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Subclass Hoplocarida  
Order Stomatopoda  
Families Lysiosquillidae, Pseudosquillidae, Gonodactylidae

MANTIS SHRIMPS

With their massive raptorial legs, stomatopods resemble praying mantids and consequently are called mantis shrimps. Spearing stomatopods, such as species in the families Lysiosquillidae and Pseudosquillidae described here, are highly effective predators that lie in burrows waiting for their prey, such as fish, worms, and small crustaceans, to swim by. The barbed, raptorial legs shoot out with one of the quickest animal movements known, impaling the prey, which is dragged into the burrow and consumed. Gonodactylids, rather than spearing their prey, are smashers that kill hard-bodied prey, such as snails, clams, and crabs, with a powerful blow from the heavy heel of the raptorial appendage. Mantis shrimps have evolved the most highly developed eye of all crustaceans.

Family Tetrasquillidae  
Tetrasquilla mucullochae (Schmitt, 1940)  
(Syn.: Heterosquilla mucullochae)  
Total length to 70 mm (2.8 in)  
This mantis shrimp has a smooth carapace and abdominal somites, and conspicuous eyes with slightly bilobed corneas. There are scattered light brown spots on the dorsal surface and pairs of black spots on the last three abdominal somites, the last pair especially prominent. Habitat & range: Subtidal among rocks, sand, and coral rubble. Circumtropical. Eastern Pacific from the Gulf of California to Ecuador and the Galápagos Islands.

Family Pseudosquillidae  
Pseudosquilla adiastala Manning, 1964  
Total length to 85 mm (3.35 in)  
This beautiful mantis shrimp is most easily recognized by its compressed body and dark ground color adorned with numerous circular or elongate white spots, especially prominent on the raptorial claws and laterally on the abdominal somites. Habitat & range: Subtidal on rock/sand bottom. Widely distributed in the eastern Pacific from Mexico to Colombia and the Galápagos Islands.
Class Malacostraca  
Order Decapoda  
Suborder Dendrobranchiata  
Families Penaeidae, Sicyoniidae

**Penaeoid Shrimps**

![Penaeoid Shrimp](image)

**Family Penaeidae**  
*Litopenaeus stylirostris* (Stimpson, 1874) (Syn.: *Penaeus stylirostris*)

Length to 150 mm (5.9 in); Galápagos specimens usually much smaller. The rostrum of this pale blue to deep blue shrimp bears 5-8 dorsal teeth and 3-8 ventral teeth; it is free of dorsal teeth on the anterior one-third. The adrostral furrow ends just behind the last dorsal rostral tooth. Females may be 20% larger than males. **Habitat & range**: Subtidal on sand to 45 m (150 ft). This species is cultivated in Ecuador for export, and is fished commercially on the continental shelf from Mexico to Panama. Uncommon in Galápagos. Gulf of California to Peru and Galápagos Islands.

Penaeoid females are the only decapods that release their eggs rather than carrying them until they hatch. Penaeoid shrimps are easily viewed at night on sandy substrates by scuba divers who hover quietly just over the sand bottom to see the shrimps digging themselves into the sand, leaving only eyes and antennae visible.
**Thor amboinensis** (de Man, 1888)  
**Squat Anemone Shrimp**

Total length to 13 mm (0.5 in)
The semi-transparent body of this unmistakable species bears large luminous spots ringed with blue on the carapace and abdomen. **Habitat & range:** Found in heads of *Pocillopora* coral; also commensal with anemones. Tropical Atlantic and Indo-Pacific, Cocos Islands, Panama, and Galápagos Islands (new record).

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**Gnathophylloides mineri** Schmitt, 1933  
**Squat Urchin Shrimp**

Total length to 8 mm (0.3 in)
Very small, stocky shrimp with short rostrum, broad eyes, and elongate chelae that are of equal length in the female but of unequal length in the male. Cephalothorax and abdomen pigmented laterally with an amber-colored band.  
**Habitat & range:** Found as a commensal on sea urchins, mainly species of *Tripneustes* and *Lytechinus*; on the white sea urchin *Tripneustes compressus* it feeds on plankton and bits of debris on the spines. Throughout the Indo-Pacific and Caribbean; Malpelo and Galápagos Islands (new record) in the eastern Pacific.

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**Family Gnathophyllidae**

**Gnathophyllum panamense** Faxon, 1893  
**Barrel Shrimp**

Total length 12-25 mm  
(0.5-1 in)
A short, stocky shrimp with reduced abdomen; color dark brown with orange and white spots. Females are larger than males. **Habitat & range:** Low littoral among rocks, often several individuals clustered together under the same rock; also subtidal to 20 m (65 ft). Gulf of California to Panama and Galápagos Islands.

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**Hymenocera picta** Dana, 1852  
**Harlequin Shrimp**

Total length to 29 mm (1.1 in)
This colorful shrimp can hardly be confused with any other crustacean in Galápagos. It is boldly pigmented with yellow-edged red and lavender patterns on a white ground color. The mouth parts are well developed for feeding on sea stars, its exclusive prey. Especially unusual are the lamelliform chelae and antennae. These shrimp often occur in pairs.  
**Habitat & range:** Found in association with their host, sea stars. Widespread in the Indo-Pacific, Panama, and the Galápagos Islands (new record).
**Alpheus grahami** Abele, 1975

Total length to 28 mm (1.1 in)
The carapace and abdomen of this uncommon shrimp are brownish-red, chelae deep red. Major chela relatively massive, free of setae, with blunt-tipped movable finger; an inferior transverse notch extends distally to end of immovable finger. Ocular hood is pointed. **Habitat & range:** Intertidal to 40 m (130 ft), under rocks and coral debris. Gulf of California to Colombia and the Galápagos Islands.

**Alpheus lottini** Guérin-Méneville, 1829

Total length to 33 mm (1.3 in)
Small shrimp easily recognized by the red or orange-red color of the body, black dorsal pattern on the thorax, spotting on the chela, and by its habitat, always in the branches of *Pocillopora* coral. The movable finger of the major chela is bluntly rounded; both movable and immovable fingers bear setae on the ends. Palm of major chela nearly smooth, lacking grooves or sculpturing. **Habitat & range:** Exclusively in *Pocillopora* coral. Circumtropical except Atlantic. In the eastern Pacific from Gulf of California to Colombia and Galápagos Islands.

**Alpheus longinquis** Kim & Abele, 1988

Long-palmed Pistol Shrimp

Total length to 30 mm (1.2 in)
Body tan to dark brown with brick-red to dark red bars on each abdominal segment. Major chela long, the movable finger highly arched and overreaching the end of the immovable finger; movable finger often white in color. Both superior and inferior margins of palm with deep transverse grooves. **Habitat & range:** Intertidal and subtidal to 36 m (120 ft) on rock and coral rubble. Gulf of California to Ecuador and the Galápagos Islands.
Family Palinuridae

**Panulirus penicillatus** (Olivier, 1791)  Red Spiny Lobster

Body length to 33 cm (13 in)

Of the three Galápagos spiny lobsters, this species is the best known and the one most frequently captured commercially. This species is distinguished from **P. gracilis** by its dark brick-reddish-brown body color, with the larger spines tipped white, and a distinct transverse groove over the middle of each abdominal somite. It is distinguished from **P. femoristriga** by the presence of four strong spines on the antennular plate that diverge distally but are closely spaced at their bases, whereas the antennular plate of **P. femoristriga** bears two spines. **Habitat & range:** Caves and recesses in shallow water, usually less than 2 m (6 ft) depth. Red spiny lobsters inhabit exposed and wave-beaten rocky shores, forming groups in caves with multiple entrances. They feed mostly on sessile invertebrates (barnacles), seaweeds, carrion, small crustaceans and molluscs, Indo-West Pacific and the Galápagos Islands.

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**Panulirus gracilis** Streets, 1871  Green (or Blue) Spiny Lobster

Body length to 27 cm (10.6 in)

The green lobster is much less frequently caught commercially in Galápagos, except on the west coast of Isabela where it may comprise up to 80% of the catch. This species is distinguished from **P. penicillatus** by its main body color of dark bluish green or brownish green, the absence of dark-tipped spines on the carapace, and the absence of a distinct transverse groove over the middle of the abdominal somites. There is, however, a distinct white transverse band passing across each abdominal somite just anterior to the posterior margin. The antennular plate lying between the antennae just in front of the eyes bears four widely-spaced spines. **Habitat & range:** Characteristically found deeper than 2 m (6 ft) in calm, often murky water inside bays and coves. More commonly encountered under or between rocks than in caves. Large individuals are normally found singly. Green spiny lobsters feed on sessile invertebrates and carrion. Indo-Pacific and Galápagos Islands.
**Petrolisthes edwardsii** (Saussure, 1853)  
**Edwards Porcelain Crab**

Carapace width 8-23 mm (0.3-0.9 in)
The carapace of this handsome and largest of Galápagos porcelainids bears strong, transverse striations not continuing across the metabranchial regions. Carpus of cheliped (first segment behind the claw) with three low, wide-set, serrate-edged teeth on the anterior margin; surface with large flattened tubercles. Manus (claw of cheliped) with similar but more rounded tubercles. Color scarlet to brick red, tubercles separated by white striations. **Habitat & range:** Rocky intertidal where it is common, especially low littoral under stones and among shell and coral rubble, less frequently subtidal down to about 40 m (130 ft). Gulf of California to Ecuador and the Galápagos Islands.

**Petrolisthes galapagensis** Haig, 1960  
**Galápagos Porcelain Crab**

Carapace width to 10 mm (0.4 in)
This uncommon porcelainid resembles *Petrolisthes brachycarpus* in overall shape but differs distinctly in coloration. Carapace and walking legs light brown flecked with white granules, chelae reddish tan. Front triangular, no epibranchial spine, carpus smoothly rounded and lacking a distinct anterior lobe, finger gape filled with a fine pubescence. **Habitat & range:** Intertidal under stones, occasionally subtidal. Endemic to the Galápagos Islands.

**Petrolisthes glasselli** Haig, 1957  
**Glassell Porcelain Crab**

Carapace width 5-12 mm (0.2-0.47 in)
The carapace of this medium-sized porcelainid bears distinct, transverse striations that do not continue across the metabranchial regions. Two epibranchial spines; front triangular. Anterior margin of carpus with 4 or 5 broad, serrate-edged teeth, surface with oblique striations; manus with oblique striations. Merus of walking legs with a row of spines on anterior edge. The crab resembles *P. edwardsii* but the transverse striations are more distinct. Color red or pink striations on cream background. **Habitat & range:** Subtidal, associated with *Pocillopora* and *Favona* coral, and under stones close to coral. Gulf of California to Colombia and Galápagos Islands.

**Petrolisthes polymites** Glassell, 1937  
**Striated Porcelain Crab**

Carapace width 4-6 mm (0.15-0.25 in)
The carapace of this small porcelainid has distinct, transverse depressions across the metabranchial regions, each lined with microscopic setae. Front broad, sinuously triangular. Carpus about one and one half times as long as wide, anterior margin with four or five broad, serrate-edged teeth, surface with short flattened wrinkles. Manus with similar wrinkles and large flattened granules. Merus of walking legs with one or two distal spines on anterior margin. Color rusty red to carmine, mottled with white; legs appear banded with orange and white. **Habitat & range:** Littoral under stones and to a depth of 10 m (33 ft). Associated with sponges. Gulf of California to Ecuador and the Galápagos Islands.
**Xanthodius stimpsoni** (A. Milne-Edwards, 1860)

Carapace width to 11.2 mm (0.5 in)
The anterolateral border of the carapace of this uncommon xanthid is cut into nine blunt teeth behind the rounded orbital tooth. The carapace itself deeply lobulated anteriorly, free of lobules posteriorly. Hand and wrist bear prominent tubercles. Color reddish brown. **Habitat & range:** Subtidal. Gulf of California to Ecuador and the Galápagos Islands (new record).

**Lophopanocephus maculatus** Rathbun, 1898

Carapace width to 11.5 mm (0.45 in)
The cheliped of this xanthid are smooth and unequal in size. Carapace with four blunt lateral teeth (not including postorbital tooth), the second and third teeth larger than first and fourth. Carapace and chelipeds free of setae; legs sparsely setose. Anterior margin of merus of walking legs with a row of small spines. Color grayish white, the edges of the chela and merus of walking legs tinged with lavender. **Habitat & range:** Subtidal 2 m (7 ft) to dredging depths on sand, rock, and coral substrates. Usually rare, but common following the 1997-98 El Niño event. Lower California, Gulf of California, and Galápagos Islands.

**Lophoxanthus lamellipes** (Stimpson, 1860)

Carapace width to 14 mm (0.6 in)
This very small xanthid is distinguished by the smooth, somewhat octagonal carapace and massive chelipeds. Color pale yellow grading to orange; some individuals purple. Fingers of chela dark brown. **Habitat & range:** Throughout the intertidal zone and subtidal to 6 m (20 ft). West coast of Mexico to Ecuador and the Galápagos Islands.

**Eurypanopeus planus** (Smith, 1869)

Carapace width to 30 mm (1.2 in)
This crab with its massive chelipeds could be mistaken for a small *Ozius verreauxii*, but differs in several ways. The lateral margin of the carapace is divided broadly into three truncate teeth, each separated by V-shaped cuts extending into grooves on the carapace. Fingers of the chela gape; movable finger of the major chela bears a backward-pointing tooth at its base. The reddish-brown color of the fixed finger continues onto the palm. Overall color ranges from slate to brown. **Habitat & range:** Intertidal under rocks. Mexico to Ecuador and the Galápagos Islands (new record).
Family Grapsidae

Grapsus grapsus (Linnaeus, 1758)

Carapace width to 73 mm (2.9 in)
The famous Sally Lightfoot crab is without question the most prominent of Galápagos crabs, appearing as vivid splashes of color on the somber lava substrate. The abundance and ubiquity of this wide-ranging grapsoid species is reflected in the original scientific name bestowed by Carolus Linnaeus, *Cancer grapsus*, meaning literally "crab crab." It is readily distinguished by its scarlet red carapace. The underside of the carapace of adults is a beautiful blue, streaked with orange yellow. Parts of the leg joints also are blue. Juvenile Sally Lightfoot crabs, lacking the brilliant hues of adults, are often mistaken as a different species. They are cryptically colored chocolate brown, striated with light orange yellow and flecks of blue. Sally Lightfoots are nimble crabs, scampering about over the rocks with surprising agility. They feed principally on algae, the juveniles exclusively so, but adults are omnivorous. 

Habitat & Range: Abundant almost everywhere in the high littoral zone of rocky shores, but moving up and down the intertidal zone with changing tide levels. Baja California, Mexico, to Peru and the Galápagos Islands; also in the Atlantic from South Florida and Caribbean to Brazil.

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The name grapsoid is a convenient term for a group of crabs embracing several families, four of which are represented in Galápagos. The family Grapsidae is an ecologically diverse assemblage of marine, amphibious, and terrestrial species that includes the nimble Sally Lightfoot crab. The family Gecarcinidae are thick-shelled land crabs, represented in Galápagos by a single recently-introduced species, *Cardisoma crassum*. The family Ocypodidae contains the familiar ghost crab and the fiddler crabs, all of which are semiterrestrial. Crabs of the family Plicidae resemble members of the family Grapsidae, but differ in several features, most obviously the small and delicate last pair of walking legs.