

inspirational  
invertebrates

# coastal crabs

a guide to the crabs of New Zealand

Version 1.1, 2020



Serena L Cox  
Shane T Ahyong

## about this guide

Crabs are a group of common marine invertebrates that inhabit our coastlines and our harbours, from the intertidal zone down to the continental shelf. They are a magnificent and very diverse group of sea creatures; we hope that you will enjoy reading about them here, and use this guide to help identify these splendid creatures in the wild.

COASTAL CRABS is a fully illustrated working e-guide to the most commonly encountered crabs of New Zealand. It is designed for New Zealanders like you who live near the sea, dive and snorkel, explore our coasts, make a living from it, and for those who educate and are charged with kaitiakitanga, conservation and management of our marine realm. It is one in a series of e-guides on New Zealand's inspirational marine invertebrates that NIWA's Coasts and Oceans group is presently developing.

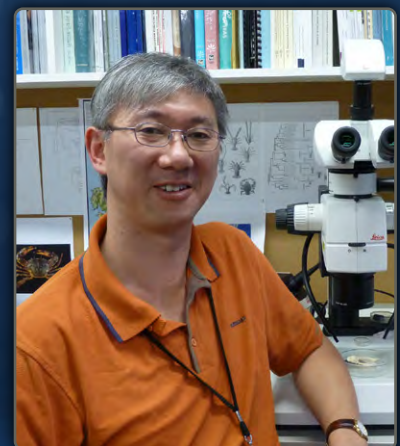
The e-guide starts with a simple introduction to living crabs and how to identify them, followed by an index based on morphology (shape), and a species index, followed by detailed individual species pages and additional supporting information. As new species are discovered and described, new species pages will be added and an updated version of this e-guide will be made available.

Each crab species page illustrates and describes features that enable you to differentiate the species from each other. Species are illustrated with high quality images of the animals in life. As far as possible, we have used characters that can be seen by eye or magnifying glass, and language that is non-technical. Information is provided in descriptive text or quick reference icons that convey information without words. Icons are fully explained at the end of this document and a glossary explains unfamiliar terms.



**Dr Serena L. Cox** is a marine scientist based in New Zealand. She has a particular interest in biosecurity, biofouling and invasive species, and is currently working on the parataxonomy of New Zealand coastal crabs.

**Dr Shane T. Ahyong** is a Senior Research Scientist at the Australian Museum and an Adjunct Associate Professor at the University of New South Wales. Primary research interests are in biodiversity, biological invasions and phylogenetics, in which he is a world authority on Crustacea. His prior position at the NIWA, Wellington provided extensive opportunity to work with the New Zealand fauna, which remains a major research area. Shane serves as a Subject Editor for the World Register of Marine Species (WoRMS) and is President of The Crustacean Society.



<http://www.niwa.co.nz/coasts-and-oceans/marine-identification-guides-and-fact-sheets>



*Remember to check the websites for updated versions!*

# a typical species page layout

**taxonomic name of species**  
*Heterozius rotundifrons* A. Milne-Edwards, 1867

**taxonomic authority**  
person(s) who first described this species

**common name of species**  
big-handed crab

**species classification**  
see species index for arrangement  
Class Malacostraca | Order Decapoda | Infraorder Brachyura | Family Belliidae

**species images**  
inset images show variations and/or closeup detail

**body plan icon**  
the basic shape of the animal, characteristic of certain groups

**life history icon**  
highlighting geographic distribution

**scale bar**  
indicating relative size of organism in the main image

**quick id icons**  
highlighting shape, surface detail, habitat, and environment

**depth range**  
common depth range around New Zealand

**information**  
details on external and internal characters and habitat

**scale of abundance**

**distribution**  
section of coastline where species is most commonly found

**key taxonomic references**  
McLay, C. (1988) Crabs of New Zealand. Leigh Laboratory Bulletin 22.  
Yaldwyn, J.C., Webster, R.W. (2011) Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). Tuhiinga 22: 171-272.

**it could also be ...**  
some species are difficult to tell apart without more detailed information, so check the other species in the guide listed here to make sure that you have the correct species

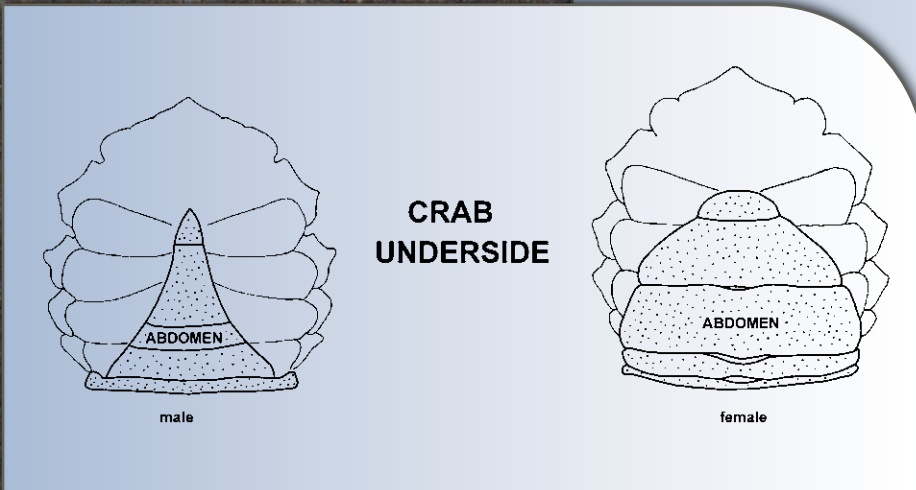
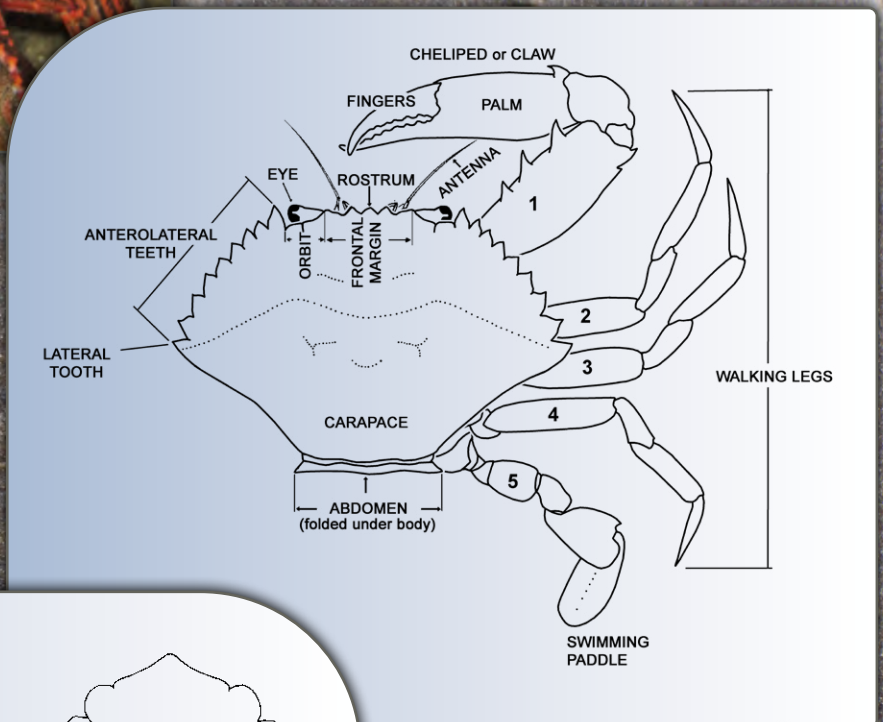
**if could also be.....**  
*Ozium deplanatus*  
*Pilumnus* sp.  
*Pilumnopeus serratifrons*

# about crabs



The phylum Arthropoda is a large group of animals distinguished from all others by their hard exoskeleton (outer shell) and segmented body (Ahyong & Gordon, 2012). The dominant marine arthropods are the crustaceans, and among these are the Decapoda, which includes the crabs, crayfish, lobsters, prawns and shrimps. Decapoda literally means ‘ten-footed’, referring to their five pairs of legs. In crabs, the first pair of walking legs has enlarged pincers or claws (chelipeds) and the remaining pairs are used for walking or swimming. Like lobsters and prawns, the main body of a crab is protected by a well-

developed, hard outer shell (carapace). The margins of the carapace may be spiny, with pointed teeth and lobes or completely smooth. The shape and ornamentation of the carapace can be very helpful in identifying crabs.



Unlike lobsters and prawns which have a narrow body and long tail, crabs also have a wide body and very short tail (abdomen), which is usually tucked underneath the body, making crabs wide and compact. The compact arrangement of the carapace and abdomen makes it much more efficient for crabs to walk sideways instead of forwards as in lobsters and prawns.

Many crabs are scavenging omnivores, eating any plant or meat scraps they come across. Some species are particularly aggressive and prey upon other invertebrates, and occasionally the odd human finger may get nipped if it comes too close. Crabs live in many different habitats ranging from the deep sea to high tide level, including sandy shores, mudflats and estuarine areas, rock pools and rocky crevices and some species prefer to hide inside mussels and seaweed. It is the common seashore species that we focus on in this guide.

The crabs included in this guide belong to two different major groups (infraorders) within the Decapoda, the Anomura and Brachyura.

## ANOMURA

The Anomura contains 17 families and about 2500 species, including hermits and deep-sea king crabs, squat lobsters and porcelain crabs. Only some of these are crab-like, and in this guide, we include one family, the Porcellanidae – also known as the porcelain crabs, false or half crabs. They have a pair of chelipeds but only three pairs of large walking legs. The last pair of legs, however, is hardly visible, being very small and tucked under the abdomen. Other distinguishing characters are the very long antennae, and flattened chelipeds that are held out flat in front of the body.

## BRACHYURA

The infraorder Brachyura contains the true crabs, with more than 100 families and more than 6500 species worldwide (Ng et al., 2008; Ahyong et al. 2011). Fourteen families are included in this guide and are commonly found in and around coasts and harbours of New Zealand.

### Bellidae

Typically rounded or slightly elongated, though the one New Zealand species is not of this shape.

### Cancridae

Typically these crabs have a very broad, oval carapace and large, ridged chelipeds, sometimes referred to as rock crabs and includes some of the best known edible crabs.

### Goneplacidae

These crabs are highly variable in form and characterised by detailed microscopic details of the reproductive organs, and often, the bow-like shape of the last segment of the last walking leg.

### Grapsidae

Carapace usually squarish in shape, and with long legs for rapid running. A distinctive feature of this intertidal group is the wide frontal gap between the short eye-stalks.

### Hymenosomatidae

Sometimes known as false spider crabs due to their small round, or triangular flat bodies and long spindly legs. Most are very small and have a thin carapace

### Majidae, Inachidae and Inachoididae

Commonly known as decorator or spider crabs because of their long thin legs and ability to camouflage. Usually pear-shaped or triangular, tapering towards the eye-stalks.

### Oziidae

Often broad, smooth, oval carapace with blunt teeth on the margins, a strong pair of chelipeds and all legs for walking (no swimming legs). They inhabit shallow rocky environments.

### Pilumnidae

Often called “hairy crabs”. They are small, cryptic crabs, mostly with a dense mat of setae (hair-like bristles) or long bristles covering the carapace and/or legs, distinctive black-or brown tipped chelae.

### Pinnotheridae

These are known as pea crabs, often found living inside bivalve molluscs such as mussels. They are almost spherical (like a pea) with long, slender legs and often poorly calcified (soft).

### Plagusidae

Common exposed shore crabs, similar in appearance to Grapsid crabs. Similar to Grapsidae with squarish carapace and long, heavy running legs, but usually with deep notches in the front of the carapace.

### Portunidae

These are the swimming crabs, which characteristically have the last pair of legs as swimming paddles. The cheliped (pincer) is usually sharply spined. Most species are efficient swimmers and aggressive predators. Typically oval shape (carapace wider than long).

### Macrophthalmidae

Commonly known as fiddler, sentinel or ghost crabs. Usually have characteristically long eye-stalks and the widest point of the carapace is anterior (just behind the eye-stalks).

### Varunidae

These are shallow water and intertidal crabs similar in many ways to the Grapsidae but differing by microscopic details of the mouthparts.

# morphology index



triangular



25-

*Euryrolambrus australis*



26

*Notomithrax minor*



27

*Notomithrax peronii*



28

*Notomithrax ursus*



29

*Trichoplatus huttoni*



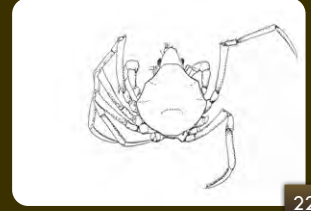
30

*Pyromaia tuberculata*



17

*Elamena producta*



22

*Halimena aoteoroa*



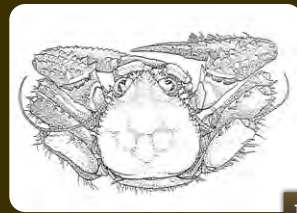
11

*Petrolisthes elongatus*



12

*Petrolisthes novaezelandiae*



10

*Petrocheles spinosus*



round



18

*Halicarcinus cookii*



19

*Halicarcinus innominatus*



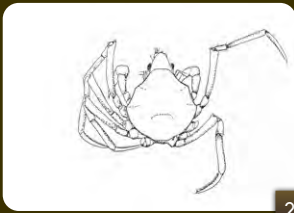
20

*Halicarcinus varius*



21

*Halicarcinus whitei*



22

*Halimena aoteoroa*



23

*Hymenosoma depressum*



24

*Neohymenicus pubescens*



35

*Nepinnotheres atrinicola*



36

*Nepinnotheres novaezelandiae*

# morphology index



oval



*Ovalipes catharus*

42



*Charybdis japonica*

38



*Portunus armatus*

43



*Scylla serrata*

44



*Nectocarcinus antarcticus*

40



*Nectocarcinus bennetti*

41



*Heterozius rotundifrons*

13



*Metacarcinus novaezelandiae*

14



*Pilumnopeus serratifrons*

32



*Pilumnus lumpinus*

33



*Pilumnus novaezelandiae*

34



*Neommatocarcinus huttoni*

15



*Liocarcinus corrugatus*

39

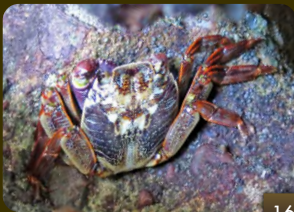


*Ozius deplanatus (truncatus)*

31



square



*Leptograpsus variegatus*

16



*Guinusia chabrus*

37



*Hemiplax hirtipes*

45



*Austrohelice crassa*

46



*Cyclograpsus lavauxi*

47



*Hemigrapsus crenulatus*

48



*Hemigrapsus sexdentatus*

49

Arthropoda

Malacostraca

Decapoda

INFRAORDER  
Anomura

Family Porcellanidae	
<i>Petrocheles spinosus</i>	10
<i>Petrolisthes elongatus</i>	11
<i>Petrolisthes novaezelandiae</i>	12

INFRAORDER  
Brachyura

Family Bellidae	
<i>Heterozius rotundifrons</i>	13
Family Cancridae	
<i>Metacarcinus novaezelandiae</i>	14
Family Goneplacidae	
<i>Neommatocarcinus huttoni</i>	15
Family Grapsidae	
<i>Leptograpsus variegatus</i>	16
Family Hymenosomatidae	
<i>Elamena producta</i>	17
<i>Halicarcinus cookii</i>	18
<i>Halicarcinus innominatus</i>	19
<i>Halicarcinus varius</i>	20
<i>Halicarcinus whitei</i>	21
<i>Halimena aoteoroa</i>	22
<i>Hymenosoma depressum</i>	23
<i>Neohymeniscus pubescens</i>	24
Family Majidae	
<i>Euryrolambrus australis</i>	25
<i>Notomithrax minor</i>	26
<i>Notomithrax peronii</i>	27
<i>Notomithrax ursus</i>	28
<i>Trichoplatus huttoni</i>	29
Family Inachoididae	
<i>Pyromaia tuberculata</i>	30
Family Oziidae	
<i>Ozius deplanatus</i>	31



Arthropoda

Malacostraca

Decapoda

Brachyura

Family Pilumnidae	
<i>Pilumnopeus serratifrons</i>	32
<i>Pilumnus lumpinus</i>	33
<i>Pilumnus novaezelandiae</i>	34
Family Pinnotheridae	
<i>Nepinnotheres atrinicola</i>	35
<i>Nepinnotheres novaezelandiae</i>	36
Family Plagusiidae	
<i>Guinusia chabrus</i>	37
Family Portunidae	
<i>Charybdis japonica</i>	38
<i>Liocarcinus corrugatus</i>	39
<i>Nectocarcinus antarcticus</i>	40
<i>Nectocarcinus bennetti</i>	41
<i>Ovalipes cathurus</i>	42
<i>Portunus armatus</i>	43
<i>Scylla serrata</i>	44
Family Macrophthalmidae	
<i>Hemiplax hirtipes</i>	45
Family Varunidae	
<i>Austrohelice crassa</i>	46
<i>Cyclograpsus lavauxi</i>	47
<i>Hemigrapsus crenulatus</i>	48
<i>Hemigrapsus sexdentatus</i>	49

Class Malacostraca Order Decapoda Infraorder Anomura Family Porcellanidae

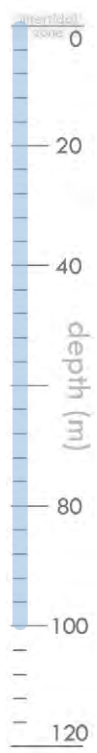
spiny half-crab



0.3 cm

main image: Colin McLay inset image: Chris Woods

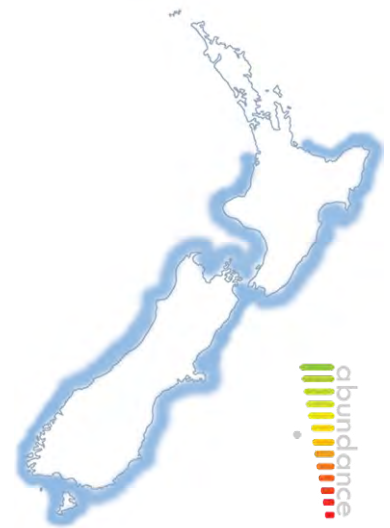
morphology	surface	substrate	habitat			



Carapace flattened, as wide as long, densely covered in short hairs. Very spiny along margins behind and between eyestalks, long antennae. Chelipeds large, flattened and covered in tubercles and spines. Chelipeds and walking legs covered in short setae, last pair short and folded against base of carapace. Grey with bluish tinge. Cheliped finger tips reddish.

Endemic, widespread, from Hauraki Gulf South (tends to be colder-water). Sub-littoral on mud, shingle or rock substrate and also seaweed (*Lessonia* sp.) holdfasts. Intertidal to 100 m.

It could also be.....  
*Petrolisthes novaezelandiae*  
*Petrolisthes elongatus*



McLay, C. (1988) Crabs of New Zealand. Leigh Laboratory Bulletin 22.

Yaldwyn, J.C., Webber, R.W. (2011) Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). Tuhiinga 22: 171-272.

Class Malacostraca Order Decapoda Infraorder Anomura Family Porcellanidae

blue half-crab



1 cm

main image: Shane Ahyong inset image: Chris Woods

morphology	surface	substrate	habitat							



Carapace elongate, flattened, smooth, oval-shaped, front bluntly triangular, rear relatively straight. Carapace margins without teeth. Antennae longer than carapace, whip-like. Eyes large and prominent. Chelipeds very large and flattened, without large teeth or serrations. Last pair of legs setose and reduced and folded, partially concealed under abdomen. Only 3 pairs of walking legs. Variable colour on carapace and dorsal surface of claws and legs from black, blue, greyish, greenish or pinkish, ventral surfaces lighter (white, yellow, blue-green).

Endemic, widely distributed around NZ, including Stewart and Auckland Islands. Introduced to Tasmania. Common beneath boulders, mussel beds, intertidal region of rocky shores, wharf piles and extending into estuaries. Upper littoral down to just below low tide.

It could also be.....  
*Petrolisthes novaezelandiae*  
*Petrocheles spinosus*



McLay, C. (1988) Crabs of New Zealand. Leigh Laboratory Bulletin 22.

Yaldwyn, J.C., Webber, R.W. (2011) Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). Tuhiinga 22: 171-272

Class Malacostraca Order Decapoda Infraorder Anomura Family Porcellanidae

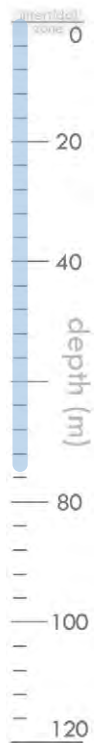
red half-crab



1 cm

main image: Shane Ahyong

morphology	surface	substrate	habitat			



Carapace flattened, slightly wider than long, covered in fine, short hairs, surface uneven. Antennae much longer than carapace, rostrum short, blunt and with short hairs on the margins. Chelipeds smaller in females than males but both are large and flattened with a central ridge running on the outer surface. Only 3 pairs of walking legs. Last pair of legs setose and reduced and folded, partially concealed under abdomen. Males dull reddish to tan brown, females greyish brown, sometimes with tiny red spots.

Endemic, widely distributed around NZ, including Stewart and Auckland Islands. Intertidal, beneath boulders and in seaweed (*Macrocystis* sp.) holdfasts, among shell debris. Intertidal (not commonly) to 75 m.

It could also be.....  
*Petrolisthes elongatus*  
*Petrocheles spinosus*



McLay, C. (1988) Crabs of New Zealand. Leigh Laboratory Bulletin 22.  
 Yaldwyn, J.C., Webber, R.W. (2011) Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). Tuhiinga 22: 171-272.

big-handed crab



images: Shane Ahyong

morphology	surface	substrate	habitat							



Carapace oval shaped, flattened and smooth. Front of carapace smooth except for one small notch between eyes. Surface of carapace and legs are covered almost completely by a compact mat of short setae, often loaded with silty. Chelipeds well-developed and rounded except for slender pincers. One claw of male is significantly larger than the other. Walking legs short and stout. Dull yellowish grey/green and often coated with mud, carapace sides and fingers are brighter yellow. Tips of legs dark brown, antennules and eyestalks lighter yellow.

Endemic, North and South Islands and Chatham Island. Buries in sand/gravel, under stones and boulders on rocky shores, very common, slow moving. Littoral and intertidal.

- It could also be.....
- Ozium deplanatus*
  - Pilumnus* sp.
  - Pilumnopeus serratifrons*



McLay, C. (1988) Crabs of New Zealand. Leigh Laboratory Bulletin 22.  
 Yaldwyn, J.C., Webber, R.W. (2011) Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). Tuhiinga 22: 171-272.

## pie-crust crab



5 cm

main image: Shane Ahyong, inset image: Pete Notman

morphology



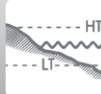
surface



substrate



habitat



Carapace oval, wider than long. Carapace margins resemble convoluted pie-crust. Large chelipeds with granular surface with four longitudinal ridges. Dark brown or red with darker rim around carapace margin. Chelipeds with black finger tips. Young crabs can be mottled green on carapace with dark brown spots. Legs orange banded and with orange dactyls.

Widely distributed around NZ including Chatham and Stewart Islands. Under stones and among large seaweeds. Adults in deeper water on sandy bottoms. Intertidal to at least 40 m. Introduced to southeastern Australia.

It could also be.....

*Ozium deplanatus*

*Pilumnus* sp.

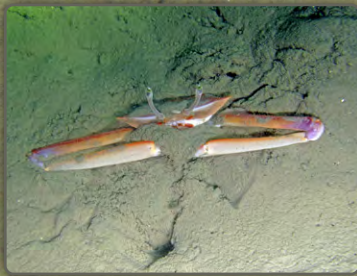
*Pilumnopeus serratifrons*



McLay, C. (1988) Crabs of New Zealand. Leigh Laboratory Bulletin 22.

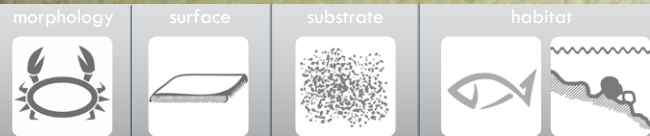
Poore, G. C. B. (2004) Marine Decapod Crustacea of Southern Australia: a guide to identification with chapter on Stomatopoda by Shane Ahyong. Melbourne: CSIRO Publishing.

## policeman crab



20 cm

images: Pete Humphries



Carapace smooth, very wide (much wider at front than rear) and pointed at each lateral margin with a strong lateral spine. Eye on extremely long stalks. Chelipeds equal in size but very slender and elongate, male chelipeds larger than female. Fingers are thin and pointed, walking legs slender. Colourful. Yellowish reddish orange carapace, eyestalks blackish brown near tip. Chelipeds and legs mostly creamy white, but can be red, orange, yellow and purple in places.

Endemic, Widespread around New Zealand including Stewart and Chatham Islands. Occurs in variety of habitats including rocky reefs amongst seaweeds, wharf pilings, under rocks, among sponges and other fouling, sand/mud sediments. Common but tend to be deeper water, from 20 m but more commonly shelf and slope.

It could also be.....  
*Hemiplax hirtipes*



Takeda, M. & Miyake, S. (1969) A small collection of crabs from New Zealand. Occasional Papers of the Zoological Laboratory, Faculty of Agriculture, Kyushu University (OHMU), 2(8): 157–293.

Yaldwyn, J.C., Webber, R.W. (2011) Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). Tuhiinga 22: 171-272.



5 cm

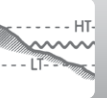
main image and right inset: Shane Ahyong; left inset: Chris Woods

morphology

surface

substrate

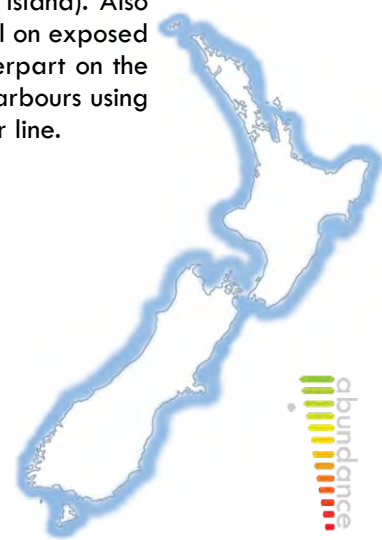
habitat



Carapace squarish in shape with well defined grooves on surface and along sides. Eyes short, near corners of carapace front. Chelipeds smooth and swollen in mature males (compared with females). Legs long and compressed, third leg longest. Tips of legs pointed and with sharp, spine like bristles. Carapace can be quite variable and patchy in colour. Juveniles commonly bluish steely grey and transversely lineated with black. Mature animals dark purple with some white patches. Chelipeds white and purple with some white spots.

Widespread around New Zealand (predominantly North Island and northern South Island). Also Australia, Indo-Pacific, South America. A large, active crab, common in upper intertidal on exposed rocky in cracks, crevices and tide pools, hiding under boulders or seaweed. Its counterpart on the lower shore and subtidally is *Guinusia chabrus* (red rock crab). Also found in muddy harbours using clay pods for shelter. Can often be seen running over surface of rocks above the water line.

It could also be.....  
*Hemigrapsus sexdentatus*  
*Guinusia chabrus*



Griffin, D.J.G. (1973) A revision of the two southern temperate shore crabs *Leptograpsus variegatus* (Fabricius) and *Plagusia chabrus* (Linnaeus) (Crustacea, Decapoda, Grapsidae). *Journal of the Royal Society of New Zealand* 3(3): 415-440.

Yaldwyn, J.C., Webber, R.W. (2011) Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). *Tuhinga* 22: 171-272.



Class Malacostraca Order Decapoda Infraorder Brachyura Family Hymenosomatidae

paua spider crab



1.5 cm

main image: Karen Schnabel, inset: Colin McLay

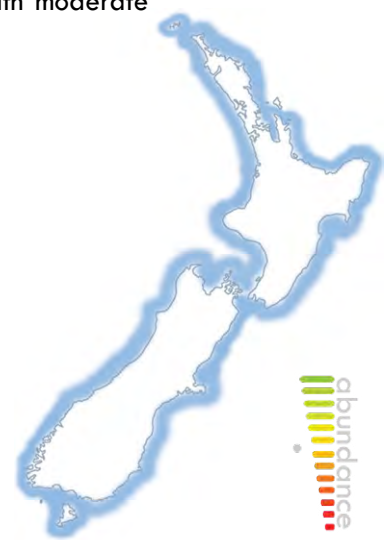
morphology	surface	substrate	habitat



Carapace pentagonal shape, flat and smooth. Rostrum wide and blunt in shape, extending between eyes, tipped by very small peak. Long, smooth, slender legs. Variable carapace colour from blackish-brown to olive-brown, red-brown, purple, cream or white with no difference between the sexes. Striking white patches are often present at base of last pair of legs. Legs often purple tinged with white bands, claw pincers white tipped.

Endemic, widespread around New Zealand. Under large boulders in coarse sand or pebbles on bottom of pools in lower mid-littoral, usually amongst coralline turf. Rocky shores with moderate exposure, often in shells of living paua (*Haliotis iris*). Intertidal rock pools.

It could also be.....  
*Halicarcinus* spp.



Melrose, M. J. (1975) The marine fauna of New Zealand: Family Hymenosomatidae (Crustacea, Decapoda, Brachyura). New Zealand Oceanographic Institute Memoir 34: 1-123.

Yaldwyn, J.C., Webber, R.W. (2011) Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). Tuhiinga 22: 171-272.

## pillbox crab



1 cm

main image: Shane Ahyong

morphology	surface	substrate	habitat



Flattened carapace, octagonal, narrowing anteriorly, slightly wider than broad. Upper carapace surface smooth, without felt. Sides of carapace with tooth on each side. Rostrum originating at carapace level and forming three short points at about eye-level. Walking legs with row of triangular teeth on last segment. Highly variable colour according to habitat, ranging from lime green to almost black, with or without whitish mottling. Chelipeds usually banded.

Endemic, widely distributed around NZ, including Stewart and Chatham Islands. Amongst seaweeds (*Corallina* sp. and *Hormosira banksii*), mussels and fouling on open and rocky coasts. Intertidal, shallow water.

It could also be.....  
*Halicarcinus* spp.  
*Halimena aoteoroa*

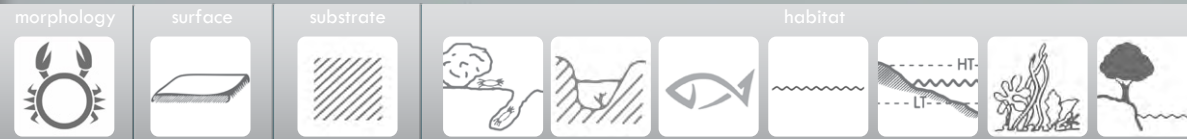


Melrose, M. J. (1975) The marine fauna of New Zealand: Family Hymenosomatidae (Crustacea, Decapoda, Brachyura). New Zealand Oceanographic Institute Memoir 34: 1-123.

Yaldwyn, J.C., Webber, R.W. (2011) Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). Tuhiinga 22: 171-272.



images: Richard Taylor



Flattened, slightly oval carapace, broader than long but angular in appearance, narrowing towards the head; no teeth on margins. Short rostrum, not extending past level of eyes, but trilobed with long tufts of hooked setae. Chelipeds swollen in males compared to females. First two pairs of legs longer than chelipeds, last two pairs slightly shorter. Varies in colour from brown with green or black tints, Legs may be banded, though not so common in mature males. Juveniles have pale yellow carapace flecked with black, orange and white chromatophores.

Widely distributed around NZ, including Stewart, and Chatham Islands. Introduced to Tasmania. Associated with the green-lipped mussel *Perna canaliculus* on hard substrates, among seaweeds and fouling organisms on wharf piles and keels of ships. Also under stones in the intertidal. Very common but cryptic nature. Lower mid-littoral but also in rock pools with *Perna*.

It could also be.....  
*Halicarcinus* spp.  
*Halimena aoteoroa*



Melrose, M. J. (1975) The marine fauna of New Zealand: Family Hymenosomatidae (Crustacea, Decapoda, Brachyura). New Zealand Oceanographic Institute Memoir 34: 1-123.

Poore, G. C. B. (2004) Marine Decapod Crustacea of Southern Australia: a guide to identification with chapter on Stomatopoda by Shane Ahyong. Melbourne: CSIRO Publishing.

Class Malacostraca Order Decapoda Infraorder Brachyura Family Hymenosomatidae

variable pillbox crab



1 cm

image: Chris Woods

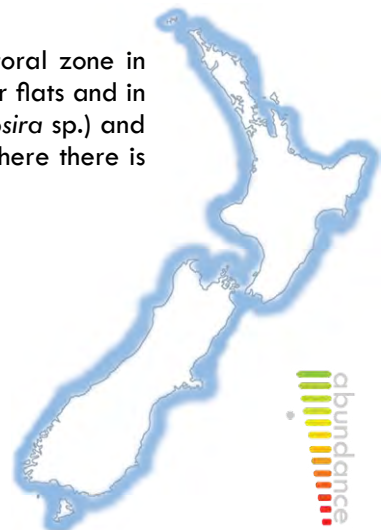
morphology	surface	substrate	habitat



Flattened carapace, pear-shaped and narrowing slightly towards the head, uninterrupted by angles; with small tooth at extreme edges. Upper carapace surface sparsely covered with fine, curved setae. Rostrum originating at carapace level and forming horizontal platform with apex either distinctly or weakly trilobed, does not extend past level of the eyes, has tuft of setae. Chelipeds hairy and almost twice the carapace length in mature males. Sparse hairs along margins of walking legs. Carapace in large males predominantly dark brown, others pale green. White or yellow blotches at base of last pair of legs. Cheliped fingers white tipped with red/orange band. Legs brown and unbanded.

Endemic, widely distributed around NZ, including Stewart, and Chatham Islands. Littoral zone in sheltered areas under algae, on rocks or under stones, in seagrass (*Zostera*) or harbour flats and in sandy areas. Common subtidally in seaweed (*Carpophyllum* sp., *Sargassum* sp., *Hormosira* sp.) and associated with some bivalves (*Maoricolpus* sp., *Dosinula* sp., *Tawera* sp.). Not found where there is high level of silt. Intertidal to 30 m.

It could also be.....  
*Halicarcinus* spp.  
*Halimena aoteoroa*



Melrose, M. J. (1975) The marine fauna of New Zealand: Family Hymenosomatidae (Crustacea, Decapoda, Brachyura). New Zealand Oceanographic Institute Memoir 34: 1-123.

Yaldwyn, J.C., Webber, R.W. (2011) Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). Tuhiinga 22: 171-272.

Class Malacostraca Order Decapoda Infraorder Brachyura Family Hymenosomatidae

White's false spider crab



0.5 cm

image: Shane Ahyong

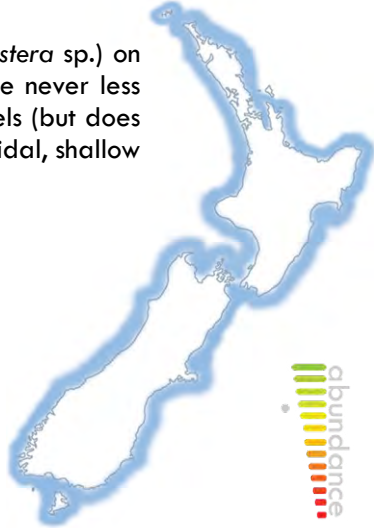
morphology	surface	substrate	habitat



Flattened carapace suboval, narrowing anteriorly, slightly longer than broad. Upper carapace surface covered with felt of fine, short hairs allowing it to blend into the background. Sides of carapace setose in males. Rostrum originating at carapace level and forming horizontal platform, extending past eyes with trilobed tip. Chelipeds hairy and more than twice the carapace length large in males. Carapace green, yellow, grey or brown, sometimes finely speckled with white or black. May have a pair of small white patches at base of last pair of legs and another on the posterior margin. Bottom half of walking legs and claws is white and a red basal band on chelipeds common. May have dark bands on walking legs.

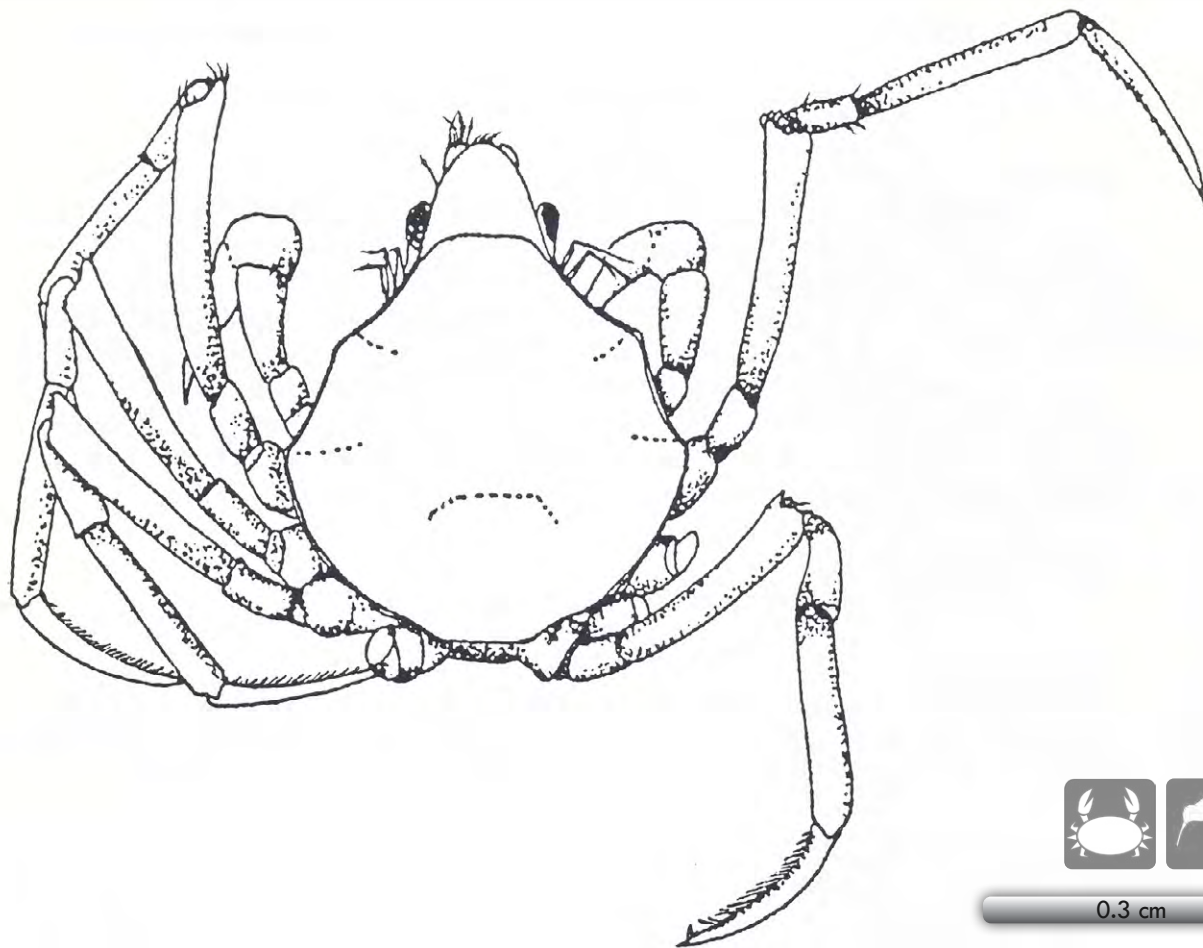
Endemic, widely distributed around NZ, including Stewart Island. Among seagrass (*Zostera* sp.) on harbour flats, in sand on sheltered, open beaches and in estuaries where particle size never less than fine sand; can withstand euryaline conditions. Found buried in mud at all tide levels (but does not construct burrows). Often found with *H. varius* (but *H. whitei* is not in seaweed). Intertidal, shallow water.

It could also be.....  
*Halicarcinus* spp.  
*Halimena aoteoroa*



Melrose, M. J. (1975) The marine fauna of New Zealand: Family Hymenosomatidae (Crustacea, Decapoda, Brachyura). New Zealand Oceanographic Institute Memoir 34: 1-123.  
 Yaldwyn, J.C., Webber, R.W. (2011) Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). Tuhiinga 22: 171-272.

Class Malacostraca Order Decapoda Infraorder Brachyura Family Hymenosomatidae



0.3 cm

image: Colin McLay



Flattened carapace suboval, longer than broad but narrowing anteriorly. Rostrum tongue-shaped, curving steeply downward anteriorly. Distinct groove between rostrum and carapace. Chelipeds slightly longer than carapace width, but slender. First pair of legs longest, fourth pair shortest. Ventral edge of legs with row of curved hairs and tips with a small blunt tooth. Reddish-brown, ends of dactyl white. Dark stripe across the region where rostrum meets with carapace.

Endemic, widely distributed around NZ. Holdfasts of seaweed (*Carpophyllum plumosum*, among *Caulerpa* sp. and *Cystophora torulosa*). Sub-littoral, shallow water.

It could also be.....  
*Halicarcinus* spp.  
*Elamena producta*



Melrose, M. J. (1975) The marine fauna of New Zealand: Family Hymenosomatidae (Crustacea, Decapoda, Brachyura). New Zealand Oceanographic Institute Memoir 34: 1-123.

Yaldwyn, J.C., Webber, R.W. (2011) Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). Tuhiinga 22: 171-272.

McLay, C. (1988) Crabs of New Zealand. Leigh Laboratory Bulletin 22. University of Auckland, Leigh Marine Laboratory.

Class Malacostraca Order Decapoda Infraorder Brachyura Family Hymenosomatidae

false spider crab



0.5 cm

image: Shane Ahyong

morphology	surface	substrate	habitat



Flattened, almost circular carapace, slightly longer than wide and scattered with fine, short setae. Rostrum arising at edge of carapace level, small and bluntly pointed, not reaching past eyes. Eye stalks close together and directed straight forward. All legs very long and fringed with short setae that trap large amounts sediment. Dull tan brown overall, with tiny scattered black and yellow spots visible when viewed under a microscope (chromatophores). Eystalks pale yellow, antennules banded yellow and black, antennae yellow. Live animals usually covered in fine sediment, giving brown furry appearance.

Endemic, widespread around New Zealand, including Auckland Islands. Under stones, among algae on sandy or silty bottoms but rarely seen. Intertidal and shallow water to 10 m.



It could also be.....  
*Halicarcinus* spp.

Melrose, M. J. (1975) The marine fauna of New Zealand: Family Hymenosomatidae (Crustacea, Decapoda, Brachyura). New Zealand Oceanographic Institute Memoir 34: 1-123.  
Yaldwyn, J.C., Webber, R.W. (2011) Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). Tuhiinga 22: 171-272.



0.4 cm

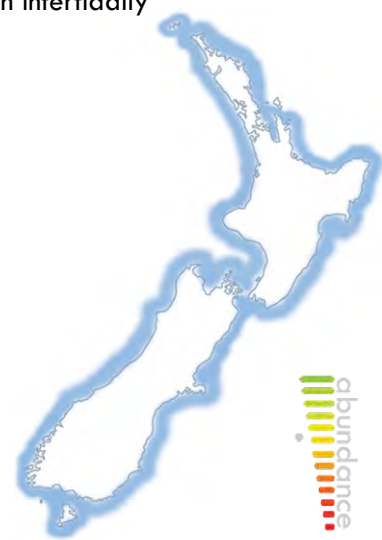
image: Chris Woods



Flattened carapace subcircular, as wide as long, rim very thin. Whole body densely covered with fine setae, usually laden with sediment. Rostrum originating at carapace level, simple and bluntly pointed, projecting past eyes. Chelipeds short in both sexes. First three pairs of legs as long as chelipeds, fourth pair shorter. Tips of legs curved with edges fringed with short hairs and a single blunt tooth on ventral edge. Grey-brown, yellow-brown.

Endemic, widely distributed around NZ including Stewart Island. Sheltered and moderately exposed rocky reefs, seaweed (*Carpophyllum* sp.) holdfasts, coralline turf, rock crevices. Common intertidally under rocks. Intertidal and shallow water to 10m.

It could also be.....  
*Halicarcinus* sp.  
*Hymenosoma depressum*



Melrose, M. J. (1975) The marine fauna of New Zealand: Family Hymenosomatidae (Crustacea, Decapoda, Brachyura). New Zealand Oceanographic Institute Memoir 34: 1-123.

Yaldwyn, J.C., Webber, R.W. (2011) Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). Tuhiinga 22: 171-272.



triangle crab



1.5 cm

main image: Shane Ah Yong, inset image: Pete Notman

morphology	surface	substrate	habitat			



Carapace triangular and broad, expanding laterally to cover the bases of the legs. Chelipeds long, surface coarse, rough and pitted. Walking legs flattened and irregularly crested. Chelipeds with purple fingers, inner surfaces white. Carapace ranging from dark red-orange and irregularly mottled with white to grey-brown. Antennules pale yellow, eyestalks often deep red above and pale beneath. Legs often mottled with white, orange and dark red.

Endemic, widespread around New Zealand including Stewart and Chatham Islands. A littoral species found on rocky, muddy shores, moderately exposed coasts, occasionally under boulders covered by coralline algae and in large, low tidal pools. Also found offshore (inner shelf), frequently associated with bryozoans. Intertidal to 80 m.

It could also be.....  
 Juveniles of *Metacarcinus novaezealandiae*



Griffin, D. J. G. (1966) The marine fauna of New Zealand: spider crabs, family Majidae (Crustacea, Brachyura). New Zealand Oceanographic Institute Memoir, 35: 1-111.

Yaldwyn, J.C., Webber, R.W. (2011) Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). Tuhiinga 22: 171-272.



camouflage crab



1 cm

images: Serena Wilkens

morphology	surface	substrate	habitat



Carapace triangular/pear-shaped and covered in short, blunt spines/tubercles, two short rostral spines between eyes forming V-shape. Carapace margin with 12 short, outwardly directed spines, no posterior spines. Chelipeds long in large males. Walking legs slender with first pair being the longest (getting progressively shorter). Carapace thickly covered by short, hooked, brownish bristles, with attached sponges or algae, accumulated mud and debris giving 'muddy' appearance. Pale yellowish body and appendages, upper surface of claws dark red or purple, tips of walking legs white.

Distributed all round NZ, including Stewart Island. Also found in southeastern Australia. Sand, mud or coarse shell bottoms and rocky shores. Intertidal to 35 m (rarely deeper), common in harbours.

- It could also be.....**
- Notomithrax ursus*
  - Notomithrax longimanus*
  - Notomithrax peronii*
  - Leptomithrax longimanus*



Griffin, D. J. G. (1966) The marine fauna of New Zealand: spider crabs, family Majidae (Crustacea, Brachyura). New Zealand Oceanographic Institute Memoir, 35: 1-111.

Poore, G. C. B. (2004) Marine Decapod Crustacea of Southern Australia: a guide to identification with chapter on Stomatopoda by Shane Ahyong. Melbourne: CSIRO Publishing.

Peron's decorator crab



2.5 cm

images: Shane Ahyong

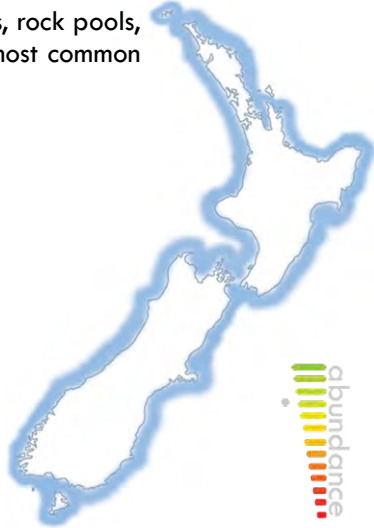
morphology	surface	substrate	habitat



Carapace triangular/pear-shaped and densely covered in spines and tubercles and short, hooked bristles; two moderately long rostral spines forming V-shape. Carapace margin with 10 short, outwardly directed spines and two short posterior spines. Chelipeds of large males long and slender. Walking legs lacking spines; dorsal surface with groups of hooked bristles. First leg longest, others progressively shorter. Dorsal surface of carapace and rostral spines covered by long, stout setae. Carapace usually thickly covered by pieces of seaweed. Dorsal surface of carapace orange to deep red, hairs brownish. Tips of fingers white. Chelipeds greenish brown.

Endemic, widely distributed in NZ, including Stewart and Chatham Islands. Rocky shores, rock pools, amongst seaweed intertidally, sometimes on sand or mud. Intertidal up to 50 m but most common offshore.

- It could also be.....
- Notomithrax ursus*
  - Notomithrax minor*
  - Leptomithrax longimanus*



Griffin, D. J. G. (1966) The marine fauna of New Zealand: spider crabs, family Majidae (Crustacea, Brachyura). New Zealand Oceanographic Institute Memoir, 35: 1-111.  
 McLay, C. (1988) Crabs of New Zealand. Leigh Laboratory Bulletin 22.

hairy seaweed crab



2 cm

images: Shane Ahyong

morphology	surface	substrate	habitat



Carapace triangular/pear-shaped and covered in small and large tubercles (not spines), two short rostral spines forming V-shape. Carapace margin with 9 short, outwardly directed spines, no posterior spines. Walking legs long and slender; dorsal surface covered in longitudinal row of short hooked bristles and long straight bristles. First legs longest, getting progressively shorter. Carapace and rostral spines covered by short, stout, hooked bristles, plus margins of rostral spines and carapace with long, dense setae. Carapace covered by clean seaweed tufts (furry/shaggy appearance). Chelipeds orange to dark red, tips of fingers white. Carapace and walking legs with brownish hairs.

Widely distributed in NZ, including Stewart and Chatham Islands. Also known from southeastern Australia. Rocky shores, rock pools, amongst seaweed intertidally and offshore up to 75 m. Negatively phototactic so may be buried in sandy/course substrates.

It could also be.....  
*Notomithrax peronii*  
*Notomithrax minor*  
*Leptomithrax longimanus*



Griffin, D. J. G. (1966) The marine fauna of New Zealand: spider crabs, family Majidae (Crustacea, Brachyura). New Zealand Oceanographic Institute Memoir, 35: 1-111.

McLay, C. (1988) Crabs of New Zealand. Leigh Laboratory Bulletin 22.

Hutton's masking crab



5 cm

images: Shane Ahyong

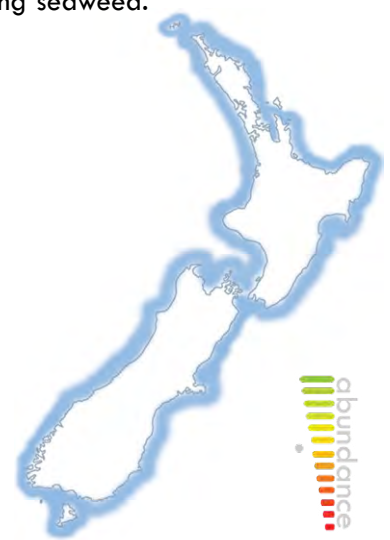
morphology	surface	substrate	habitat



Carapace pear shaped with several prominent tubercles (spines) scattered over surface. Very straight, stiff setae arise from the tubercles, often in pink clusters. Surface of carapace covered in mat of very short, fine velvet. Two prominent rostral spines and outwardly directed spines along caparapce edge behind the eyes. Chelipeds long. End of walking legs very flattened and wide, with last segment folding against previous segment Chelipeds dull orange to deep red or pale purple. Endemic to New Zealand, mainly southern distribution including Stewart and Chatham Islands.

Northern limits mainland Napier and Cavalli Islands. Exposed rocky coasts and among seaweed. Low tide to subtidal.

It could also be.....  
*Notomithrax* sp.



Griffin, D. J. G. (1966) The marine fauna of New Zealand: spider crabs, family Majidae (Crustacea, Brachyura). New Zealand Oceanographic Institute Memoir 35: 1-111  
Woods, C.M.C. (1995) Masking in the spider crab *Trichoplatus huttoni* (Brachyura: Majidae). New Zealand Natural Sciences 22: 75-80.

Class Malacostraca Order Decapoda Infraorder Brachyura Family Inachoididae

fire crab



1.5 cm

images: Shane Ahyong

morphology	surface	substrate			habitat					



Carapace pear-shaped and may be covered with short hairs (juveniles) or naked and glossy (adults). Single rostrum projecting beyond eyes into a single blunt tip. Carapace covered with small tubercles and bumps. Legs long, slender and spindly, first pair is the longest and last pair the shortest. Overall dull olive brown-green.

Auckland, Kaipara, Manakau, Whangarei, Opuia, New Plymouth. Occurs in variety of habitats including rocky reefs amongst seaweeds, wharf pilings, under rocks, among sponges and other fouling, sand/mud sediments. Usually in shallow water but may occur down to 650 m. Introduced to NZ, Australia and Japan; native to west coast of North America.

It could also be.....  
*Notomithrax sp. juveniles*



Ahyong, S.T., Wilkens, S.L. (2011) Aliens in the Antipodes: Non-indigenous marine crustaceans of New Zealand and Australia. In Galil, B.S., Clark, P.F., Carlton, J.T. (Eds), In the Wrong Place: Alien Marine Crustaceans: Distribution, Biology and Impacts. Invading Nature – Springer Series in Invasion Ecology 6, 451-485 pp.  
Yaldwyn, J.C., Webber, R.W. (2011) Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). Tuhiinga 22: 171-272.

iron crab



2 cm

images: Shane Ahyong

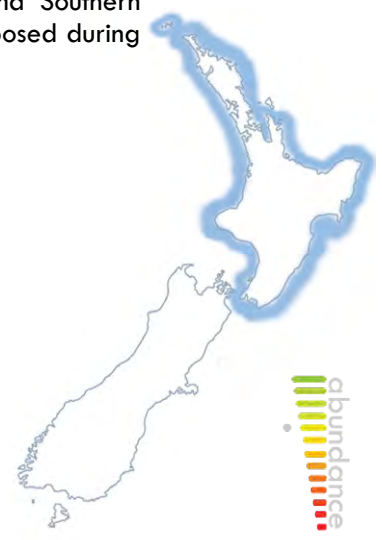
morphology	surface	substrate	habitat			



Carapace flattened, wider than long, almost oval in shape. Frontal region quite wide and edges of carapace with blunt, rough lobes. Smooth, powerful chelipeds with black fingers, walking legs fringed with fine setae. Previously known in New Zealand as *Ozius truncatus* (an endemic Australian species). Dark chocolate to rusty red-brown above, often with pale mottling. Underside cream to pale tan. Chelipeds powerful, fingers black or dark brown. Setae on legs often golden, antennules dark-red brown.

Widespread and common around North Island of New Zealand; also Western and Southern Australia. Beneath boulders on shelated shores from upper mid-littoral to low tide, exposed during low tide. Found on gravel, rocky and stony beaches. Intertidal.

It could also be.....  
*Heterozius rotundifrons*  
*Pilumnopus serratifrons*



Bennett, E. W. (1964). The marine fauna of New Zealand: Crustacea Brachyura. New Zealand Oceanographic Institute Memoir 22: 1-120.  
 McLay, C. (1988) Crabs of New Zealand. Leigh Laboratory Bulletin 22.  
 Yaldwyn, J.C., Webber, R.W. (2011) Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). Tuhiinga 22: 171-272.

smooth-handed crab



image: Shane Ahyong

morphology	surface	substrate	habitat



Carapace oval, wider than long, sparsly covered with setose ridges. Front of carapace (between eyes) bilobed and rounded; margins to the side of eyes cut into low triangular teeth. Chelipeds very smooth, well developed but unequal (right usually larger than left). Finger tips dark brown to black. Walking legs shorter than chelipds and often setose. Carapace and walking legs brown. Chelipeds finger tips dark brown. Colour often obscured by a layer of muddy sediment.

Northeastern NZ (Coromandel, Auckland and north) and southeastern Australia. Under stones on sheltered sandy and muddy beaches, rarely in burrows. Intertidal.



Davie, P.J.F. (1989) A re-appraisal of *Heteropanope* Stimpson, and *Pilumnopus* A Milne-Edwards (Crustacea: Decapoda: Pilumnidae) with descriptions of new species and new genera. *Memoirs of The Queensland Museum* 27: 129-156.

Yaldwyn, J.C., Webber, R.W. (2011) Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). *Tuhinga* 22: 171-272.



Class Malacostraca Order Decapoda Infraorder Brachyura Family Pilumnidae

hairy crab



image: Shane Ahyong

morphology	surface	substrate	habitat			



Carapace flattened and wider than long, entire upper surface and legs densely covered with short, tomentum giving tight woolly appearance. Unequal sized chelipeds, upper surface densely covered in tomentum, except for fingers tips and palms. Muddy-light brown dorsally, off-white underneath. Cheliped with white palms; fingers dark brown.

Widely distributed around NZ including Chatham Islands (more commonly North Island and northern South Island). Common on rocky shores, under boulders, in seaweed holdfasts and among clusters of serpulid worms, sponges and deep crevices among broken rock. Low intertidal.

It could also be.....  
*Pilumnus novaezelandiae*



Bennett, E. W. (1964). The marine fauna of New Zealand: Crustacea Brachyura. New Zealand Oceanographic Institute Memoir, 22: 1–120.

Yaldwyn, J.C., Webber, R.W. (2011) Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). Tuhiinga 22: 171–272.

Class Malacostraca Order Decapoda Infraorder Brachyura Family Pilumnidae

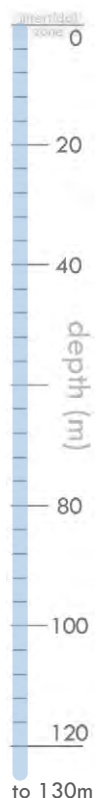
bristle crab



1 cm

images: Colin McLay

morphology	surface	substrate	habitat			



Carapace oval-shaped and wider than long, anterior margin with short spines, upper surface sparsely covered with long and short bristles (denser towards anterior) giving ragged/bristly appearance. Unequal sized chelipeds (right usually larger), bristly in appearance with covering of tubercles. Muddy-brown, pale underneath. Chelipeds finger tips black, extreme tips white.

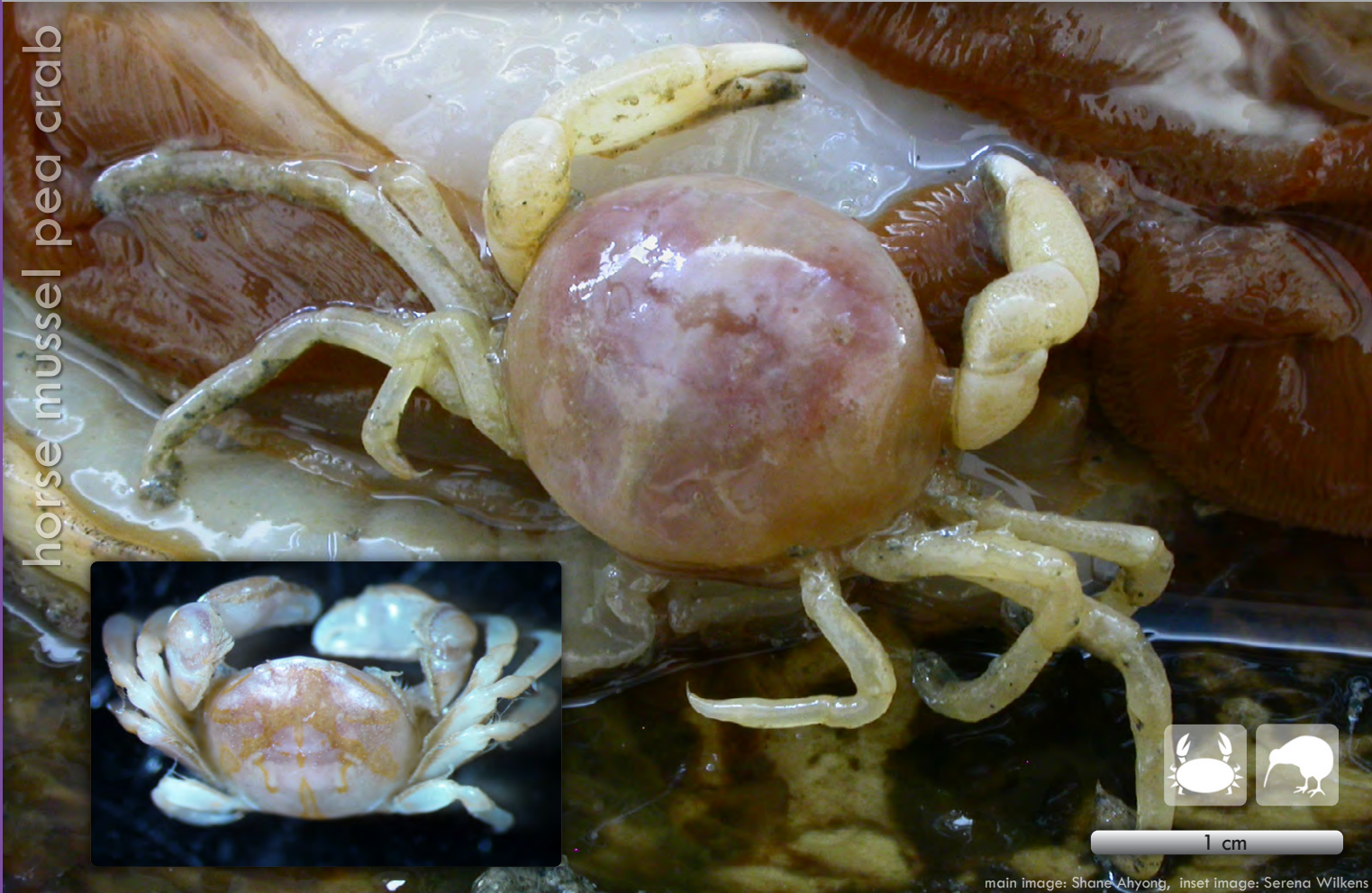
Endemic, widely distributed around NZ including Stewart, Chatham and Kermadec Islands. Under boulders and in rock crevices fouled with algae, sponge and bryozoa, often gregarious. Low intertidal to 130 m (more common at shallower depths).

It could also be.....  
*Pilumnus lumpinus*



Bennett, E. W. (1964). The marine fauna of New Zealand: Crustacea Brachyura. New Zealand Oceanographic Institute Memoir 22: 1-120.  
Takeda, M. & Webber, W. R. (2006) Crabs from the Kermadec Islands in the South Pacific. In Y. Tomida, T. Kubodera, S. Akiyama & T. Kityama (Eds.), Proceedings of the 7th and 8th Symposia on Collection Building and Natural History Studies in Asia and the Pacific Rim 34: 191-237.

horse mussel pea crab



1 cm

main image: Shane Ahyong, inset image: Serena Wilkens

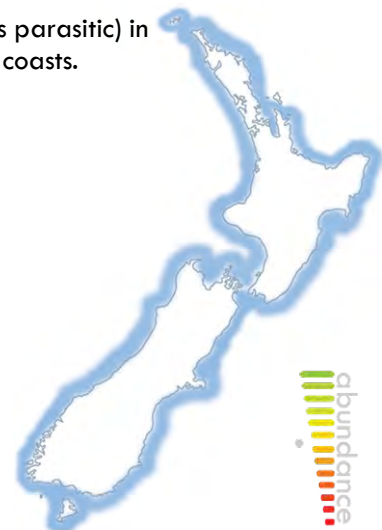
morphology	surface	substrate	habitat



Carapace almost spherical – pea-like, very smooth. Eyes, antennules and antennae very reduced, not easily seen from above. Cheliped finger tips hooked and pointed. Females have asymmetrical length legs from left to right, especially second walking leg. Colour variable – margins of male carapace pale orange, central regions have splotches of grey or cream seperated by orange bands. An orange strip usually runs down the center of the carapace. Chelipeds orange, interrupted by grey patches. Leg margins orange with medial grey areas or banded orange and grey. Mature female unpigmented.

Endemic, widespread around New Zealand. Commensal (McLay (1988) defines them as parasitic) in the horse mussel, *Atrina zelandica*. Intertidal down to 200 m, in estuaries and off open coasts.

It could also be.....  
*Nepinnotheres novaezelandiae*



Page, R. M. (1983). Description of a new species of *Pinnotheres*, and redescription of *P. novaezelandiae* (Brachyura: Pinnotheridae). *New Zealand Journal of Zoology* 10: 151–162.

Yaldwyn, J.C., Webber, R.W. (2011) Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). *Tuhinga* 22: 171-272.

pea crab



0.7 cm

images: Shane Ahyong

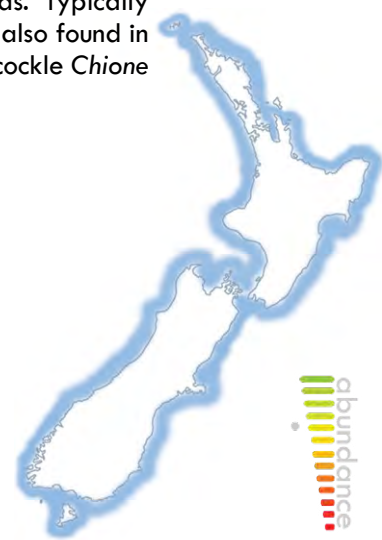


Carapace almost spherical – pea-like, very smooth. Eyes, antennules and antennae very reduced and not easily seen from above. Chelipeds finger tips hooked and pointed. Mature females have symmetrically sized legs from left to right. Colour variable – anterior half of carapace orange-brown, with white spots and cream areas. Posterior half with white spots on a mauve and yellow background. Chelipeds yellowish-brown, legs brown with darker areas. Mature females creamy-white all over.

Endemic, widespread around New Zealand including Stewart and Chatham Islands. Typically commensal ('parasitic') in the mussels *Perna canaliculus* and *Mytilus galloprovincialis* but also found in other bivalves *Aulacomya atra*, oyster *Crassostrea gigas*, pipi *Paphies australis* and the cockle *Chione stutchburyi*.

Intertidal and subtidal down to 30 m. Estuaries and open coastline.

It could also be.....  
*Nepinnotheres atrinicola*



Page, R. M. (1983). Description of a new species of *Pinnotheres*, and redescription of *P. novaezelandiae* (Brachyura: Pinnotheridae). *New Zealand Journal of Zoology* 10: 151–162.

Yaldwyn, J.C., Webber, R.W. (2011) Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). *Tuhinga* 22: 171-272.

red rock crab



5 cm

main image: Shane Ahyong, inset image: Serena Wilkens

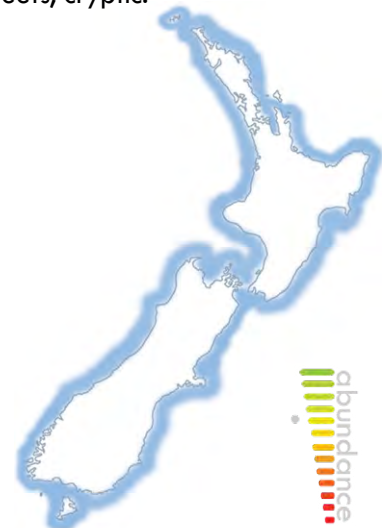
morphology	surface	substrate	habitat



Carapace as wide as long, squarish with 4 well-defined spines on sides. Front between eyes with deep notches. Carapace, chelipeds and legs covered with red-brown furry velvet; naked ridges on dorsal surfaces darker brick red. Chelipeds moderately long and enlarged in mature males, covered in rows of tubercles. Strong walking legs with serrated anterior margins on first segment. Very fast moving. Underside of body and inner face of claws and tubercles creamy-white.

Widely distributed around NZ (not as common in southern South Island) and Chatham Islands. Also Indo-Pacific, Australia, South Africa, Chile. Subtidal along exposed rocky coasts and reefs, cryptic. Nocturnal in rock pools at low tide, rarely out of the water. Low tide to 25 m.

It could also be.....  
*Leptograpsus variegatus*



Griffin, D.J.G. (1973) A revision of the two southern temperate shore crabs *Leptograpsus variegatus* (Fabricius) and *Plagusia chabrus* (Linnaeus) (Crustacea, Decapoda, Grapsidae). *Journal of the Royal Society of New Zealand* 3(3): 415–440.  
Dawson, E.W. (1987) A key to the world species of *Plagusia* (Crustacea: Brachyura) with a new record of *P. depressa tuberculata* Lamarck from New Zealand. *National Museum of New Zealand Records* 3(4): 37–45.

Class Malacostraca Order Decapoda Infraorder Brachyura Family Portunidae

Asian paddle crab



5 cm

main image: Shane Ahyong

morphology	surface	substrate	habitat



Carapace wider than long, surface smooth, sides with six teeth behind eyes. Carapace margin between eyes with eight triangular teeth. Walking legs flattened and unspined. Last pair of legs flattened into rounded paddle, fringed with setae. Very aggressive. Overall dull olive green with various mottling from orangish-brown to dark purple. Chelipeds with orangish-brown palms and banded fingers.

Invasive in New Zealand. Currently occurs in the Auckland region from Firth of Thames to Whangarei. Native to East Asia. Sheltered muddy or sandy-mud habitats, especially bays. Intertidal to at least 15 m.

- It could also be.....
- Nectocarcinus bennetti*
  - Ovalipes catharus*
  - Scylla serrata*
  - Portunus armatus*



Ahyong, S.T., Wilkens, S.L. (2011) Aliens in the Antipodes: Non-indigenous marine crustaceans of New Zealand and Australia. In Galil, B.S., Clark, P.F., Carlton, J.T. (Eds), In the Wrong Place: Alien Marine Crustaceans: Distribution, Biology and Impacts. Invading Nature – Springer Series in Invasion Ecology 6, 451-485 pp.

Gust, N., Inglis, G.J. (2006) Adaptive multi-scale sampling to determine an invasive crab's habitat useage and range in New Zealand. Biological Invasions 8: 339-353.

Class Malacostraca Order Decapoda Infraorder Brachyura Family Portunidae

dwarf swimming crab



1 cm

main image: Reyn Naylor, inset image: Serena Wilkens

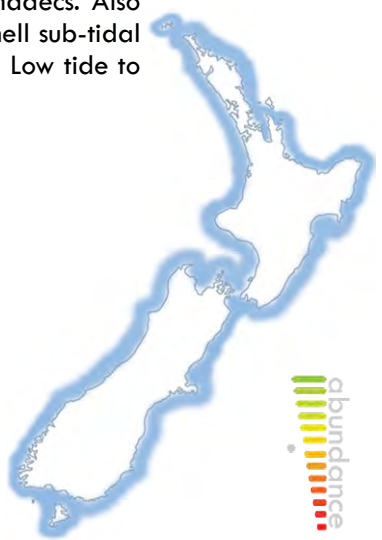
morphology		surface	substrate			habitat				



Carapace wider than long with 5 sharp teeth on sides behind eyes. Front between eyes wavy, forming three low lobes. Carapace surface with fine transverse ridges. Chelipeds short. Walking legs flattened and unspined. Last pair of walking legs with leaf-shaped paddle ending in sharp point. Variable colour patterns ranging from pure white to mottled grey and white, often with a white stripe down the middle of the carapace. Base of chelipeds and walking leg dactyls with a red band.

Widespread around New Zealand, including Stewart and Chatham Island and Kermadecs. Also North Atlantic, Mediterranean, Indo-West Pacific, Australia, Japan. Sandy and sand-shell sub-tidal bottom. Also occurs amongst weed on the sandy tidal flats and in intertidal rock pools. Low tide to 130 m.

- It could also be.....
- Ovalipes catharus*
  - Nectocarcinus antarcticus*
  - Nectocarcinus bennettiae*



Bennett, E. W. (1964) The marine fauna of New Zealand: Crustacea Brachyura. New Zealand Oceanographic Institute Memoir 22: 1-120.  
 Ah Yong, S. T., Booth, J., Bruce, N. L., Loerz, A.-N., Naylor, J. R., Schnabel, K., & Webber, W. R. (2012) Phylum Arthropoda. In D. M. Tracey, O. F. Anderson & J. R. Naylor (Eds.), A guide to common deepsea invertebrates in New Zealand waters, Third Edition, pp. 159-222. Wellington: NZ Ministry of Fisheries.

Class Malacostraca Order Decapoda Infraorder Brachyura Family Portunidae

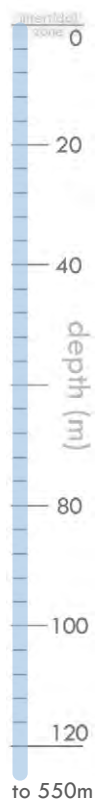
hairy red swimming crab



4 cm

main image: Shane Ahyong inset image: Pete Notman

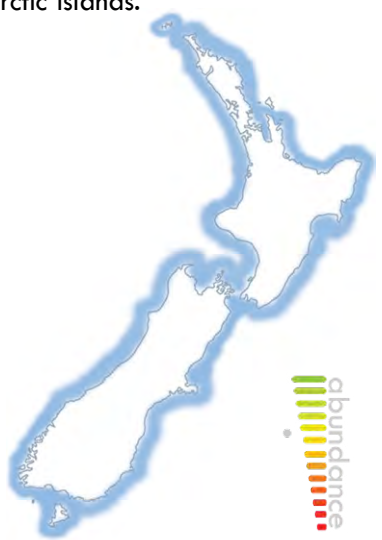
morphology	surface	substrate	habitat



Carapace wider than long, surface roughened, with areas of very short, fine 'hairs' giving velvet-like appearance. Carapace margin with four low triangular teeth behind eyes. Margin between eyes with four teeth. Walking legs flattened and unspined. Last pair of legs flattened into oval-shaped paddle, fringed with setae. Carapace, chelipeds and legs with mottled dark red/maroon over a pinkish-red background, no trace of iridescence (unlike *Nectocarcinus bennetti*). Some white marks on ridges and spines. Fingers of claws dark red.

Endemic, widespread around New Zealand including Stewart, Auckland and sub-antarctic Islands. Sand, gravel, mud and shell bottoms. Intertidal, sublittoral down to 550 m.

- It could also be.....
- Nectocarcinus bennetti*
  - Ovalipes catharus*
  - Liocarcinus corrugatus*



Dell, R. K., Griffin, D. J. G., & Yaldwyn, J. C. (1970). A new swimming crab from the New Zealand subantarctic and a review of the genus *Nectocarcinus* A. Milne Edwards. *Transactions of the Royal Society of New Zealand*, 12(7): 49–68.

Ahyong, S. T., Booth, J., Bruce, N. L., Loerz, A.-N., Naylor, J. R., Schnabel, K., & Webber, W. R. (2012) Phylum Arthropoda. In D. M. Tracey, O. F. Anderson & J. R. Naylor (Eds.), *A guide to common deepsea invertebrates in New Zealand waters*, Third Edition, pp. 159–222. Wellington: NZ Ministry of Fisheries.



smooth red swimming crab



2 cm

image: Reyn Naylor

morphology	surface	substrate	habitat



Carapace wider than long and naked (no hairs), with rounded granules forming distinct ridges on front half of carapace, surface with iridescent sheen. Carapace margin with four low triangular teeth behind eyes. Margin between eyes with four teeth. Walking legs flattened and unspined. Last pair of legs flattened into oval-shaped paddle, fringed with setae. Carapace, chelipeds mainly purplish red with areas of pink iridescence, but can be variable in colour. Main areas of iridescence across anterior of carapace. Walking legs pale off-white/cream.

Endemic, southern South Island, Stewart Island, Snares and Auckland Islands. Sand, gravel, mud and shell bottoms. 20 to 480 m.

- It could also be.....
- Nectocarcinus antarcticus*
  - Ovalipes catharus*
  - Liocarcinus corrugatus*



Dell, R. K., Griffin, D. J. G., & Yaldwyn, J. C. (1970). A new swimming crab from the New Zealand subantarctic and a review of the genus *Nectocarcinus* A. Milne Edwards. *Transactions of the Royal Society of New Zealand*, 12(7): 49–68.

Ahyong, S. T., Booth, J., Bruce, N. L., Loerz, A.-N., Naylor, J. R., Schnabel, K., & Webber, W. R. (2012) Phylum Arthropoda. In D. M. Tracey, O. F. Anderson & J. R. Naylor (Eds.), *A guide to common deepsea invertebrates in New Zealand waters*, Third Edition, pp. 159–222. Wellington: NZ Ministry of Fisheries.

## paddle crab



6 cm

Image: Shane Ahyong

morphology



surface



substrate



habitat



Carapace slightly wider than long, oval shaped, surface slightly evenly grainy, sides with five teeth behind eyes. Carapace margin between eyes with four teeth. Walking legs flattened and unspined. Last pair of legs flattened into rounded paddle, fringed with setae. Very aggressive. Overall sandy-gray background with orange-red highlights, especially on chelipeds. Upper rear surface of carapace with pair of reddish-maroon eye-spots. Swimming paddles with purplish tint. Underside white.

Widespread around New Zealand including Stewart and Chatham Islands; also southern Australia. Surf zone on sheltered and open coasts; sand or sandy-mud. Intertidal-100 m.

It could also be.....

*Nectocarcinus bennetti*  
*Charybdis japonica*



Stephenson, W., & Rees, M. (1968) A revision of the genus *Ovalipes* Rathbun, 1898 (Crustacea, Decapoda, Portunidae). Records of the Australian Museum 27: 213-261.

McLay, C. (1988) Crabs of New Zealand. Leigh Laboratory Bulletin 22.

Australian blue swimmer crab



10 cm

image: Shane Ahyong

morphology



surface



substrate



habitat



Carapace wider than long, with long spine on either side, surface granulated and coarse, side of carapace has nine sharp teeth behind eyes, the first being predominantly larger. Carapace margin between eyes has short spines along frontal margin. Long, slender chelipeds with spines and ridges. First three pairs of walking legs slender, slightly flattened, all with pointed tips. Last pair of legs flattened into rounded paddle, fringed with setae. Carapace almost uniform dark blue/purple to mottled olive green with irregular white lines. Legs blue to lilac with mottling.

Found in Northern New Zealand mainland, Australia and New Caledonia. Prefers muddy or sandy bottoms, juveniles found with seagrass. Intertidal-shallow subtidal areas.

It could also be.....  
*Charybdis japonica*  
*Scylla serrata*



Lai, J. C. Y., Ng, P. K. L. & Davie, P. J. F. (2010) A revision of the *Portunus pelagicus* (Linnaeus, 1758) species complex (Crustacea: Brachyura: Portunidae), with the recognition of four species. Raffles Bulletin of Zoology, 58(2): 199–237.

Yaldwyn, J.C., Webber, R.W. (2011) Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). Tuhiinga 22: 171-272.

Class Malacostraca Order Decapoda Infraorder Brachyura Family Portunidae

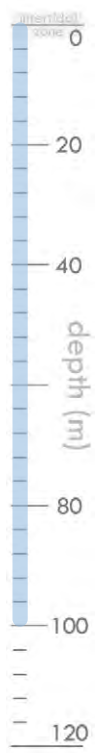
mangrove crab



11 cm

image: Shane Ahyong

morphology	surface	substrate	habitat



Carapace wider than long, surface very smooth, sides with nine sharp teeth behind eyes. Carapace margin between eyes with six teeth; margin behind eyes with 9 spines. Large, smooth, powerful chelipeds. Walking legs flattened and unspined. Last pair of legs flattened into rounded paddle, fringed with setae. Swimming paddles with reticulated patterning. Variable but often olive/dark green to very dark purplish. Chelipeds with brown fingertips. Very aggressive.

Estuaries in Northland. Occurs throught the tropical Indo-West Pacific. Burrows in mud of bays and estuaries, espccially in mangrove areas. Intertidal-shallow subtidal.

It could also be.....  
*Nectocarcinus bennetti*  
*Ovalipes catharus*  
*Charybdis japonica*



Keenan, C.P., Davie, P.J.F. & Mann, D.L. (1998) A revision of the genus *Scylla* de Haan, 1833 (Crustacea: Decapoda: Brachyura: Portunidae). Raffles Bulletin of Zoology 46, 217-245.  
 Yaldwyn, J.C., Webber, R.W. (2011) Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). Tuhiinga 22: 171-272.

## sentinel crab



1.5 cm

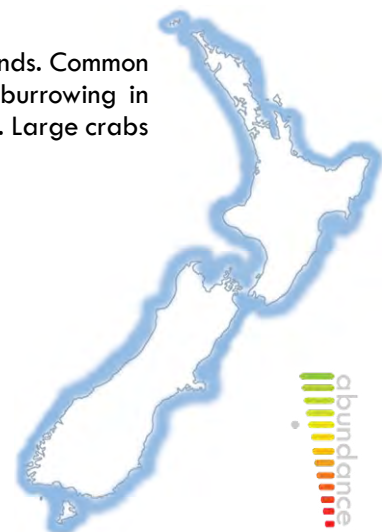
main image: Shane Ahyong, inset image: Serena Wilkens



Formally *Macrophthalmus hirtipes*. Oblong, wide carapace (much wider than long), body somewhat barrel-shaped, margins with two narrow notches behind the eyes. Eyes on long stalks. Front of carapace almost straight and steep at front. Chelipeds small, lightly built, fringed with long setae and fingers slender, downward pointing, inwardly curved. First pair of legs slightly longer than claws, second and third much longer and last pair similar in length to first pair. Carapace dark green to orange-brown with scattered dense, dark brown spots, margin dark brown. Can be brightly coloured in larger specimens. Eye stalks white with dark brown patches, legs yellow-green and claws often deep red or orange dorsally, white ventrally.

Endemic, widely distributed around NZ, including Stewart, Auckland and Campbell Islands. Common from mid- to low-tide level in mud and sand flats of harbours, lagoons, estuaries, burrowing in waterlogged sediments. Small crabs live under shell debris or bury in surface sediments. Large crabs dig short, diagonal burrows.

It could also be.....  
*Austrohelice crassa*  
*Neommatocarcinus huttoni*



McLay, C. (1988) Crabs of New Zealand. Leigh Laboratory Bulletin 22.

Yaldwyn, J.C., Webber, R.W. (2011) Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). Tuhiinga 22: 171-272.

burrowing mud crab



1 cm

image: Shane Ahyong

morphology	surface	substrate	habitat			



Carapace smooth and flattened, oblong/square in outline; body thick, somewhat barrel-shaped. Large eyes on long stalks, at carapace corners. Slightly bilobed front between eyes. Chelipeds large and rounded.

Carapace grey, olive-green, blue-green to brown, margins yellow. Chelipeds and walking legs light yellow margins, but predominantly dark green. Antennae brown, antennules light purple, eyestalks pale green. Ventral surface pale cream-brown.

Endemic, widespread around New Zealand including Stewart Island. Found on sheltered beaches and harbours, lagoons, estuaries and mangrove swamps, tidal creeks, mudflats and freshwater/brackish areas. Burrows in firm, well drained sediment that is exposed at low tide. Intertidal.

It could also be.....  
*Hemiplax hirtipes*



McLay, C. (1988) Crabs of New Zealand. Leigh Laboratory Bulletin 22.  
Sakai, K., Türkay, M. & Yang, S.-L. (2006) Revision of the *Helice/Chasmagnathus* complex. (Crustacea: Decapoda: Brachyura). *Abhandlungen der Senckenbergischen Naturforschenden Gesellschaft*, 565: 1–76.

Class Malacostraca Order Decapoda Infraorder Brachyura Family Varunidae

smooth shore crab



1.5 cm

main image: Shane Ah Yong, inset image: Chris Woods

morphology	surface	substrate	habitat			



Carapace oblong, slightly wider than long, very smooth. Eyes at corners of carapace. Front of carapace between eyes straight-edged. Chelipeds larger in males compared with females. Legs relatively long and smooth, with small tufts of setae projecting from bases of between first, second and third legs. Carapace variable in colour but often speckled in dark reddish-brown on a variable background which may be slate blue, bluish grey, fawn to yellowish brown. Legs with similar irregular mottling dorsally. Ventral surfaces pale.

Endemic, widespread around New Zealand. Prefers upper intertidal area, under stones, on boulder beaches ranging from open wave-exposed coasts to sheltered harbours. Also may be found in estuarine mudflats, occasionally in burrows tunnelled by other species. One of the more 'terrestrial' crabs in NZ. Common at or about the high-tide level.

It could also be.....  
*Hemigrapsus sexdentatus*



Campbell, B. M. & Griffin, D. J. G. (1966) The Australian Sesarminae (Crustacea: Brachyura): genera *Helice*, *Helograpsus* nov., *Cyclograpsus* and *Paragrapsus*. *Memoirs of the Queensland Museum* 14(5): 127-174.

McLay, C. (1988) Crabs of New Zealand. *Leigh Laboratory Bulletin* 22.



1.5 cm

image: Shane Ahyong

morphology



surface



substrate



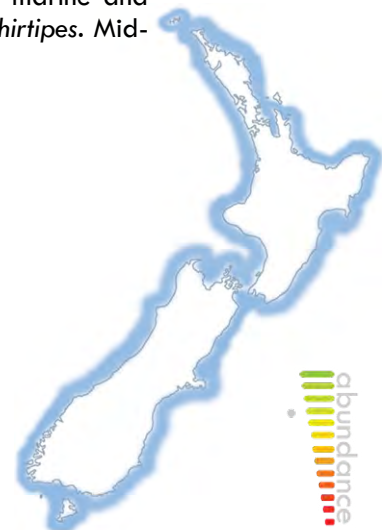
habitat



Carapace polished, flattened, squarish with two teeth on either side. Front of carapace straight edged between eye stalks. Inner surface of chelipeds in males with dense mat of setae. Legs flattened and hairy along margins. Carapace greenish-yellow with white patches, covered with purple or reddish brown spots (or may be more purplish with white spots). Eystalks white. Dorsal surface of chelipeds dark brown/purple, fingers white with dark brown tips and fringed with short fine setae.

Widespread around New Zealand, including Stewart Island. Also southern Chile. Occurs in wide variety of habitats including under stones, buried in sand, mud or clay, in sheltered marine and estuarine environments. Often in similar habitats as *Austrohelice crassa* and *Hemiplax hirtipes*. Mid-tide level down to 10 m.

It could also be.....  
*Hemigrapsus sexdentatus*  
*Cyclograpsus lavauxi*



McLay, C. (1988) Crabs of New Zealand. Leigh Laboratory Bulletin 22.

Yaldwyn, J.C., Webber, R.W. (2011) Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). Tuhiinga 22: 171-272.



## purple rock crab



3 cm

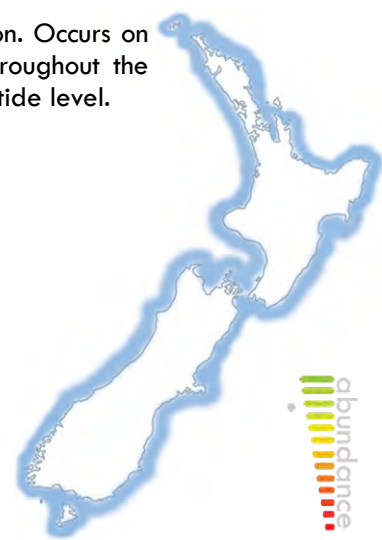
main image: Shane Ahyong, inset: Chris Woods



Previously known as *Hemigrapsus edwardsi*. Carapace polished, flattened, squarish with two teeth on either side. Front of carapace straight edged between eye stalks. Inner surface of chelipeds in males with pale balloon-like sac between base of fingers. Legs with few or no 'hairs' along margins. Highly variable colour with juveniles purple and cream mottled becoming more solid black-purple in adults. Darker crabs often have banded legs. Typically the front half of the carapace is darker than the back. Eystalks white. Ventral surface is white.


Endemic, widespread around New Zealand including Stewart Island and very common. Occurs on relatively sheltered rocky, stony or muddy shores, usually sheltering under rocks throughout the intertidal. Can tolerate slightly estuarine conditions. Near high-tide level down to mid-tide level.






It could also be.....  
*Hemigrapsus crenulatus*  
*Leptograpsus variegatus*










Yaldwyn, J.C. & Webber, R.W. (2011). Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). Tuhiinga 22: 171–272.



McClay, C.L. & Schubart, C.D. (2004). On the correct name for *Hemigrapsus edwardsii* (Hilgendorf, 1882) (Brachyura: Varunidae) from New Zealand. Journal of Natural History 38: 695–704.



body plan		crab	
-----------	---	------	--

life history		native	naturally occurring around New Zealand, endemic
		range extension	since first described in NZ, this species has been recorded elsewhere
		widespread	species recorded globally
		Southeast Asia	
		Central Pacific	





	introduced	species naturally occurring outside of New Zealand waters and is found in New Zealand, invasive
	southwest pacific	naturally occurring around New Zealand, Australia and other pacific locations
	antipodean	naturally occurring around New Zealand and Australia only
	Indo-Pacific	




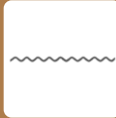



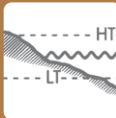







morphology		triangular	carapace triangular / pear-shaped
		round	carapace round, may be pea shaped
		oval	carapace oval, wider than long, may have long spine on each side

	square / oblong	carapace square or oblong-shaped
	paddles	paddles present on tip of 5th walking leg, used for swimming

surface		setae	dense mat of hair-like bristles covering the carapace and/or legs
		rough	irregularly pitted and ridged surface, often tough, rugose

	smooth	even, hairless, may have slight depressions
	blunt spines	surface covered with blunt spines, may be regular or irregular

substrate		living organism	living or growing on the external surface of an animal (epizoic) or seaweed, (epiphytic)		rock	hard substrate such as mudstone, sandstone, basalt, compressed carbonates
		mud	very fine muddy and silty sediments derived from terrigenous rocks, soils and clays		sand	small coarse grains of worn silica, rock, and shell

habitat		algal beds	coralline algae, seagrass or algal beds		marine	exclusively marine environments
		estuarine	estuarine, brackish or mangrove environments		sheltered water	sheltered water habitats, little wind or wave action
		exposed water	exposed habitats with wind and wave action		subtidal	zone below the low tide, including rock flats, slopes, walls, crevices, overhangs, boulder fields, organisms exposed to wave surge and currents, and subdued illumination
		littoral	the part of the sea that is closest to shore extending from high water mark		intertidal	exposed shoreline zone between high and low tides, including rock flats, pools, overhangs, crevices, organisms exposed to wave action, temperature extremes, full illumination, and desiccation
		rocky shore	shoreline covered with rocks and boulders		temperate sea-grass beds	meadows of marine plants growing on a sandy substrate
		burrowing	burrow in sand / mud		rockpool	indentation in rock filled with water, intertidal
		cryptic	hidden under rocks or in cracks/crevices		estuarine	estuarine, brackish or mangrove environments
		commensal	requires a 'host' as a habitat			

## glossary

algal	beds areas of seafloor with coralline algae, sea-grass or multiple seaweed species
antennae	second pair of appendages protruding from the front of crustacean next to eyes, typically long and whip-like, sensory function
antennules	first pair of appendages protruding from front of crustacean, typically smaller than antennae
anterior	towards the front
antipodean	naturally occurring around New Zealand and Australia only
artificial substratum	anything man-made such as mooring blocks, mussel lines, wharf piles
banded	stripes of two or more different colours
bank	seabed raised into a bank of compacted rubble and other carbonate materials including shell, kina and sea lace hash, organisms exposed to wave surge and currents, and subdued illumination
benthic	pertaining to living on or in the seabed as opposed to floating or swimming in the ocean above
benthos	organisms that live on or in the seabed at the bottom of the sea
bilobed	two lobes
blunt	not sharp, rounded ends
brain-shaped	hemispherical with brain-like corrugations
brittle	fragile but rigid, breaks apart easily
bryozoan (bryozoans)	scientific name for a moss animal or sea lace
carapace	the shield or external shell covering the main body of many types of crustaceans
cartilaginous	having the texture of cartilage, firm and tough yet flexible
chelipeds	a leg that forms the pincer or claws. The first pair of legs in crabs.
chromatophore	a pigmented cell
colonial	multiple animals bound by a single test
commensal	an association between two organisms in which one benefits and the other derives neither benefit nor harm
concentric	circles arranged with one inside the other
covered rock	sand and rubble spread over underlying hard substrate, organisms attached to basement rock susceptible to inundation and scouring from wave surge and currents, and subdued illumination
cryptic	difficult to see (habitat) or difficult to detect differentiate from other species
decorative	features that enhance and add embellishments to an otherwise plain structure, ornamented
deep sea (benthic)	seabed in the deeper parts of the ocean not exposed to surface wave action, and where little or no light penetrates
deep sea (pelagic)	water above the seabed in the deeper parts of the ocean not generally exposed to surface wave action, and where light may or may not penetrate, can be contrasted with water that is near the coast, open-ocean zone
diameter	the distance across the widest point of a circle
dichotomous	of branching, where the axis is divided into two branches
digitate	finger-like
dorsal	upper surface of the animal
endemic	naturally occurring in New Zealand, but not elsewhere
epibenthic	pertaining to living on the seabed as opposed to floating or swimming in the ocean above
epibenthos	organisms that live on the surface of sediments and other substrates at the bottom of the sea
environment	physical, chemical, ecological, behavioural, and other conditions experienced by an organism
epiphytic	living or growing on the external surface of a seaweed
epizoic	living or growing on the external surface of an animal
eurybathic	can live or be found at many depths
fingers	finger-like, often arising from an encrusting or restricted base, digitate
firm	requires some pressure to compress
fleshy	feels like skin or edam cheese, dense
gelatinous	jelly-like, slippery
gonad	reproductive structure
granular	surface covered in small to medium sized rounded or square granules, giving a sand-papery texture due to calcareous or siliceous minerals in or on (echinoderms) the surface of the organism (sponges, ascidians)
habitat	the environment and local situation in which an organism lives
hard	solid to the touch, not compressible, rigid
indents	underwater caves, shelves and overhangs, organisms that live there may experience wave surge, subdued illumination, or near darkness
integument	outer body wall or skin
interstices	the gaps and spaces between things e.g., rocks, sand-grains or seaweed holdfasts
intertidal	exposed shoreline zone between high and low tides, including rock flats, pools, overhangs, crevices, organisms exposed to wave action, temperature extremes, full illumination, and desiccation
introduced	species naturally occurring outside of New Zealand waters and is found in New Zealand, invasive

lateral	side of an animal
margins	edge of a surface
meandering	wandering along and above substratum attached at intervals, repent, ramify
morphology	form and structure, shape
mottled	variable, blotchy, patterning of several colours
mud	very fine and silty sediments derived from terrigenous rocks, soils and clays
naked	surface unadorned by spines or granules, usually smooth
native	naturally occurring around New Zealand, endemic
opaque	impenetrable by light
oral	related to the mouth of an animal
ornamented	an otherwise plain structure that is altered or adorned by embellishment, decorative
paddle	the tip of the fifth walking leg, flattened into an oval or rounded leaf-like appendage, used for swimming as opposed to walking
peristome	parts surrounding the mouth of various invertebrates such as the echinoderms
posterior	towards the rear of the organism
radius	distance between the edge and centre of a circle
range extension	since first described in New Zealand, this species has been recorded elsewhere
refuge	safe place to hide from predators
rock	hard substrate such as mudstone, sandstone, basalt, compressed carbonates
rockpool	indentation in rock, filled with water, intertidal zone
rostrum	elongation of the front of the carapace (shell) between the eyes
rough	irregularly pitted and ridged surface, often tough
rubble	shell, stone, and pebble rubble
sand	small coarse grains of worn silica, rock, and shell
seabed	composed of a variety of sedimentary substrates including coarse gravels, shell hash and sands to finer sand, mud, and silts, organisms susceptible to inundation and scouring from wave surge and currents, and subdued illumination
setae (Crustacea)	hair-like structures on the body and limbs of crustaceans
sinuous	wavy pattern
smooth	even, hairless, silky, can be slightly undulating
soft	soft to the touch, easily compressible
southwest pacific	naturally occurring around New Zealand, Australia and other pacific locations
spined	surface covered with spines (echinoderms), or prickly bundles of very long spicules
stipe	a stalk or stem, especially the stem of a seaweed or sponge
substrate	an underlying substance or layer, rock, sand, etc
subtidal	zone below the low tide, including rock flats, slopes, walls, crevices, overhangs, boulder fields, organisms exposed to wave surge and currents, and subdued illumination
surface	patterning or ornamentation on the surface of the body of an animal
teeth	sharp or pointy protrusions arising from the shell or lateral margin of the shell
thick encrusting	spreading over substratum, more than about 20 mm thick
thin encrusting	spreading over substratum, less than about 5 mm thick
translucent	lets light through body wall or surface of organism, but not enough to perceive distinct details through it.
transparent	body wall can be gelatinous, appearing see-through, internal details visible
transverse	across the short axis of the body wall
trilobed	three lobes
tubercles	rounded or lumpy protrusions arising from the carapace or margins of the carapace, may be granulated in texture
ventral	lower surface or underside of the animal that sits on the seabed
wall	underwater cliffs and slopes, organisms exposed to wave surge and currents, and subdued illumination
warty	bearing small flattened bumps or tubercles
widespread	species recorded globally

## acknowledgements

A number of the specimens used to produce this guide are from the Marine Invasives Taxonomic Service Collection (MITS) (funded by the Ministry for Primary Industries under Agreement 11465), and were collected under the National Marine High Risk Site Surveillance research programme (Project RFP10623). Support to SW was funded by NIWA under Coasts and Oceans Research Programme 2 Marine Biological Resources: Discovery and definition of the marine biota of New Zealand (2014/2015 SCI) and MITS. STA thanks Rachel, Bronwyn and Jessica for help during many family field trips. Thanks to the many and talented photographers whose work was used with permission in our guide, including: Pete Notman for the cover photo and introduction background image. Other photographs, used with permission were contributed by Pete Notman, Chris Woods, Reyn Naylor, Kareen Schnabel, all from NIWA New Zealand; Richard Taylor, University of Auckland and Pete Humphries. Special thanks to Colin McLay for the line drawing of *Halimena aotearoa* (originally published in Melrose, 1975). Thanks also to Diana McPherson for help with the templates and maps.

## further reading

- Ahyong, S. T. (2008) Deepwater crabs from seamounts and chemosynthetic habitats off eastern New Zealand (Crustacea: Decapoda: Brachyura). *Zootaxa* 1708: 1–72.
- Ahyong, S. T., Booth, J., Bruce, N. L., Loerz, A.-N., Naylor, J. R., Schnabel, K., & Webber, W. R. (2012) Phylum Arthropoda. In D. M. Tracey, O. F. Anderson & J. R. Naylor (Eds.), *A guide to common deepsea invertebrates in New Zealand waters*, Third Edition, pp. 159–222. Wellington: NZ Ministry of Fisheries.
- Ahyong, S.T., Wilkens, S.L. (2011) Aliens in the Antipodes: Non-indigenous marine crustaceans of New Zealand and Australia. In Galil, B.S., Clark, P.F., Carlton, J.T. (Eds), *In the Wrong Place: Alien Marine Crustaceans: Distribution, Biology and Impacts*. *Invading Nature – Springer Series in Invasion Ecology* 6, 451–485 pp.
- Bennett, E. W. (1964) The marine fauna of New Zealand: Crustacea Brachyura. *New Zealand Oceanographic Institute Memoir* 22: 1–120.
- Campbell, B. M., Griffin, D. J. G. (1966) The Australian Sesarminae (Crustacea: Brachyura): genera *Helice*, *Helograpsus* nov., *Cyclograpsus* and *Paragrapsus*. *Memoirs of the Queensland Museum* 14(5): 127–174.
- Davie, P.J.F. (1989) A re-appraisal of *Heteropanope* Stimpson, and *Pilumnopeus* A Milne-Edwards (Crustacea: Decapoda: Pilumnidae) with descriptions of new species and new genera. *Memoirs of The Queensland Museum* 27: 129–156.
- Dawson, E.W. (1987) A key to the world species of *Plagusia* (Crustacea: Brachyura) with a new record of *P. depressa tuberculata* Lamarck from New Zealand. *National Museum of New Zealand Records* 3(4): 37–45.
- Dell, R. K., Griffin, D. J. G., Yaldwyn, J. C. (1970). A new swimming crab from the New Zealand subantarctic and a review of the genus *Nectocarcinus* A. Milne Edwards. *Transactions of the Royal Society of New Zealand*, 12(7): 49–68.
- Griffin, D. J. G. (1966) The marine fauna of New Zealand: spider crabs, family Majidae (Crustacea, Brachyura). *New Zealand Oceanographic Institute Memoir*, 35: 1–111.
- Griffin, D.J.G. (1973) A revision of the two southern temperate shore crabs *Leptograpsus variegatus* (Fabricius) and *Plagusia chabrus* (Linnaeus) (Crustacea, Decapoda, Grapsidae). *Journal of the Royal Society of New Zealand* 3(3): 415–440.
- Gust, N., Inglis, G.J. (2006) Adaptive multi-scale sampling to determine an invasive crab's habitat useage and range in New Zealand. *Biological Invasions* 8: 339–353.
- Keenan, C.P., Davie, P.J.F. Mann, D.L. (1998) A revision of the genus *Scylla* de Haan, 1833 (Crustacea: Decapoda: Brachyura: Portunidae). *Raffles Bulletin of Zoology* 46, 217–245.
- Lai, J. C. Y., Ng, P. K. L. Davie, P. J. F. (2010) A revision of the *Portunus pelagicus* (Linnaeus, 1758) species complex (Crustacea: Brachyura: Portunidae), with the recognition of four species. *Raffles Bulletin of Zoology* 58(2): 199–237.
- McLay, C. (1988) Crabs of New Zealand. *Leigh Laboratory Bulletin* 22: 1–463.
- McClay, C.L., Schubart, C.D. (2004) On the correct name for *Hemigrapsus edwardsii* (Hilgendorf, 1882) (Brachyura: Varunidae) from New Zealand. *Journal of Natural History* 38: 695–704.
- Melrose, M. J. (1975) The marine fauna of New Zealand: Family Hymenosomatidae (Crustacea, Decapoda, Brachyura). *New Zealand Oceanographic Institute Memoir* 34: 1–123. Yaldwyn, J.C., Webber, R.W. (2011) Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). *Tuhinga* 22: 171–272.
- Ng, P.K.L., Guinot, D., Davie, P.J.F. (2008) *Systema Brachyurorum: Part 1*. An annotated checklist of extant brachyuran crabs of the world. *Raffles Bulletin of Zoology* 17: 1–286.
- Page, R. M. (1983). Description of a new species of *Pinnotheres*, and redescription of *P. novaezelandiae* (Brachyura: Pinnotheridae). *New Zealand Journal of Zoology* 10: 151–162.

- Poore, G. C. B. (2004) Marine Decapod Crustacea of Southern Australia: a guide to identification with chapter on Stomatopoda by Shane Ahyong. Melbourne: CSIRO Publishing.
- Sakai, K., Türkay, M., Yang, S.-L. (2006) Revision of the *Helice/Chasmagnathus* complex. (Crustacea: Decapoda: Brachyura). *Abhandlungen der Senckenbergischen Naturforschenden Gesellschaft* 565: 1–76.
- Stephenson, W., Rees, M. (1968) A revision of the genus *Ovalipes* Rathbun, 1898 (Crustacea, Decapoda, Portunidae). *Records of the Australian Museum* 27: 213–261.
- Takeda, M., Miyake, S. (1969) A small collection of crabs from New Zealand. *Occasional Papers of the Zoological Laboratory, Faculty of Agriculture, Kyushu University (OHMU)*, 2(8): 157–293.
- Yaldwyn, J.C., Webber, R.W. (2011) Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). *Tuhinga* 22: 171–272.
- Takeda, M., Webber, W. R. (2006) Crabs from the Kermadec Islands in the South Pacific. In Y. Tomida, T. Kubodera, S. Akiyama & T. Kityama (Eds.), *Proceedings of the 7th and 8th Symposia on Collection Building and Natural History Studies in Asia and the Pacific Rim* 34: 191–237.
- Woods, C.M.C. (1995) Masking in the spider crab *Trichoplatus huttoni* (Brachyura: Majidae). *New Zealand Natural Sciences* 22: 75–80.
- Yaldwyn, J.C., Webber, R.W. (2011) Annotated checklist of New Zealand Decapoda (Arthropoda: Crustacea). *Tuhinga* 22: 171–272.

