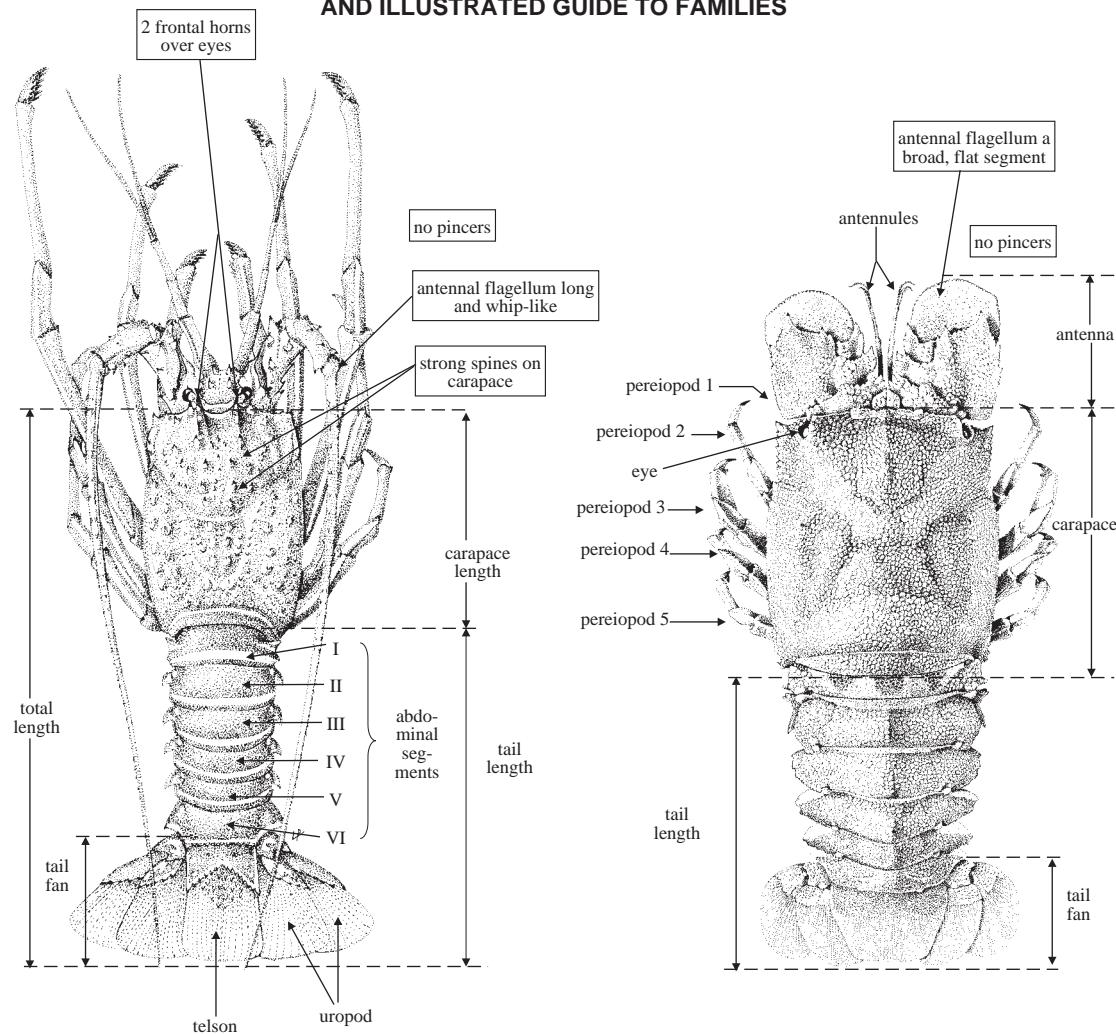


LOBSTERS

A single species of lobster, the Cape rock lobster, is presently of prime interest to fisheries in Namibia. It is the basis of an important fishery centred in Lüderitz. Four additional species of lobsters that occur in Namibia are of potential interest to fisheries and are presented here. Six additional lobsters may also occur in fisheries off Namibia (Holthuis, 1991), but are not considered important and only their family identification is considered.

Lobsters are crustaceans that can look similar to shrimps except that lobsters have flattened (compressed from top to bottom) or cylindrical bodies while shrimps almost always have laterally compressed (flattened from side to side) bodies. The families of lobsters in Namibia can be easily distinguished by their general body and head shape, the presence of large chela or pincers on the first pereiopod, the length of the flagella, and their distribution.

TECHNICAL TERMS AND MEASUREMENTS, AND ILLUSTRATED GUIDE TO FAMILIES



PALINURIDAE

Spiny lobsters

Three species found in Namibia, all included in the "Guide to Species."

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SCYLLARIDAE

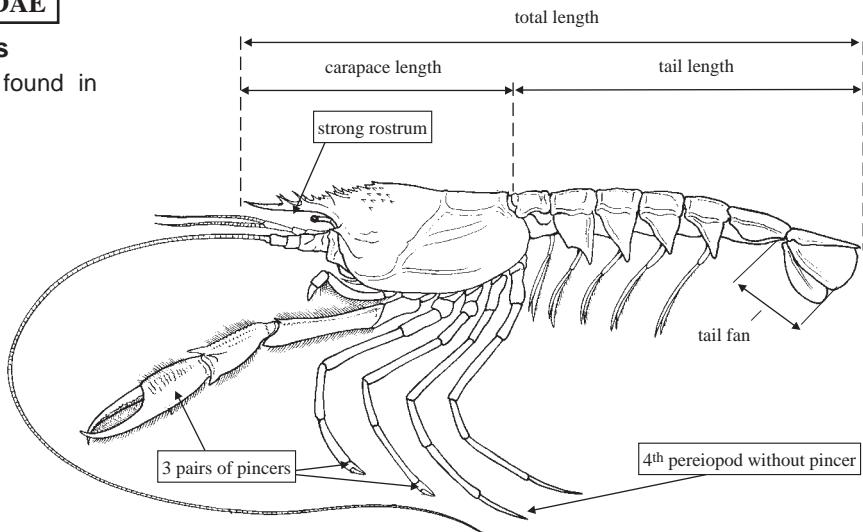
Slipper lobsters

Only 1 species found in the extreme northern part of Namibia, included in the "Guide to Species."

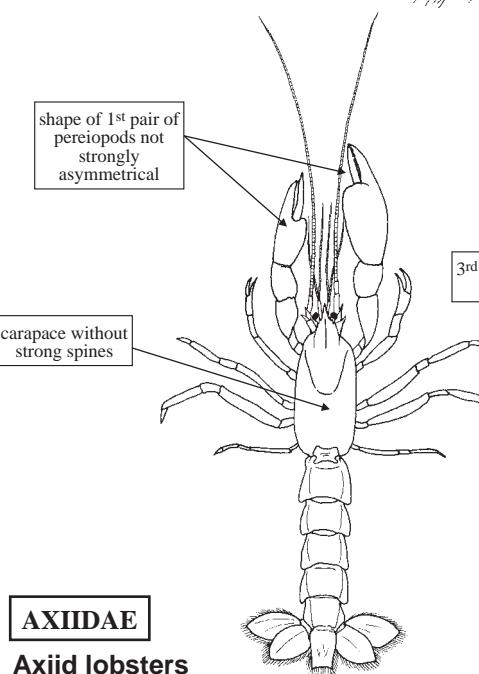
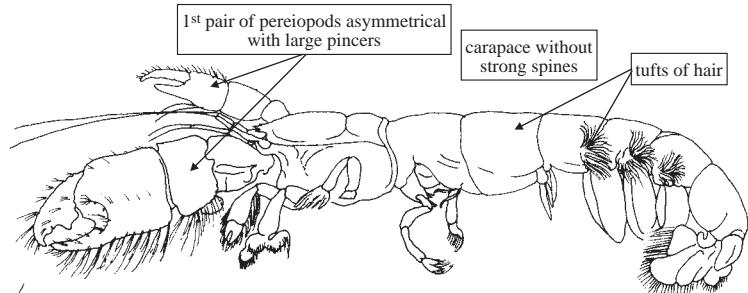
Page 38

NEPHROPIDAE**True lobsters**

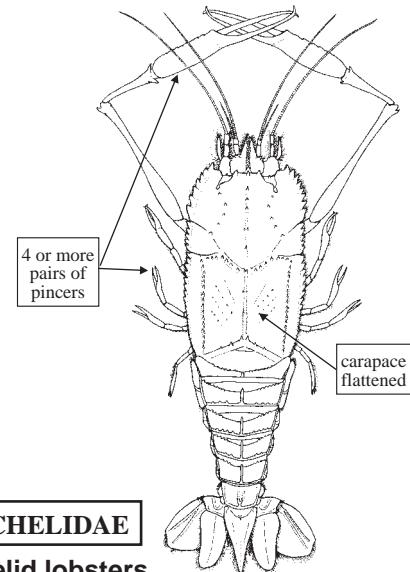
One species found in Namibia.

**Page 38****CALLIANASSIDAE****Ghost shrimps**

One species reported from Namibia, *Callianassa australis* Kensley, 1974; not included in the "Guide to Species."

**AXIIDAE****Axiid lobsters**

Two species in Namibia, *Calostacus longispinus* (McArbile, 1901) and *Calocaris barnardi* Stebbing, 1914; neither included in the "Guide to Species."

**POLYCHELIDAE****Polychelid lobsters**

Three species found in Namibia, *Stereomastis submi* (Bate, 1878), *S. grimaldi* (Bouvier, 1905), and *S. talismani* (Bouvier, 1917); none considered important to fisheries and therefore none included in the "Guide to Species."

***Jasus lalandii* (H. Milne Edwards, 1837)**

(plate I, 5)

FAO names: En - Cape rock lobster; Fr - Langouste du Cap; Sp - Langosta del Cabo.

Local names: West coast rock lobster; Crayfish; Kreef (Ak); Afrikanische Languste, Kap-Languste, Rote Languste (Gr).

Size: Maximum total body length 46 cm, carapace length 18 cm.

Fisheries: Captured by lobster pots and hoop nets. An important fishery for this species centred around Lüderitz where there were reported landings of around 2 000 t per year in the 1980's. In the 1950's and 1960's however, landings averaged around 7 000 t per year and reached a peak in 1952 of over 13 000 t. The current closed season for lobster is between the months of November and May and the size restriction is a minimum of 65 mm carapace length.

Habitat and biology: Occurs in coastal waters on rocky bottoms in depths up to about 100 m. Males molt between September and December and females molt between April and May after which mating takes place; females reach sexual maturity at 57 to 59 mm carapace length; hatching appears to be synchronized with the onset of upwelling; larvae settle in shallow-water kelp beds, adults more to deeper waters. Lifespan is about 30 to 40 years. Feeds primarily on mussels, other invertebrates and sometimes seaweeds; octopus is an important predator, preying on a wide size range. In Namibia found south of 21°S.

***Panulirus regius* De Brito Capello, 1864**

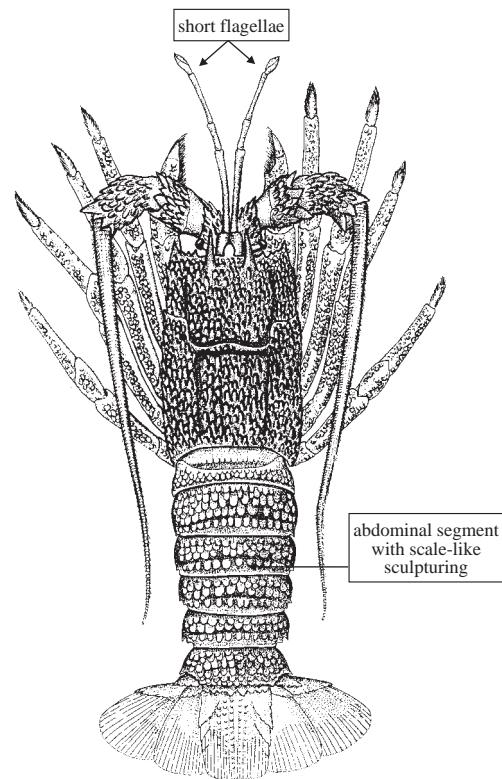
FAO names: En - Royal spiny lobster; Fr - Langouste royale; Sp - Langosta real.

Local names: Königs languste (Gr).

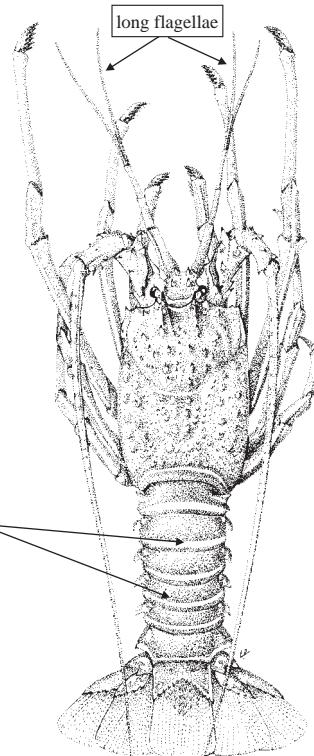
Size: To 35 cm, common to 25 cm.

Fisheries: Lobster pots, bottom trawls, bottom set nets.

Habitat and biology: Shallow coastal waters from depths of 5 to 40 m on rocky and sandy bottoms, but also reported on soft bottoms at depths between 500 and 600 m. Only recorded in the extreme northern part of Namibia.

LBC **PALINURIDAE****PALINURIDAE**

colour greenish, white bands on hind margins of abdominal segments



***Projasus parkeri* (Stebbing, 1902)**

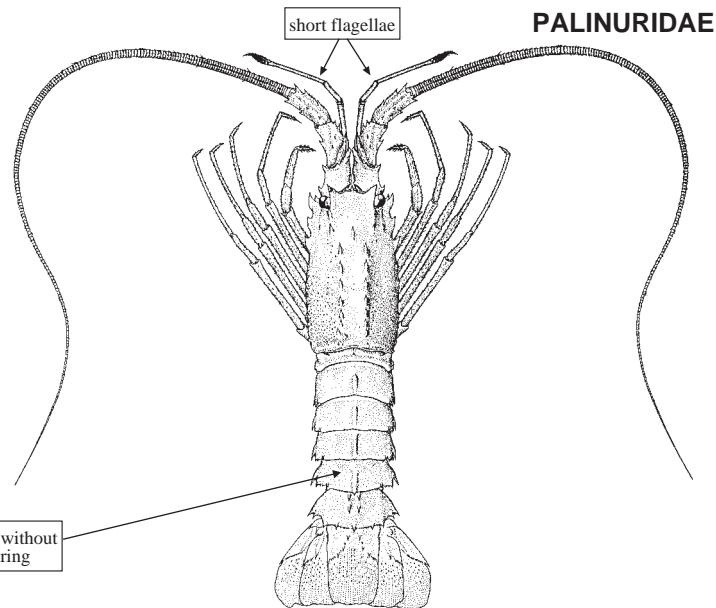
FAO names: En - Cape jagged lobster; Fr - Langouste dentelé; Sp - Langosta dentada.

Local names:

Size: Maximum total length of about 15 cm, maximum carapace length is 6 cm.

Fisheries: None at present, only rarely caught.

Habitat and biology: Found on muddy bottoms that also have some rock and coral at depths between 370 and 841 m. Off Namibia, so far only reported on Valdivia Bank.



***Scyllarides herklotsii* (Herklots, 1851)**

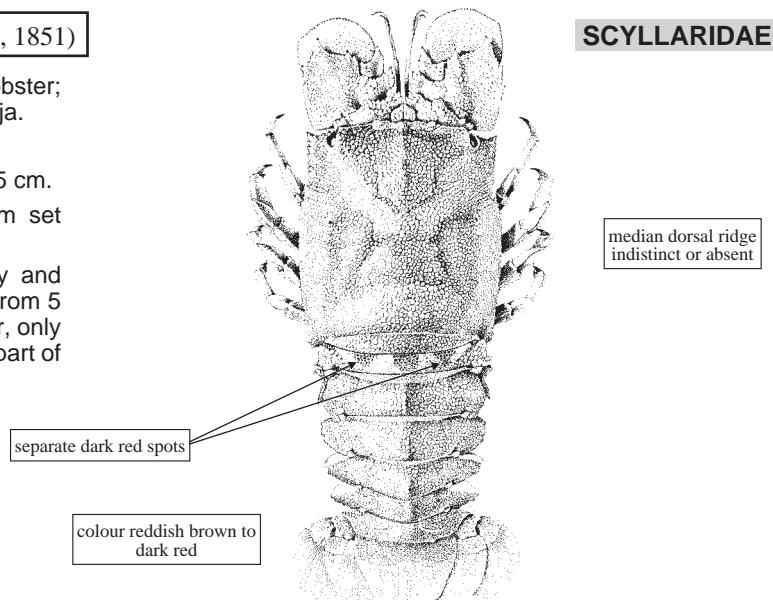
FAO names: En - Red slipper lobster; Fr - Cigale rouge; Sp - Cigarra roja.

Local names:

Size: About 32 cm, common to 25 cm.

Fisheries: Bottom trawls, bottom set nets.

Habitat and biology: On sandy and rocky bottoms usually at depths from 5 to 70 m, but also to 300 m. So far, only reported in the extreme northern part of Namibia.



***Nephropsis atlantica* Norman, 1882**

(plate I, 6)

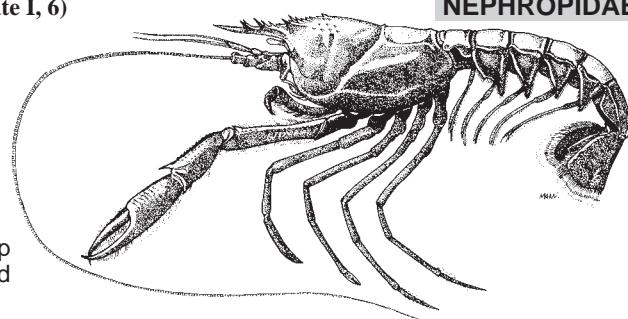
FAO names: En - Scarlet lobsterette; Fr - Langoustine écarlate; Sp - Cigalo escarlata.

Local names:

Size: Maximum total length 10.3 cm.

Fisheries: Taken as bycatch in trawls.

Habitat and biology: On mud bottoms in deep water from 470 to 1 800 m. In Namibia reported north of 24°S.

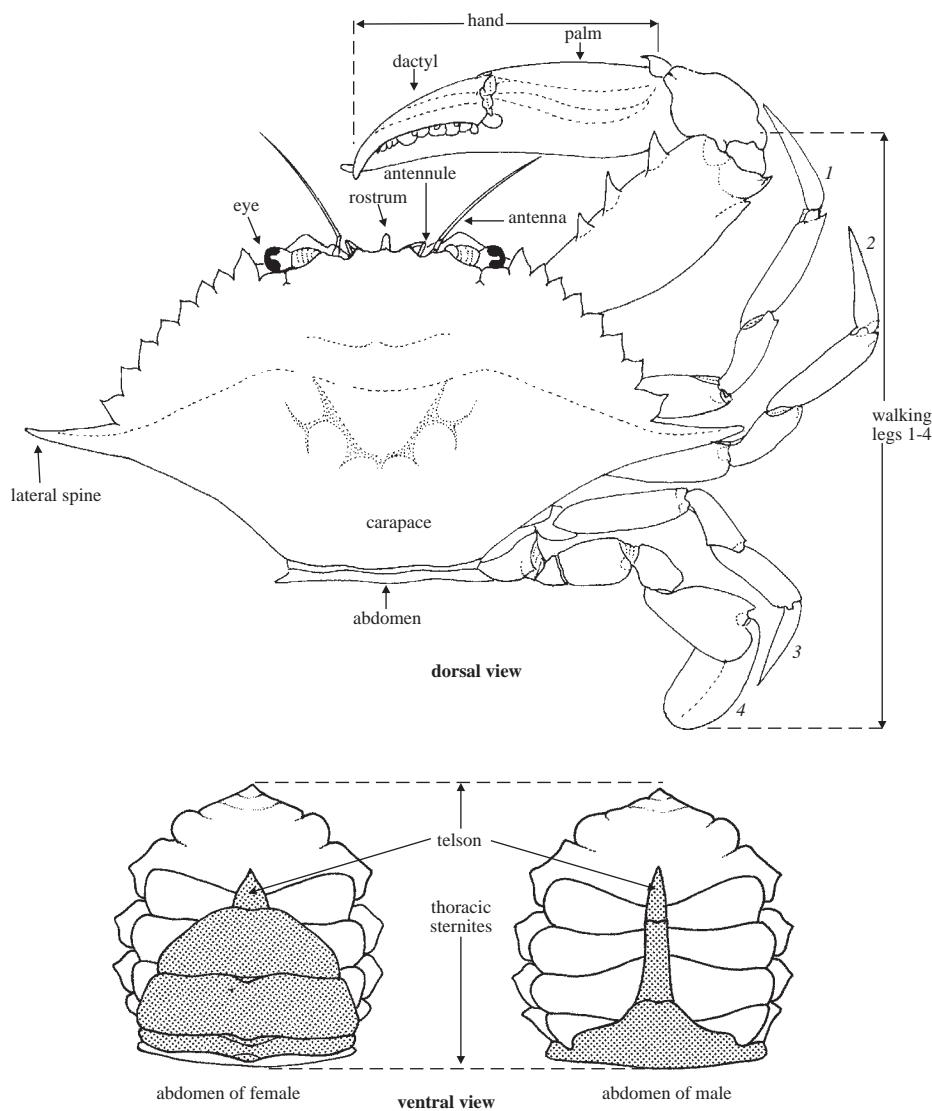


CRABS

Many species of crabs occur in Namibia, but only a few species are considered as potentially important to fisheries. A substantial fishery already exists for 1 species, *Chaceon maritae* (West African geryon). For our list of offshore crabs, we rely on Macpherson (1991) who completed extensive pelagic and benthic trawls off the coast of Namibia. He recorded 12 species in 5 families of anomuran crabs and 23 species in 11 families of brachyuran crabs. These 35 species are those likely to be encountered in offshore fisheries. We also include in this guide 3 nearshore crabs that are likely to be of interest to fisheries although there are other nearshore and littoral crabs that occur in Namibia. Of these 38 species, we list only 7 species in 6 different families of present or potential interest to fisheries. In order to aid the researcher to identify at least to family level all crabs that are likely to occur (but not necessarily of importance) in fisheries, our "Guide to Suborders and Families" covers 16 families of crabs that may be encountered.

The classification of crabs above the species level is often confusing since different taxonomists sometimes use different ranks and groups. For crustaceans we generally follow Holthuis (1991) and therefore recognize 2 suborders of crabs: the Anomura and Brachyura. These 2 suborders are easily separable by the position of the abdomen and the size of the last pair of legs.

TECHNICAL TERMS AND MEASUREMENTS



Suborder ANOMURA - Hermit Crabs, Stone Crabs, King Crabs, and Squat Lobsters

Abdomen only somewhat reduced, not firmly tucked underneath carapace; the fifth pair of legs often reduced so that it appears as if there are only 3 pairs of walking legs. Five families from Namibia, only 1 represented in the "Guide to Species."

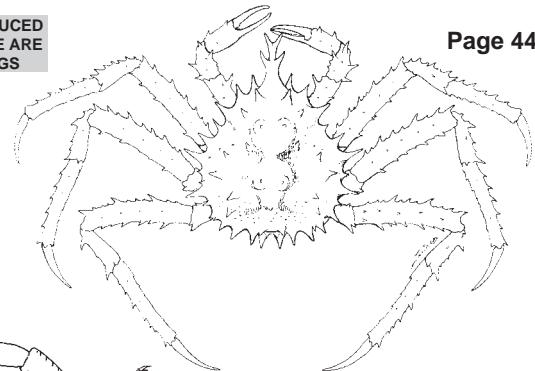
LITHODIDAE

Stone and king crabs

Two species included in "Guide to Species"; another not included is *Paralomis africana* Macpherson, 1982.

THE 5th PAIR OF LEGS OFTEN REDUCED
SO THAT IT APPEARS AS IF THERE ARE
ONLY 3 PAIRS OF WALKING LEGS

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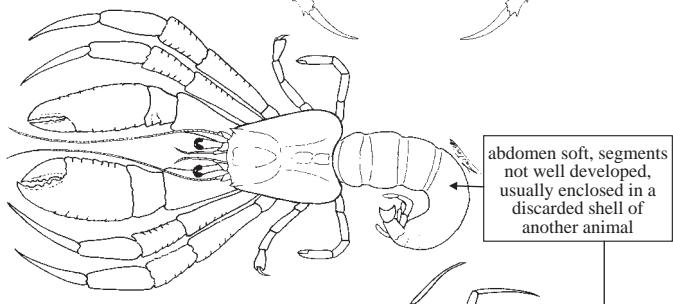


DIOGENIDAE

Left-handed hermit crabs

One species likely to be encountered in Namibia, *Dardanus arrosor* (Herbst, 1796); not included in the "Guide to Species." Demersal, at depths between 100 and 200 m.

ABDOMEN ONLY SOMEWHAT
REDUCED, NOT FIRMLY TUCKED
UNDERNEATH CARAPACE

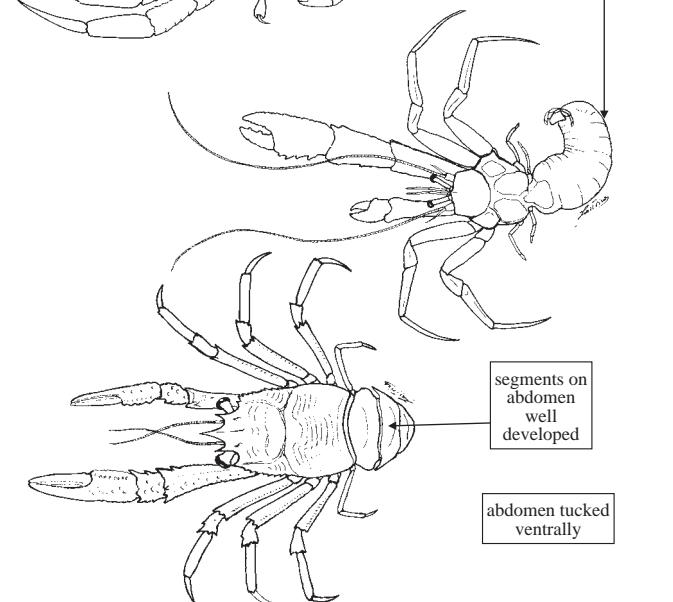


abdomen soft, segments
not well developed,
usually enclosed in a
discarded shell of
another animal

PARAPAGURIDAE

Deepwater hermit crabs

Three species likely to be encountered, *Parapagurus bouvieri* Stebbing, 1910, *Sympagrus dimorphus* (Studer, 1883), and *S. macrocerus* Forest, 1955, none included in the "Guide to Species." All demersal species occurring at depths between 200 and 800 m.



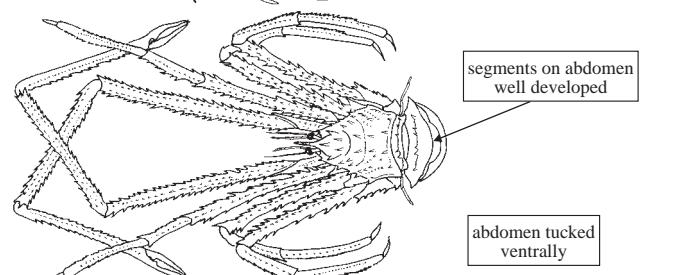
segments on
abdomen
well
developed

abdomen tucked
ventrally

GALATHEIDAE

Squat lobsters

Four species likely to be encountered, *Munidopsis chuni* Doflein and Balss, 1913, *M. longirostris* A. Milne Edwards and Bouvier, 1897, *Munida benguela* Saint Laurent and Macpherson, 1988, and *M. speciosa* von Martens, 1878; none included in the "Guide to Species."



segments on abdomen
well developed

abdomen tucked
ventrally

CHIROSTYLIDAE

Chirostylid crabs

One species likely to be encountered in Namibia, *Eumunidae squamifera* Saint Laurent and Macpherson, 1990; not included in the "Guide to Species." Demersal, caught at depths between 300 and 500 m.

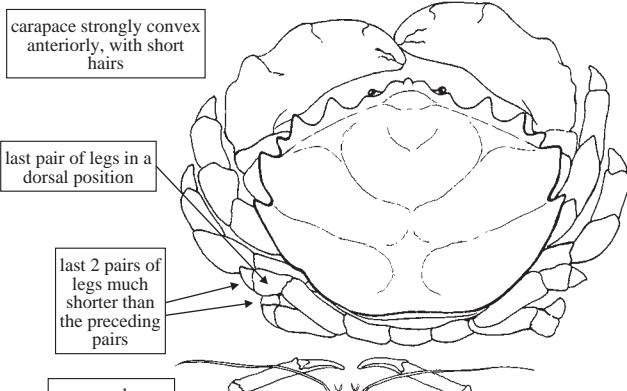
Suborder BRACHYURA - True Crabs

Abdomen reduced, tucked tightly underneath carapace; last pair of legs not substantially reduced. Twelve families from Namibia, 5 of these represented in the "Guide to Species."

DROMIIDAE

Sponge crabs

Three demersal species likely to be encountered, *Exodromidia bicornis* (Studer, 1882), *E. spinosa* (Studer, 1882), and *Pseudodromidia inermis* Macpherson, 1988; none included in the "Guide to Species."



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HOMOLIDAE

Homolid crabs

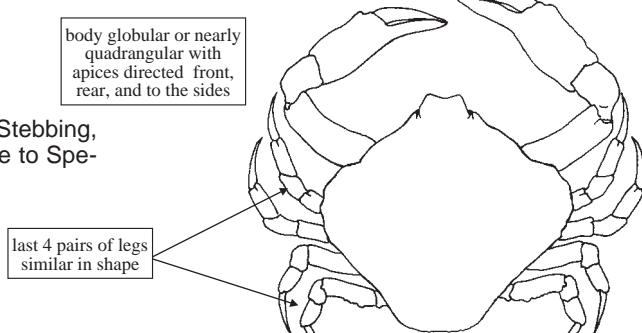
One species likely to be encountered, included in the "Guide to Species."



LEUCOSIDAE

Purse crabs

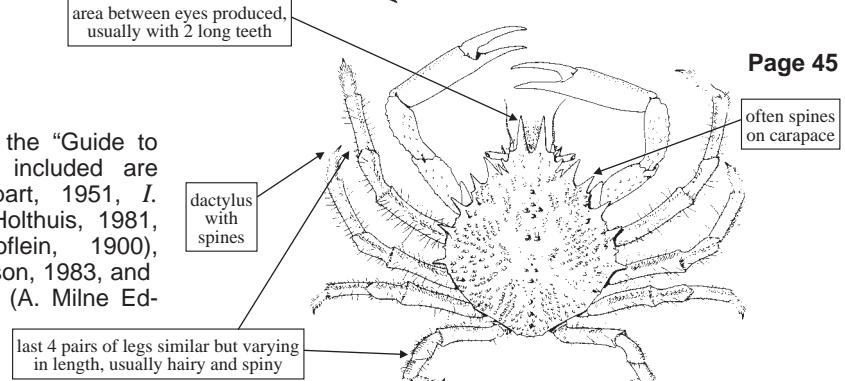
One species, *Ebalia scandens* (Stebbing, 1921); not included in the "Guide to Species."



MAJIDAE

Spider crabs

One species included in the "Guide to Species," 4 others not included are *Inachus angolensis* Capart, 1951, *I. grallator* Manning and Holthuis, 1981, *Rochinia hertwigi* (Doflein, 1900), *Dorynchus basi* Macpherson, 1983, and *Macropodia macrocheles* (A. Milne Edwards and Bouvier, 1898).

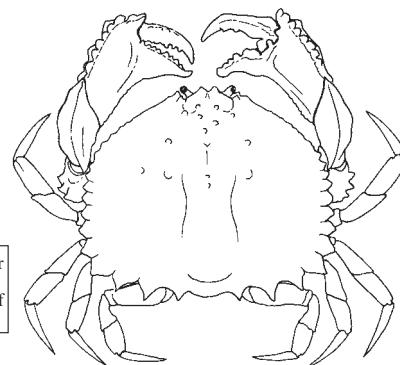


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CALAPPIDAE**Box crabs**

One species included in the "Guide to Species"; 2 others not included are *Acanthocarpus brevispinis* Monod, 1946 and *Mursia cristimanus* de Haan, 1837. Demersal at depths between 100 and 500 m.

clypeiform expansions over legs, or a pronounced lateral spine on each side of carapace

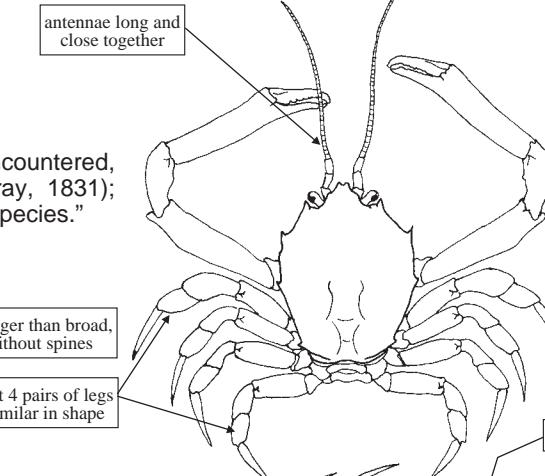


carapace strongly convex, anterior and lateral margins in a single arc

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CORYSITIDAE**Corysitid crabs**

One species likely to be encountered, *Nautilocystes ocellatus* (Gray, 1831); not included in the "Guide to Species."



antennae long and close together

carapace longer than broad, surface without spines

last 4 pairs of legs similar in shape

front with 4 teeth

GERYONIDAE

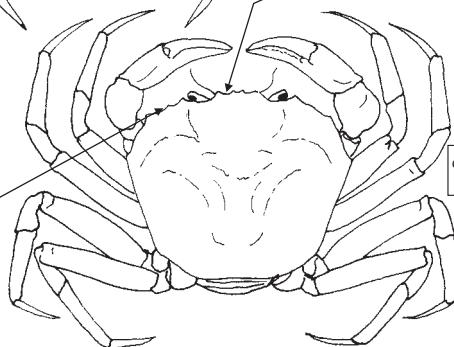
Page 45

Deepsea crabs

One species included in the "Guide to Species," another, *Chaceon chuni* (Macpherson, 1983) not included.

anterolateral margin with 3-5 indistinct teeth

last 4 pairs of legs similar, long, slender, and smooth



carapace trapezoid, broader than long

GONEPLACIDAE**Goneplacid crabs**

Two species, *Goneplax rhomboides* (Linnaeus, 1758) and *Neoplumuloplax heterochir* (Studer, 1882); neither included in the "Guide to Species."

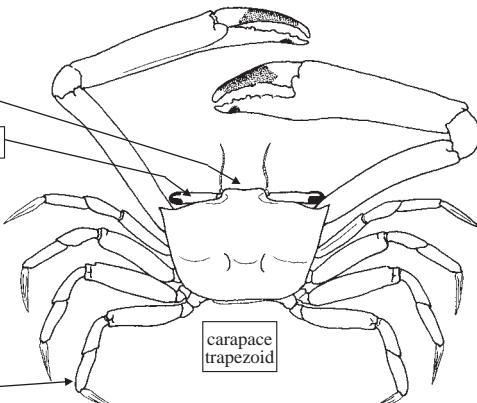
front of carapace relatively broad and smooth, without teeth

eyestalk long

last 4 pairs of legs similar in shape

carapace trapezoid

last 4 pairs of legs similar in shape



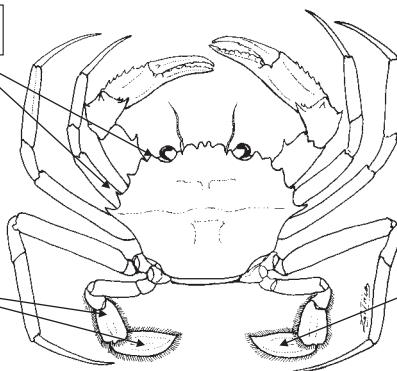
PORTUNIDAE**Swimming crabs**

Two species, *Bathynectes piperitus* Manning and Holthuis, 1981 and *Macropipus australis* Guinot, 1961; the former a frequent bycatch in the trawl industry and therefore included in the "Guide to Species."

5-9 teeth on anterolateral margin

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no spines on dactyls

**XANTHIDAE****Mud crabs**

One species likely to be encountered offshore, *Monodaeus cristulatus* Guinot and Macpherson, 1989; not included in the "Guide to Species."

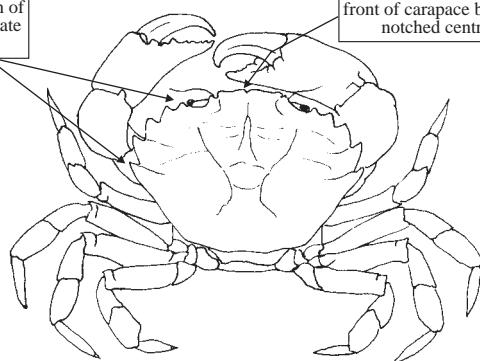
anterior margin of carapace lobulate or toothed

front of carapace broad and notched centrally



last 4 pairs of legs similar, with hair

posterolateral part of carapace without clypeiform expansion over legs

**GRAPSIDAE****Lightfoot, shore, marsh, and matchbox crabs**

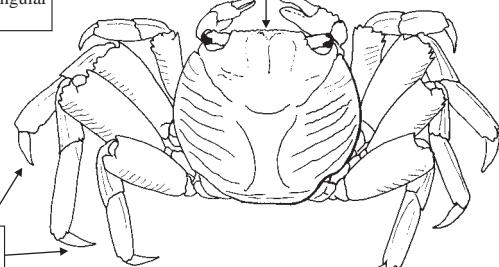
Two species included in the "Guide to Species"; 2 others not included are *Mierograpsus kingsleyi* (Miers, 1885), and *Euchirograpsus liguricus* H. Milne Edwards, 1853.

carapace quadrangular or round

usually no teeth in front

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last 4 pairs of legs similar, dactyls with conspicuous spines

**OCYPODIDAE****Ghost crabs**

A number of species occurring nearshore and in the littoral zone, none included in the "Guide to Species."

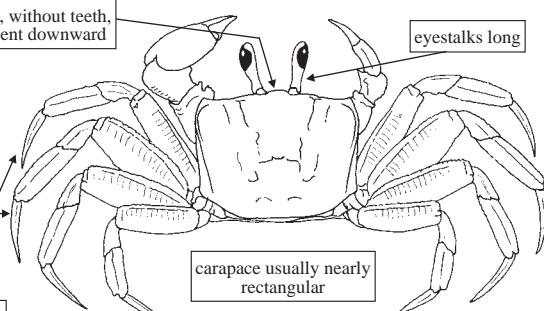
dactyls smooth or ridged, not conspicuously spiny

eyestalks long

last 4 pairs of legs similar

carapace usually nearly rectangular

front narrow, without teeth, somewhat bent downward



***Lithodes ferox* Filhol, 1885**

(plate I, 7)

FAO names: En - Fierce king crab; Fr - Crabe royale féroce; Sp - Centolla feroz.

Local names: Stone crab, Spider crab.

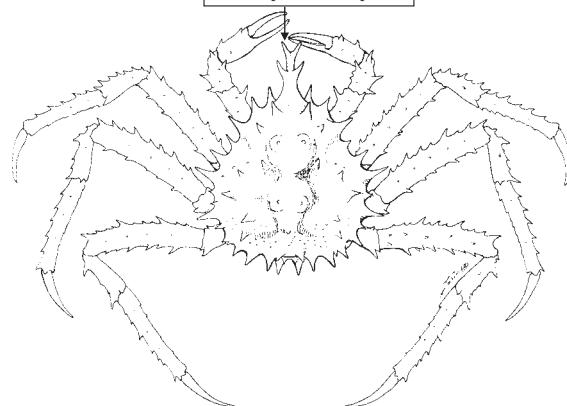
Size: To about 11 cm carapace width.

Fisheries: Caught commonly in bottom trawls.

Habitat and biology: Demersal, at depths between 300 and 500 m.

KCF LITHODIDAE

rostrum produced, tip bifid

***Neolithodes asperrimus* Barnard, 1947**

FAO names: En - Rough king crab; Fr - Crabe royale grêle; Sp - Centolla áspera.

Local names: Stone crab, Spider crab.

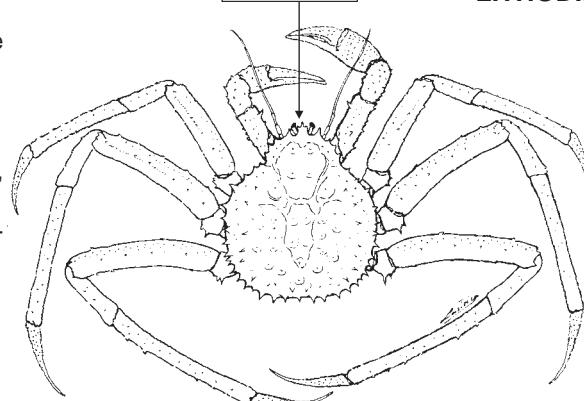
Size: To about 19 cm carapace length.

Fisheries: Caught incidentally in bottom trawls, also occasionally in crab pots.

Habitat and biology: Demersal, at depths between 600 and 2 000 m.

LITHODIDAE

rostrum not bifid

***Paromola cuvieri* (Risso, 1816)****HOMOLIDAE**

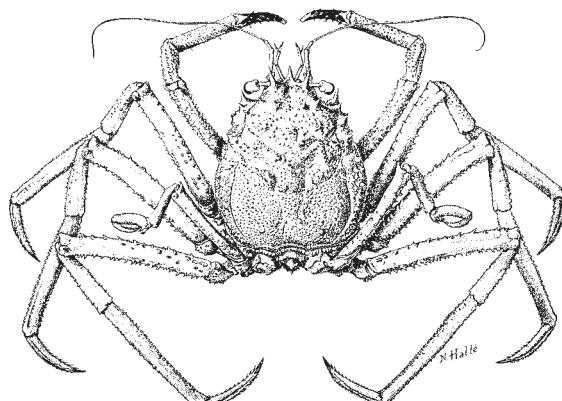
FAO names: En - Paromola; Fr - Paromole; Sp - Paromola.

Local names:

Size: To about 21.5 cm carapace length, commonly from 10 to 16 cm.

Fisheries: Caught incidentally in bottom trawls.

Habitat and biology: Demersal, at depths between 50 and 1 000 m, commonly between 300 and 400 m.



***Maja squinado* (Herbst, 1788)**

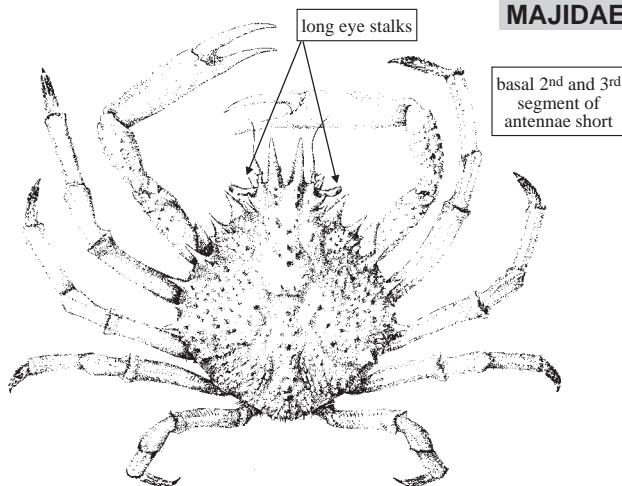
FAO names: En - Spinous spider crab; Fr - Araignée européenne; Sp - Centolla europea.

Local names: Seaspider, Spidercrab, SpinyCrab; Große Seespinne (Gr).

Size: To 22 cm carapace length.

Fisheries: Caught with bottom trawls and trammel nets.

Habitat and biology: Sublittoral, to a depth of 75 m.

**MAJIDAE*****Calappa pelii* Herklots 1851**

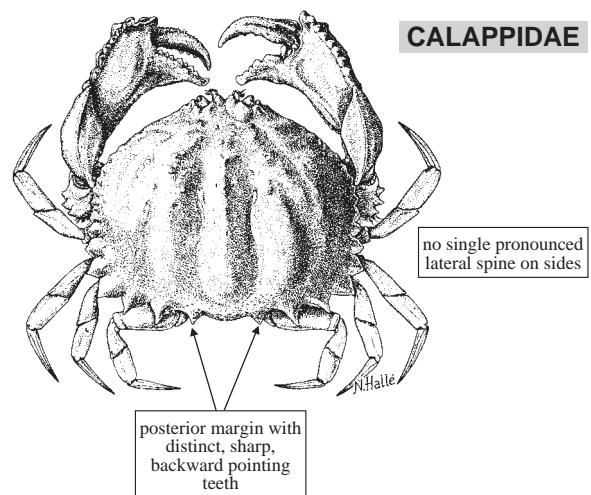
FAO names: En - Spiny box crab; Fr - Migraine épineuse; Sp - Calapa espinuda.

Local names:

Size: To 6 cm (carapace width).

Fisheries: Caught incidentally in bottom trawls.

Habitat and biology: Burrows in sand or sandy mud between depths of 12 and 400 m, common between 100 and 200 m depth.

**CALAPPIDAE*****Chaceon maritae* (Manning and Holthuis, 1981)**

(plate I, 8)

CRR GERYONIDAE

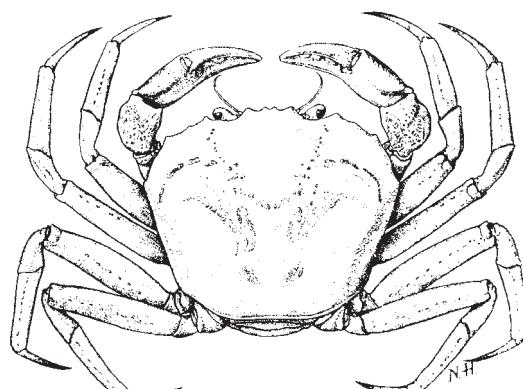
FAO names: En - West African geryon; Fr - Géron west-africain; Sp - Gerón de Guinea.

Local names: Deepsea red crab; Red crab; Rote Tiefseekrabbe (Gr); Cangrejo Colorado (Sp).

Size: To 16 cm (males) and 10 cm (females) carapace width.

Fisheries: Caught with bottom trawls and pots. Economically important fishery directed at this species, catches currently about 3 000 t per year, but previously up to 10 000 t.

Habitat and biology: Inhabits muddy bottoms at depths between 100 and 950 m, most frequent between 300 and 700 m.



***Bathynectes piperitus* Manning and Holthius, 1981**

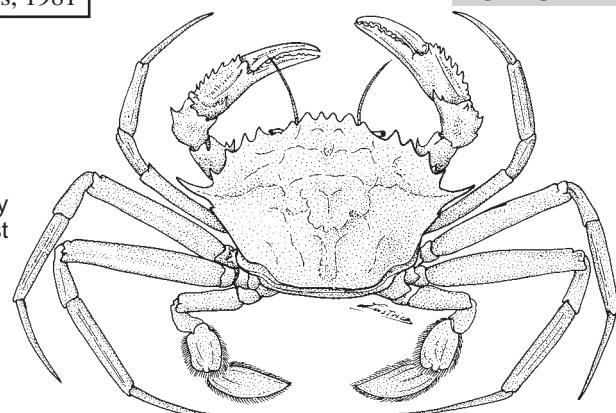
FAO names: En - Peppermint swimcrab; Fr - Etrille menthe poivrée; Sp - Juibe menta.

Local names:

Size: To about 8.5 cm (carapace width).

Fisheries: Bycatch in trawl fisheries.

Habitat and biology: Mostly on mud or sandy mud bottoms from depths of 100 to 630 m, most often from 300 to 450 m.

**PORTUNIDAE*****Grapsus grapsus* (Linnaeus, 1758)**

FAO names: En - Lightfoot crab; Fr - Anglette commune; Sp - Abuete negro.

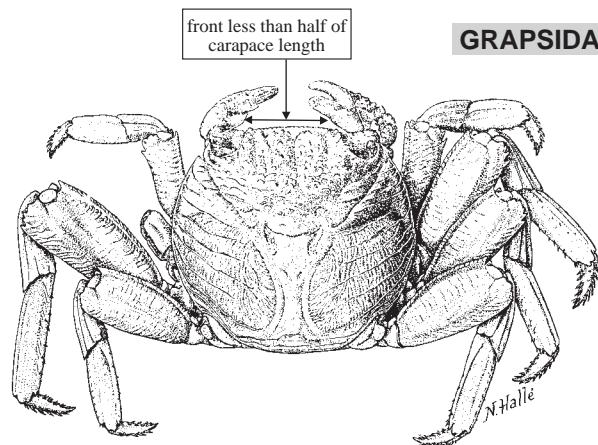
Local names:

Size: To about 9 cm carapace length.

Fisheries: Caught mainly by hand and cast nets.

Habitat and biology: Lives near the water line, on rocks.

carapace nearly oval



front less than half of carapace length

GRAPSIDAE***Pachygrapsus transversus* (Gibbes, 1850)**

FAO names: En - African matchbox crab; Fr - Anglette africaine; Sp - Abuete cajeta.

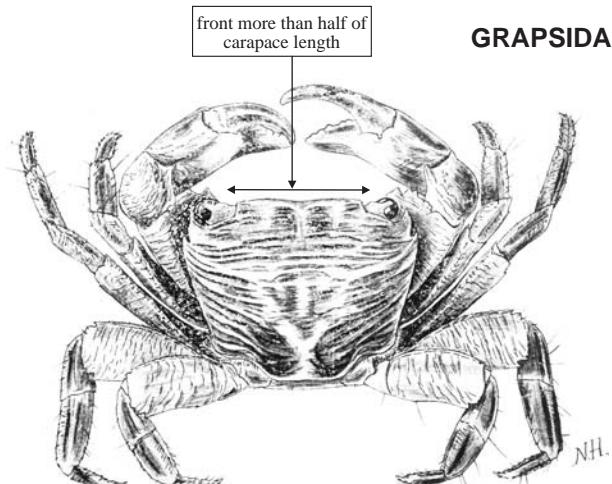
Local names:

Size: To about 1.8 cm carapace length.

Fisheries: Caught mainly by hand and cast nets.

Habitat and biology: On rocks along the coast, just below the surface.

carapace nearly trapezoidal



front more than half of carapace length

GRAPSIDAE