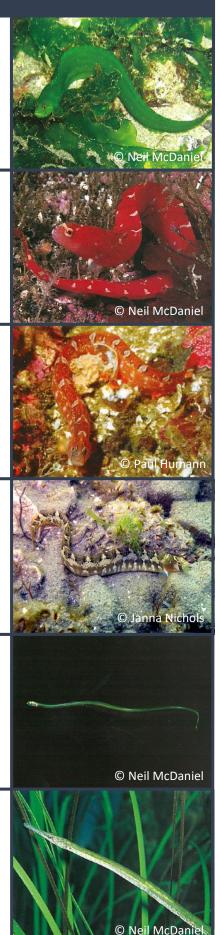
Ptilichthys goodei

- Adult length 10 24 cm
- Very long, thin body with small head, large eyes, tiny mouth and protruding lower jaw
- Somewhat translucent with shades of greenish gray to yellowish or orange

Bay pipefish

Syngnathus leptorhynchus

- Adult length 10 18 cm
- Only pipefish north of California
- Long, thin body, with green to brown coloration, belly often white
- Long trumpet-like snout, small fan-shaped tail



FISH SPECIES

Pacific spiny lumpsucker - juvenile

Eumicrotremus orbis

- Adult length 2.5 8 cm
- Globular head and body with cone-shaped lumps covering body
- · Squarish foredorsal fin widely separated from second dorsal
- Shades of brown to green, often with yellow or orange highlights
- Wide suction disc on underside

Three-spined stickleback - juvenile

Gasterosteus aculeatus

- Adult length 3 8 cm
- · Small, streamlined torpedo-shaped fish
- It's common name is derived from the presence of 2-4, but usually 3 sharp spines on the back, forward of the dorsal fin





Sculpin - juvenile

Multiple species from the family Cottidae e.g., *Clinocottus* acuticeps, Myoxocephalus polyacanthocephalus

- Large bulbous head that often bears fleshy appendages and numerous spines, especially on the gill covers (freshwater sculpin lack spines)
- · Protruding eyes are set high on the head, large pectoral fins
- Shades of brown, green and gray predominate in this family



Snailfish – juvenile

Multiple species from the family Liparidae

- Generally have large, smoothly rounded heads that flow into elongated bodies
- Most have long dorsal and anal fins that nearly join the smallish tail
- Most have a large suction disc on the underside formed by their ventral fins



Flatfish – post-larval

Multiple species from the family Paralichthyidae and Pleuronectidae

- Post-larval flatfish appear translucent with pigment spots in locations where future patterning will be
- Larval flatfish undergo transformation in which skull twists and one eye migrates through a slit in the head



Rockfish - juvenile

Multiple species from the family Scorpaenidae

- Bass-like fish with more or less compressed bodies, large mouths, jutting lower jaws and prominent lips
- Most have spines on their gill plate covers and heads
- Many rockfishes are easily identified by their bright colors and bold markings, but juveniles often appear rather drab with subtle differences



CRAB SPECIES

Dungeness crab

Metacarcinus magister

- Megalopae have both a posterior spine and a long pointed rostrum. M. magister is the largest cancrid with a carapace width of 3.5-4.6 mm.
- Juvenile instars are widest at the tenth tooth. First instars are rounded in shape and have a distinct "V" marking on the rear of the carapace.



MEGALOPA







JUVENILE INSTAR

Blackclaw crab

Lophopanopeus bellus

- Megalopae are present in May and peak in June. Carapace is roughly rectangular or square with small teeth at anterior corners; lacks spines.
- Adults have carapaces to 40mm with three teeth on each side, hairs on walking legs and large blacktipped claws.

Red rock crab

Cancer productus

- Megalopae have both a posterior spine and a long pointed rostrum. Carapace length 3.4-3.6 mm and width 2.0-2.1 mm. Similar in appearance and size to pygmy rock crab (Glebocarcinus oregonensis).
- Juveniles are extremely variable in color, sometimes striped, with 5 bumps on protruding rostrum and almost no visibile space between ten rounded marginal teeth.

Pygmy rock crab

Glebocarcinus oregonensis

- Megalopae have both a posterior spine and a long pointed rostrum. Carapace length is about 3.4 mm; width at widest point is about 2.2 mm. Similar in appearance and size to red rock crab (Cancer productus).
- Adults have a very rounded carapace with ten marginal teeth, widest at the seventh or eighth tooth. Claw tips are black; legs very hairy. Males and females grow to 50 mm carapace width.

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Shore crab

Hemigrapsus sp.

- Megalopae resemble adults with a rectangular carapace. Carapace length from front to back is 1.7-1.8 mm and width is 1.2-1.5 mm.
- Common shore crab species include the hairy shore crab and purple shore crab. Carapace is flat and square, with three rounded marginal teeth.

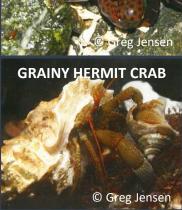
Hermit crab

Pagarus sp.

- Megalopae resemble adults with coiled abdomens, two pairs of walking legs, and last two pairs of walking legs extremely reduced.
- Adults have soft, unprotected, coiled abdomens. Common hermit crab species include the hairy hermit crab and the grainy hermit crab.



HAIRY SHORE CRAB



MISCELLANEOUS SPECIES

Octopuses - juvenile

Either Enteroctopus dofleini or Octopus rubescens

- E. dofleini is one of the largest octopuses with an arm spread up to 3 m
- Adult O. rubescens body length (exclusive of the arms) does not exceed
 6 cm
- Juvenile octopuses caught in light traps are anywhere from 1-4 cm, but species are difficult to distinguish at this life stage

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Stubby squid

Rossia Pacifica

- Short, reddish-brown squid with pale underside
- Eight arms and two tentacles that are about mantle length
- Adult size of mantle is 4 cm, juveniles caught in trap are 0.5 1 cm
- Arguably one of the cutest marine invertebrates, along with the Pacific spiny lumpsucker



Amphipods

Multiple species from the order Amphipoda

- Hundreds of genera inhabit our area, almost all require microscopic examination for positive identification, but rarely exceed 1 cm in length
- Compressed laterally and have long first and second antennae
- The last three pairs of abdominal appendages are nearly as conspicuous as the seven pairs of legs



Isopods

Multiple species from the order Isopoda

- Isopods have an elongated, untapered, segmented body. The abdominal region of the body is mostly unsegmented
- Terminal portion is rather smoothly rounded, except for a tiny blunt tooth at the tip
- Have the ability to cling to surfaces with seven pairs of claw-tipped legs



Segmented worms

Multiple species from the class Polychaeta

- Elongated worm divided into many distinct segments
- Segments mostly much like one another with fleshy flaps and groups of bristles on either side of most segments
- May have simple or branched tentacle-like or gill-like structures associated with the head region or with other parts of the body



Shrimp

Multiple species from the family Crangonidae, Hippolytidae, and Pandalidae

- Small, slender-bodied decapod crustaceans with a long tail, single pair of pincers and a primarily swimming mode of locomotion
- There are many species of shrimp in Puget Sound and they are very difficult to identify to species in the field

