

## An Overview of the Decapoda

With Glossary and References

The arthropods (meaning jointed leg) are a phylum that includes, among others, the insects, spiders, horseshoe crabs and **crustaceans**. A few of the traits that arthropods are characterized by are; their jointed legs, a hard exoskeleton made of chitin and growth by the process of ecdysis (molting).

The Crustacea are a group nested within the Arthropoda which includes the shrimp, crabs, krill, barnacles, beach hoppers and many others. The members of this group present a wide range of morphology and life history, but they do have some unifying characteristics. They are the only group of arthropods that have two pairs of antenna.

The decapods (meaning ten-legged) are a group within the Crustacea and are the topic of this key. The decapods are primarily characterized by a well developed carapace and ten pereopods (walking legs). The higher-level taxonomic groups within the Decapoda are the Dendrobranchiata, Anomura, Brachyura, Caridea, Astacidea, Axiidea, Gebiidea, Palinura and Stenopodidea. However, two of these groups, the Palinura (spiny lobsters) and the Stenopodidea (coral shrimps), do not occur in British Columbia and are not dealt with in this key. The remaining groups covered by this key include the crabs, hermit crabs, shrimp, prawns, lobsters, crayfish, mud shrimp, ghost shrimp and others.

### Arthropoda

#### Crustacea

#### Decapoda

**Dendrobranchiata** – Prawns

**Caridea** – Shrimp

**Astacidea** – True lobsters and crayfish

**Thalassinidea** - This group has recently been split into the 2 groups listed below, based on genetic studies, but since such information cannot be placed in a key such as this, they will still be dealt with as an individual entries here in this key..(consult the key “**BC Ghost and Mud Shrimps** for more details.)

**Axiidea** – Ghost shrimp

**Gebiidea** – Mud shrimp

**Anomura** – Squat lobsters, porcelain crabs, hermit crabs, sand crabs, umbrella crabs, and many crabs resembling true crabs

**Brachyura** – True crabs

As previously mentioned, the decapods, like all arthropods, grow spasmodically through the complex process of ecdysis. The chitinous exoskeleton does not allow for the type of continual gradual growth in body size seen in many other organisms (i.e. vertebrates, cnidarians, molluscs, etc.). Instead the animal grows within the confines of the exoskeleton until the space available inside the exoskeleton is exhausted.

Now the animal enters a pre-molt phase. At this point the animal grows a new, but soft exoskeleton inside the old exoskeleton. At the same time the old carapace starts to separate from the epidermis (skin layer) just underneath. When the old exoskeleton is loose enough it splits allowing the animal inside to wriggle out. At this point the new exoskeleton is still soft and the animal swells its body by taking in air or water. This will allow new growth within the soon-to-be hardened new exoskeleton. Over the next several days the organism often hides away waiting for its new exoskeleton to harden. In some ways the process of ecdysis can be likened to the making of papier-mâché shapes using a balloon as a form.

All of the arthropods, including the decapods, are segmented animals. In the decapods some of the segments have become fused into one larger body area. They also have a high degree of tagmatization (specialization of body regions). The decapods have two main body regions: the cephalothorax and abdomen. The cephalothorax forms their main body and is where the eyes, ganglia and most organs occur. The upper, or dorsal, portion of the cephalothorax is covered with a carapace. The rostrum, a pointy protrusion between the eyes, is an outgrowth of the carapace. The decapod's various appendages, such as the pereopods, antennae, and mouthparts, all arise from the cephalothorax. The appendages, similar to the rostrum, are actually outgrowths of the body wall. The second main body region, the abdomen, is prominent in some groups (i.e. the shrimp, lobsters, mud shrimp). In these groups the pleopods and fan-like uropods are often important for locomotion. For example, shrimp can use their pleopods to slowly swim forward. If startled, shrimp and lobsters can quickly flex their abdomen and uropods and dart away from danger. This is called the tail-flip response or the caridean escape response. In the brachyurans and anomurans (crabs) the abdomen has become folded under the cephalothorax and in some groups is fully or partially fused to the underside of the cephalothorax.

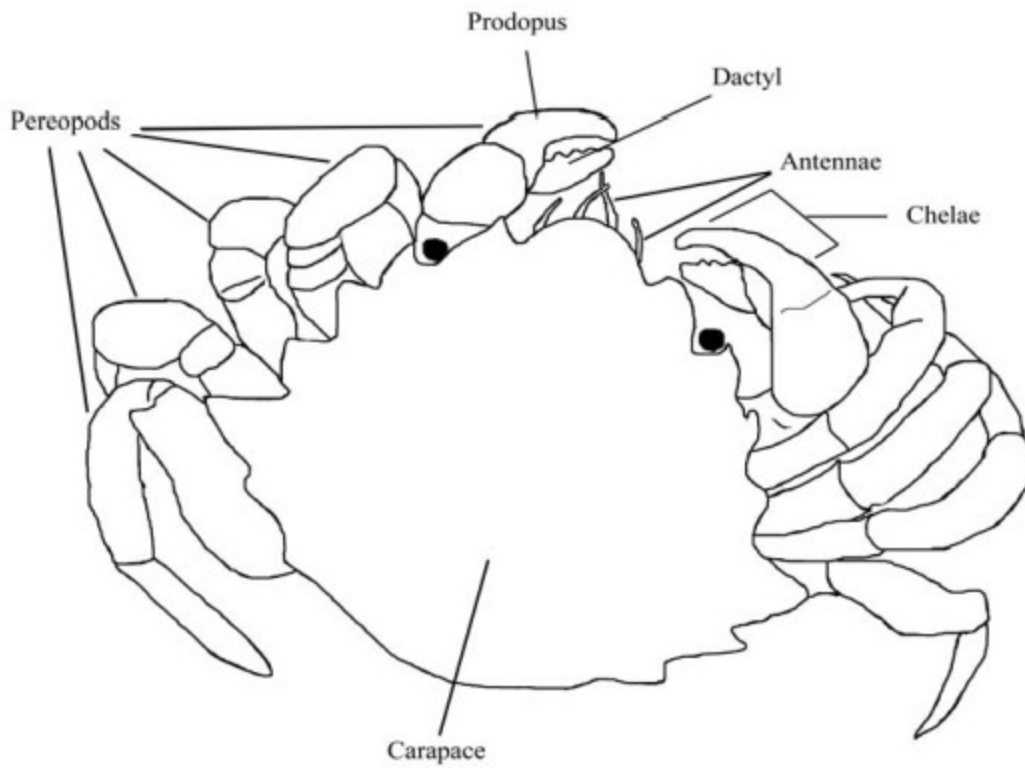


Figure 1. The morphology of a generalized brachyuran crab.

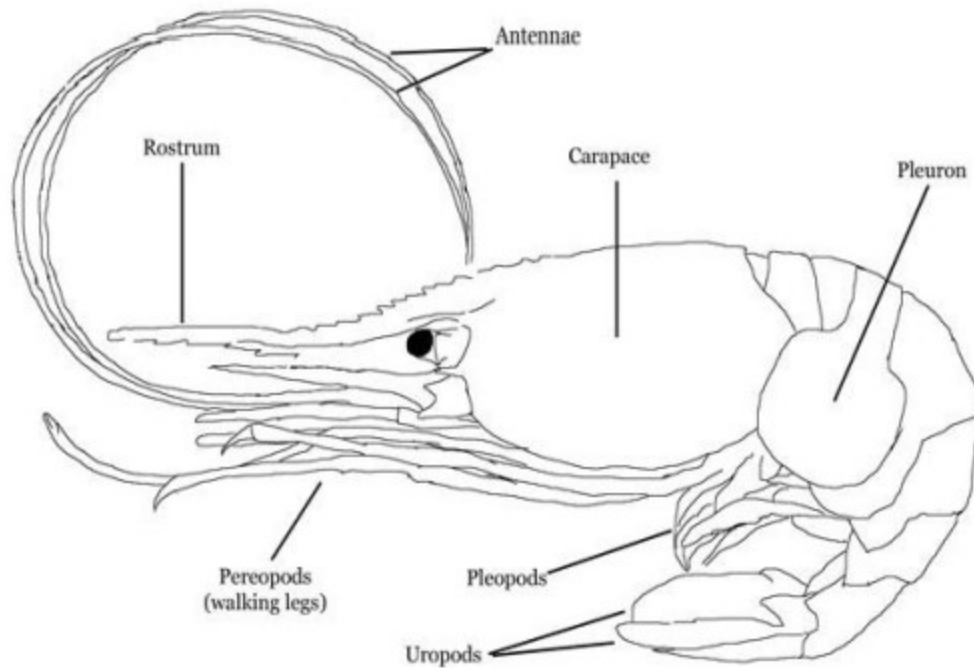


Figure 2. The morphology of a generalized caridean shrimp. Note how pleuron two (indicated) overlaps pleurons one and three.

# Decapod Species found in British Columbia

(\*Indicates non-native species\* )

## Dendrobranchiata

### Family Benthesicymidae

*Bentheogennema borealis* (Rathbun, 1902), Northern Blunt-tailed Shrimp  
*Bentheogennema burkenroadi* Krygier and Wasmer, 1975, Burkenroad's  
Blunt-tailed Shrimp

### Family Sergestidae

*Sergestes similis* Hansen, 1903, Pacific Sergestid  
*Sergia tenuiremis* (Krøyer, 1855), Ocean Sergestid

## Caridea

### Family Pasiphaeidae

*Pasiphaea pacifica* Rathbun, 1902, Pacific Glass Shrimp  
*Pasiphaea tarda* Krøyer, 1845, Crimson Pasiphaeid  
*Parapasiphae sulcatifrons* Smith, 1884, Grooveback Shrimp

### Family Acanthephyridae

*Acanthephyra chacei* Krygier and Forss, 1981  
*Acanthephyra curtirostris* Wood-Mason, 1891  
*Notostomus japonicus* Bate, 1888, Japanese Spinyridge  
*Hymenodora acanthitelsonis*, Wasmer, 1972  
*Hymenodora frontalis* Rathbun, 1902, Pacific Ambereye  
*Hymenodora glacialis* (Buchholz, 1874), Northern Ambereye  
*Hymenodora gracilis* Smith, 1886, Gracile Ambereye

### Family Oplophoridae

*Systellaspis braueri* (Balss, 1914) January 2011  
*Systellaspis cristata* (Faxon, 1893)

### Family Alpheidae

*Betaeus harrimani* Rathbun, 1904, Northern Hooded Shrimp  
*Betaeus setosus* Hart, 1964, Fuzzy Hooded Shrimp

## Family Hippolytidae

- Eualus avinus* (Rathbun, 1899), Beaked Eualid  
*Eualus barbatus* (Rathbun, 1899), Barbed Eualid  
*Eualus berkeleyorum* Butler, 1971, Berkeley's Eualid  
*Eualus butleri* Jensen, 2004, Sponge Eualid  
*Eualus biunguis* (Rathbun, 1902), Deepsea Eualid  
*Eualus fabricii* (Krøyer, 1841), Arctic Eualid  
*Eualus lineatus* Wicksten and Butler, 1983, Striped Eualid  
*Eualus macrophthalmus* (Rathbun, 1902), Bigeye Eualid  
*Eualus pusiolus* (Krøyer, 1841), Doll Eualid  
*Eualus subtilis* Carvacho and Olsen, 1984, Pygmy Eualid  
*Eualus suckleyi* (Stimpson, 1864), Shortscale Eualid  
*Eualus townsendi* (Rathbun, 1902), Townsend's Eualid
- Heptacarpus brevirostris* (Dana, 1852), Stout Coastal Shrimp  
*Heptacarpus camtschaticus* (Stimpson, 1860), Northern Coastal Shrimp  
*Heptacarpus carinatus* Holmes, 1900, Smalleye Coastal Shrimp  
*Heptacarpus decorus* (Rathbun, 1902), Elegant Coastal Shrimp  
*Heptacarpus flexus* (Rathbun, 1902), Slenderbeak Coastal Shrimp  
*Heptacarpus herdmani* (Walker, 1898)  
*Heptacarpus kincaidi* (Rathbun, 1902), Kincaid's Coastal Shrimp  
*Heptacarpus moseri* (Rathbun, 1902), Alaskan Coastal Shrimp  
*Heptacarpus paludicola* Holmes, 1900, Californian Coastal Shrimp  
*Heptacarpus pugettensis* Jensen, 1983, Puget Coastal Shrimp  
*Heptacarpus sitchensis* (Brandt, 1851), Sitka Coastal Shrimp  
*Heptacarpus stimpsoni* Holthuis, 1947, Stimpson's Coastal Shrimp  
*Heptacarpus stylus* (Stimpson, 1864), Stiletto Coastal Shrimp  
*Heptacarpus taylori* (Stimpson, 1857), Taylor Coastal Shrimp  
*Heptacarpus tenuissimus* Holmes, 1900, Slender Coastal Shrimp  
*Heptacarpus tridens* (Rathbun, 1902), Threespine Coastal Shrimp  
*Hippolyte clarki* Chace, 1951, Kelp Humpback Shrimp
- Lebbeus acudactylus* Jensen, 2006  
*Lebbeus catalepsis* Jensen, 1987  
*Lebbeus eludus* Jensen, 2006, Elusive Lebbeid  
*Lebbeus grandimanus* (Brazhnikov, 1907), Candy-striped Shrimp  
*Lebbeus groenlandicus* (Fabricius, 1775), Spiny Lebbeid  
*Lebbeus mundus* Jensen, 2006, Cleaner Lebbeid  
*Lebbeus polaris* (Sabine, 1824) Polar Lebbeid  
*Lebbeus unalaskensis* (Rathbun, 1902)  
*Lebbeus washingtonianus* (Rathbun, 1902), Slope Lebbeid

*Spirontocaris arcuata* Rathbun, 1902, Rathbun's Bladed Shrimp  
*Spirontocaris dalli* Rathbun 1902,  
*Spirontocaris holmesi* Holthuis, 1947, Slender Bladed Shrimp  
*Spirontocaris lamellicornis* (Dana, 1852), Dana's Bladed Shrimp  
*Spirontocaris ochotensis* (Brandt, 1851), Oval Bladed Shrimp  
*Spirontocaris prionota* (Stimpson, 1864), Deep Bladed Shrimp  
*Spirontocaris sica* Rathbun, 1902, Dagger Bladed Shrimp  
*Spirontocaris snyderi* Rathbun, 1902, Snyder's Bladed Shrimp  
*Spirontocarus spinus* (Sowerby, 1805), Parrot Shrimp  
*Spirontocaris truncatus* Rathbun, 1902, Blunt Bladed Shrimp

### **Family Pandalidae**

*Pandalopsis dispar* Rathbun, 1902, Sidestripe Shrimp  
*Pandalopsis lucidirimicola* Jensen, 1998, Sparkling Shrimp  
*Pandalus borealis* Krøyer, 1838, Northern Shrimp  
*Pandalus danae* Stimpson, 1857, Dock Shrimp  
*Pandalus goniurus* Stimpson, 1860, Humpy Shrimp  
*Pandalus hypsinotus* Brandt, 1851, Coonstriped Shrimp  
*Pandalus jordani* Rathbun, 1902, Ocean Shrimp  
*Pandalus platyceros* Brandt, 1851, Spot Shrimp  
*Pandalus stenolepis* Rathbun, 1902, Roughpatch Shrimp  
*Pandalus tridens* Rathbun, 1902, Yellowleg Pandalid

### **Family Crangonidae**

*Argis alaskensis* (Kingsley, 1882), Alaskan Argid  
*Argis crassa* (Rathbun, 1899), Rough Argid  
*Argis dentata* (Rathbun, 1902), Arctic Argid  
*Argis lar* (Owen, 1839), Kuro Shrimp  
*Argis levior* (Rathbun, 1902), Nelson's Argid  
*Argis ovifer* (Rathbun, 1902), Split-eye Argid  
*Crangon alaskensis*, (Kingsley, 1882), Alaskan argid  
*Crangon alba* Holmes, 1900, Stout Crangon  
*Crangon dalli* Rathbun, 1902, Ridged Crangon  
*Crangon franciscorum angustimana* Rathbun, 1902, Calif. Bay Shrimp  
*Crangon franciscorum franciscorum* Stimpson, 1856, California Bay Shrimp  
*Crangon nigricauda* Stimpson, 1856, Black Tailed Bay Shrimp  
*Lissocrangon stylirostris* (Holmes, 1900), Smooth Bay Shrimp  
*Mesocrangon intermedia* (Stimpson, 1860), Northern Spinyhead  
*Mesocrangon munitella* (Walker, 1898), Miniature Spinyhead  
*Metacrangon acclivis* (Rathbun, 1902), Forked Spinyhead  
*Metacrangon munita* (Dana, 1852), Coastal Spinyhead  
*Metacrangon spinosissima* (Rathbun, 1902), Southern Spinyhead  
*Metacrangon variabilis* (Rathbun, 1902), Deepsea Spinyhead

Neocrangon abyssorum (Rathbun, 1902), Abyssal crangon  
Neocrangon communis (Rathbun, 1899), Gray Shrimp  
Neocrangon resima (Rathbun, 1902),  
Paracrangon echinata Dana, 1852, Horned Shrimp  
Rhynocrangon alata (Rathbun, 1902), Saddleback Shrimp  
Sclerocrangon boreas (Phipps, 1774), Sculptured Shrimp

## **Astacidea**

### **Family Astacidae**

Pacifastacus leniusculus klamathensis (Stimpson, 1857), Signal Crayfish  
Pacifastacus leniusculus leniusculus (Dana, 1852), Signal Crayfish  
Pacifastacus leniusculus trowbridgii (Stimpson, 1857), Signal Crayfish

### **Family Cambaridae**

\*Procambarus clarkii (Girard, 1852), Red Swamp Crayfish

### **Family Nephropidae**

\*Homarus americanus Milne-Edwards, 1837, American Lobster

## **Thalassinidea**

### **Axiidea**

#### **Family Axiidea**

Calastacus stilirostris Faxon, 1893  
Calocarides quinqueseriatus (Rathbun, 1902)  
Calocarides spinulicauda (Rathbun 1902)  
Lophaxius rathbunae Kensley, 1989

#### **Family Callianassidae**

Callianopsis goniophthalma (Rathbun, 1901)  
Neotrypaea californiensis (Dana, 1854), Bay Ghost Shrimp  
Neotrypaea gigas (Dana, 1852), Giant Ghost Shrimp

## **Gebiidea**

### **Family Upogebiidae**

Upogebia pugettensis (Dana, 1852), Blue Mud Shrimp

# Anomura

## Family Chirostylidae

*Gastroptychus iaspis* Baba and Haig, 1990, Red Pinch bug

## Family Diogenidae

*Paguristes turgidus* (Stimpson, 1857)

*Paguristes ulreyi* Schmitt, 1921

## Family Haplogastridae

*Acantholithodes hispidus* (Stimpson, 1860), Spiny Lithode Crab

*Dermaturus mandti* Brandt, 1850,

*Hapalogaster grebnitzkii* Schalfeew, 1892, Northern Hairy Crab

*Hapalogaster mertensii* Brandt, 1850, Hairy Crab

*Oedignathus inermis* (Stimpson, 1860), Paxillose Crab

*Placetrone wosnessenskii* Schalfeew, 1892, Scaled Crab

## Family Hippidae

*Emerita analoga* (Stimpson, 1857), Pacific Mole Crab

## Family Lithodidae

*Cryptolithodes sitchensis* Brandt, 1853, Umbrella Crab

*Cryptolithodes typicus* Brandt, 1849, Butterfly Crab

*Lithodes aequispinus* Benedict, 1895, Golden king crab

*Lithodes couesi* Benedict, 1895, Scarlet king crab

*Lopholithodes mandtii* Brandt, 1849, Puget Sound King Crab

*Lopholithodes foraminatus* (Stimpson, 1862), Brown box Crab

*Paralithodes camtschaticus* (Tilesius, 1815), Red King Crab

*Paralomis multispina* (Benedict, 1895), Spiny Paralomis

*Paralomis verrilli* (Benedict, 1895), Verrill's Paralomis January 2011

*Phyllolithodes papillosus* Brandt, 1849, Heart Crab

*Rhinolithodes wosnessenskii* Brandt, 1849, Rhinoceros Crab

## Family Munididae

*Munida quadrispina* Benedict, 1902, Squat Lobster

## Family Munidopsidae

*Munidopsis granosicorium* Williams and Baba, 1989

*Munidopsis quadrata* Faxon, 1893

## Family Porcellanidae

*Petrolisthes cinctipes* (Randall, 1839), Porcelain Crab

*Petrolisthes eriomerus* Stimpson, 1871, Flattop Crab

*Pachycheles pubescens* Holmes, 1900, Pubescent Porcelain Crab

*Pachycheles rudis* Stimpson, 1858, Thick Clawed Porcelain Crab



### **Family Paguridae**

Discorsopagurus schmitti (Stevens, 1925), Rubeworm Hermit Crab  
Elassochirus cavimanus (Miers, 1879), Purple Hermit Crab  
Elassochirus gilli (Benedict, 1892), Pacific Red Hermit Crab  
Elassochirus tenuimanus (Dana, 1851), Widehanded Hermit Crab  
Labidochirus splendescens (Owen, 1839)  
Orthopagurus minimus (Holmes, 1900), Tuskshell Hermit Crab  
Pagurus aleuticus (Benedict, 1892), Aleutian Hermit Crab  
Pagurus armatus (Dana, 1851), Black Eyed Hermit Crab  
Pagurus beringanus (Benedict, 1892), Bering Hermit Crab  
Pagurus capillatus (Benedict, 1892), Fuzzy Hermit Crab  
Pagurus caurinus Hart, 1971, Greenmark Hermit Crab  
Pagurus confragosus (Benedict, 1892), Knobbyhand Hermit Crab  
Pagurus cornutus (Benedict, 1892), Hornyhand Hermit Crab  
Pagurus dalli (Benedict, 1892), White Knee Hermit Crab  
Pagurus granosimanus (Stimpson, 1858), Grainyhand Hermit Crab  
Pagurus hartae (McLaughlin and Jensen, 1996), Hart's Hermit Crab  
Pagurus hemphilli (Benedict, 1892), Maroon Hermit Crab  
Pagurus hirsutiusculus (Dana, 1851), Hairy Hermit Crab  
Pagurus holmi Ng and McLaughlin 2009  
Pagurus kennealyi (Stimpson, 1864), Bluespined Hermit Crab  
Pagurus mertensii Brant, 1851, Hermit crab  
Pagurus middendorffi Brant, 1851, Hermit crab  
Pagurus ochotensis Brandt, 1851, Alaskan Hermit Crab  
Pagurus quaylei Hart, 1971, Quayle's Hermit Crab  
Pagurus rathbuni (Benedict, 1892), Longfinger hermit  
Pagurus samuelis (Stimpson, 1857), Blue Band Hermit Crab  
Pagurus setosus (Benedict, 1892), Setose Hermit Crab  
Pagurus stevensae Hart, 1971, Steven's Hermit Crab  
Pagurus tanneri (Benedict, 1892), Longhand Hermit Crab  
Pagurus townsendi (Benedict, 1892)  
Pagurus trigonocheirus (Stimpson, 1858), fuzzy hermit  
Pagurus undosus (Benedict, 1982), Pribilof hermit crab

### **Family Parapaguridae**

Parapagurus benedicti de Saint Laurent, 1972, Deep Sea Hermit Crab

### **Family Porcellanidae**

Petrolisthes cinctipes (Randall, 1839), Porcelain Crab  
Petrolisthes eriomerus Stimpson, 1871, Flattop Crab  
Pachycheles pubescens Holmes, 1900, Pubescent Porcelain Crab  
Pachycheles rudis Stimpson, 1858, Thick Clawed Porcelain Crab

# Brachyura

## Family Calappidae

*Platymera gaudichaudi* Milne-Edwards, 1837, Two-spine Crab

## Family Cancridae

*Cancer productus* Randall, 1839, Red Rock Crab  
*Cancer magister* Dana, 1852, Dungeness crab  
*Cancer oregonensis* (Dana, 1852), Pygmy Rock Crab  
*Cancer gracilis* Dana, 1852, Graceful Rock Crab  
*Cancer antennarius* Stimpson, 1856, Spot-bellied Rock Crab  
*Cancer branneri* Rathbun, 1926, Furrowed Rock Crab

## Family Cheiragonidae

*Telmessus cheiragonus* (Tilesius, 1815), Helmet Crab January 2011 Christina Ball

## Family Epialtidae

*Chorilia longipes* Dana, 1851, Longhorn Decorator Crab  
*Mimulus foliatus* Stimpson, 1860, Foliate Kelp Crab  
*Pugettia gracilis* Dana, 1851, Graceful Kelp Crab  
*Pugettia producta* (Randall, 1839), Northern Kelp Crab  
*Pugettia richii* Dana, 1851, Cryptic Kelp Crab  
*Scyra acutifrons* Dana, 1851, Sharp Nose Crab

## Family Majidae

*Chionoecetes angulatus* Rathbun, 1924, Angled Tanner Crab  
*Chionoecetes bairdi* Rathbun, 1924, Tanner Crab  
*Chionoecetes tanneri* Rathbun, 1893, Grooved Tanner Crab  
*Hyas lyratus* Dana, 1851, Pacific Lyre Crab  
*Macroregonia macrochira* Sakai, 1978, Deep Sea Giant Spider Crab  
*Oregonia bifurca* Rathbun, 1902  
*Oregonia gracilis* Dana, 1851, Graceful Decorator Crab

## Family Portunidae

\**Carcinus maenas* (Linnaeus, 1758), European Green Crab

## Family Panopeidae

*Lophopanopeus bellus bellus* (Stimpson, 1860), Black Clawed Crab  
*Lophopanopeus bellus diegensis* Rathbun, 1900

## Family Grapsidae

*Planes cyaneus* Dana, 1852, Flotsam Crab  
*Planes marinus* Rathbun, 1914, Drifter Crab

## Family Varunidae

*Hemigrapsus nudus* (Dana, 1851), Purple Shore Crab  
*Hemigrapsus oregonensis* (Dana, 1851), Green Shore Crab

**Family Pinnotheridae**

*Pinnixa eburna* Wells, 1928, Lugworm Dwelling Pea Crab

*Pinnixa faba* (Dana, 1851), Mantle Pea Crab

*Pinnixa littoralis* Holmes, 1894, Gaper Pea Crab

*Pinnixa occidentalis* Rathbun, 1893, Western Pea Crab

*Pinnixa schmitti* Rathbun, 1918, Schmitt's Pea Crab

*Pinnixa tubicola* Holmes, 1894, Tube-dwelling Pea Crab

*Fabia subquadrata* (Dana, 1851), Grooved Mussel Crab

*Pinnotheres pugettensis* Holmes, 1900, Smooth Tunicate Crab

*Pinnotheres taylori* Rathbun, 1918, Tuberculate Tunicate Crab

*Scleroplax granulata* Rathbun, 1893, Burrow Pea Crab

## GLOSSARY OF TERMS

**Abdomen** – The part of the body posterior to the cephalothorax.

**Anterior** – The front of an organism. For example, the anterior portion of a shrimp encompasses the head.

**Carapace** – The “head-shield”. This is a continuous covering, or shell, over the cephalothorax.

**Caridean escape response** – A quick and forceful contraction of the abdomen resulting in swift backward movement. Usually done to escape predators. See also tail-flip response.

**Cephalothorax** – The cephalothorax contains the head and most of the organs in members of the Crustacea. This is the main body of the animal. It is made up of the many fused segments of the cephalon (head) and thorax (body).

**Chelae** – In crustaceans this is the pincer in which the dactyl serves as the movable claw and the prodopus serves as the stationary part of the claw.

**Cheliped** – An arthropod leg that has chelae at the distal end.

**Chelate** – Having chelae. For example, the first pair of pereopods in most decapods is chelate (has claws).

**Dactyl** – The moveable, or hinged, portion of the chelae (claw). This is the terminal portion, usually claw-like, of a thoracic appendage. Together with the prodopus it forms the chelae.

**Distal** – Situated away from the base or point of attachment.

**Dorsal** – The back of an organism. For example, the dorsal portion of a crab encompasses uppermost half of the carapace.

**Ecdysis** – Ecdysis, or molting, is the process by which the exoskeleton is periodically shed to allow the organism to increase in body size.

**Exoskeleton** – The rigid exterior skeleton that supports and protects the body in some invertebrate groups. It is analogous to the endoskeletons found in the vertebrates. Exoskeletons may be able to articulate (e.g. as in arthropods and bivalves) or may be non-articulate (e.g. the shell of snails).

**Gravid** – Carrying eggs or developing young. A female may also be said to be “berried” or “in berry”, meaning that she is carrying eggs.

**Hermaphroditic** – An organism with both male and female reproductive organs. An organism may either be a simultaneous hermaphrodite in which both male and female reproductive organs are present at the same time. Alternatively an organism may be a sequential hermaphrodite in which an individual changes sex over the course of its life.

**Invertebrate** – Those animals that lack a vertebral column or backbone.

**Morphology** – The form and structure of an organism.

**Pereopod** – An appendage (walking leg) originating from the cephalothorax in crustaceans. All decapods have five pereopods.

**Pleopod** – Paired appendages found on the underside of the abdomen. They are used for brooding eggs and in the shrimp for forward swimming.

**Pleuron** – One of the paired lateral flaps on each side of the first five abdominal segments.

**Posterior** – The back or end of an organism. For example, the posterior portion of a shrimp encompasses the tail.

**Prodopus** – The sixth segment of a typically seven-segmented appendage. In species in which the first pair of legs are chelate (having claws), the prodopus forms the unmovable portion of the claw. Together with the dactyl it forms the chelae (claw).

**Proximate** – Situated close to the base or point of attachment.

**Tagmatization** – The specialization of body segments resulting in distinct body regions (i.e. the head, thorax and abdomen).

**Tail-flip response** – The quick and forceful contraction of the abdomen resulting in swift backward movement. Usually done to escape predators. Also known as the caridean escape response.

**Telson** – The telson is a plate attached to the sixth abdominal segment. Together with the uropods, it forms the fan-like tail at the end of the abdomen.

**Uropod** – One of a pair of appendages arising in the end (posterior) of the abdomen. Together with the telson they form the fan-like tail at the end of the abdomen.

**Ventral** – The abdominal side of an organism. For example, in a shrimp the ventral view would encompass the legs (pereopods) and the pleopods on the tail of the shrimp.

**Vertebrate** – Those animals that have a vertebral column, or backbone. This group includes the fish, reptiles, amphibians, birds and mammals.

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