

Geographical Distribution : Southern Atlantic. ,So far only known from two localities: southeast of the Falkland/ Malvinas Islands (55°01' -55°10'S 39°55' - 39°46'W) and south of South Georgia (6°04' - 60°08'S 35°59' 36°04'W) (Fig. 89).

Habitat and Biology : Deep sea between (1976-J 2068 and 2886 (-3040) m.

Size : Total body length about 15 cm, carapace length (without rostrum) 5 to 6 cm.

Interest to Fisheries : None so far. Until now only 4 specimens have been collected of this species. Its scarcity and the very great depths at which it is found, make it an unlikely candidate for a fishery, notwithstanding its relatively good size.

Literature : Original description.

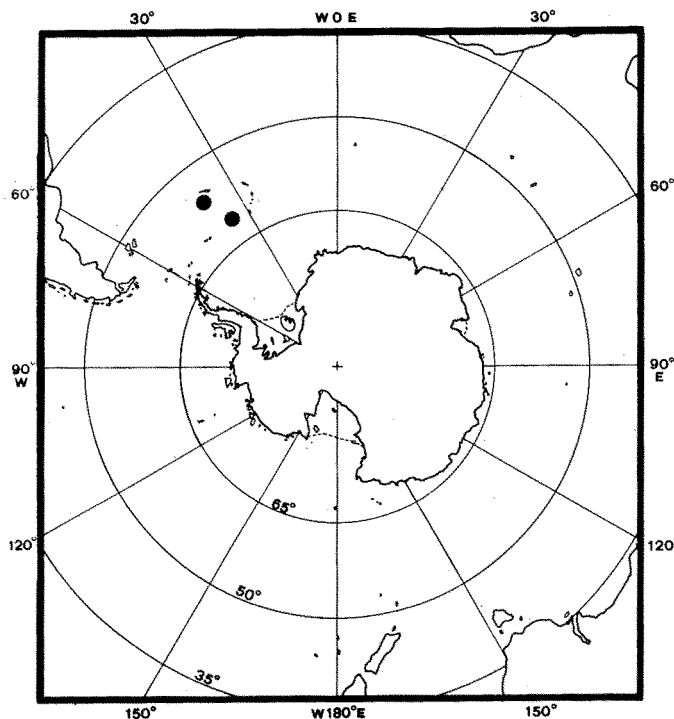


Fig. 89

SUBFAMILY NEPHROPINAE Dana, 1852

Nephropinae Dana, 1852, Proceedings Academy Natural Sciences. Philadelphia, 6: 15.

This, the typical subfamily of Nephropid lobsters, contains the following 5 genera. *Eunephrops*, *Homarus*, *Metanephrops*, *Nephrops* and *Thymopides*.

All species of Nephropinae are of present or potential commercial interest, and all are listed here.

Key to Genera:

- 1a. Left and right first chelipeds unequal, one a crushing claw, the other a cutting claw. Antennal spines without a strong posterior carina (Figs 90,91) First abdominal sternite of the male without a median spine
- 2a. Palm of first chelipeds smooth, without ridges. Subdorsal carinae without spinules. Abdominal somites smooth, without grooves;no carinae separating the tergites from the pleura (Fig. 90)**Homarus**

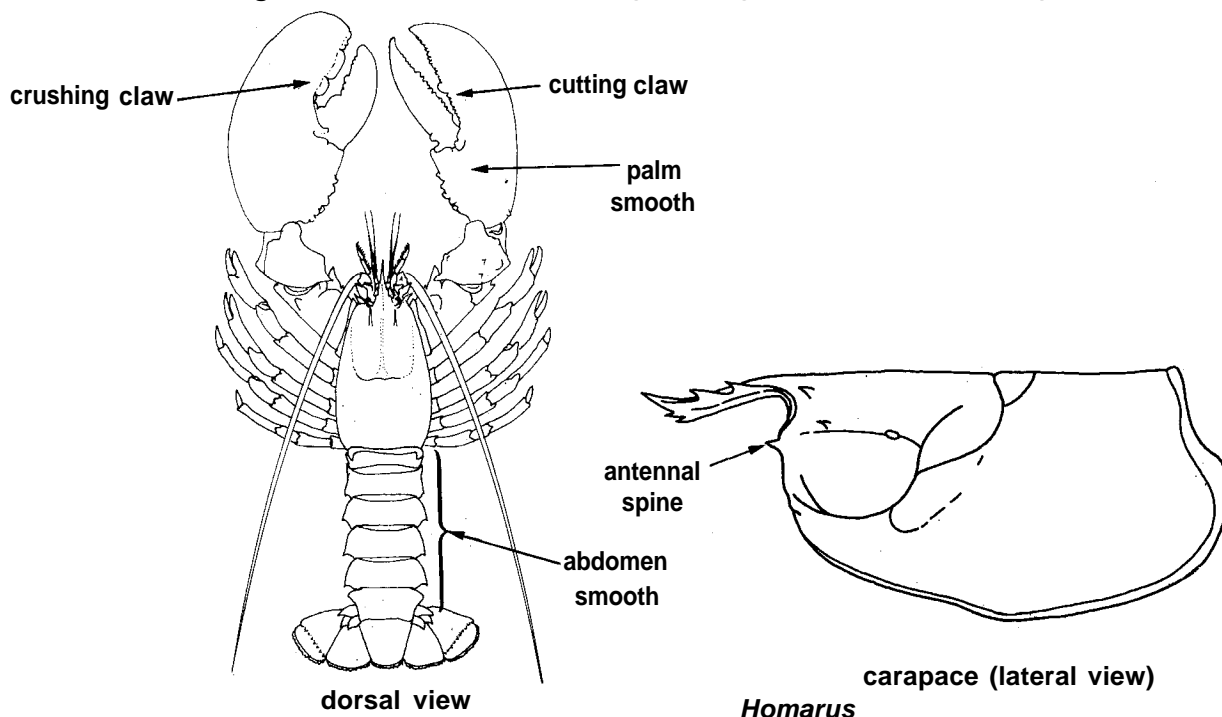
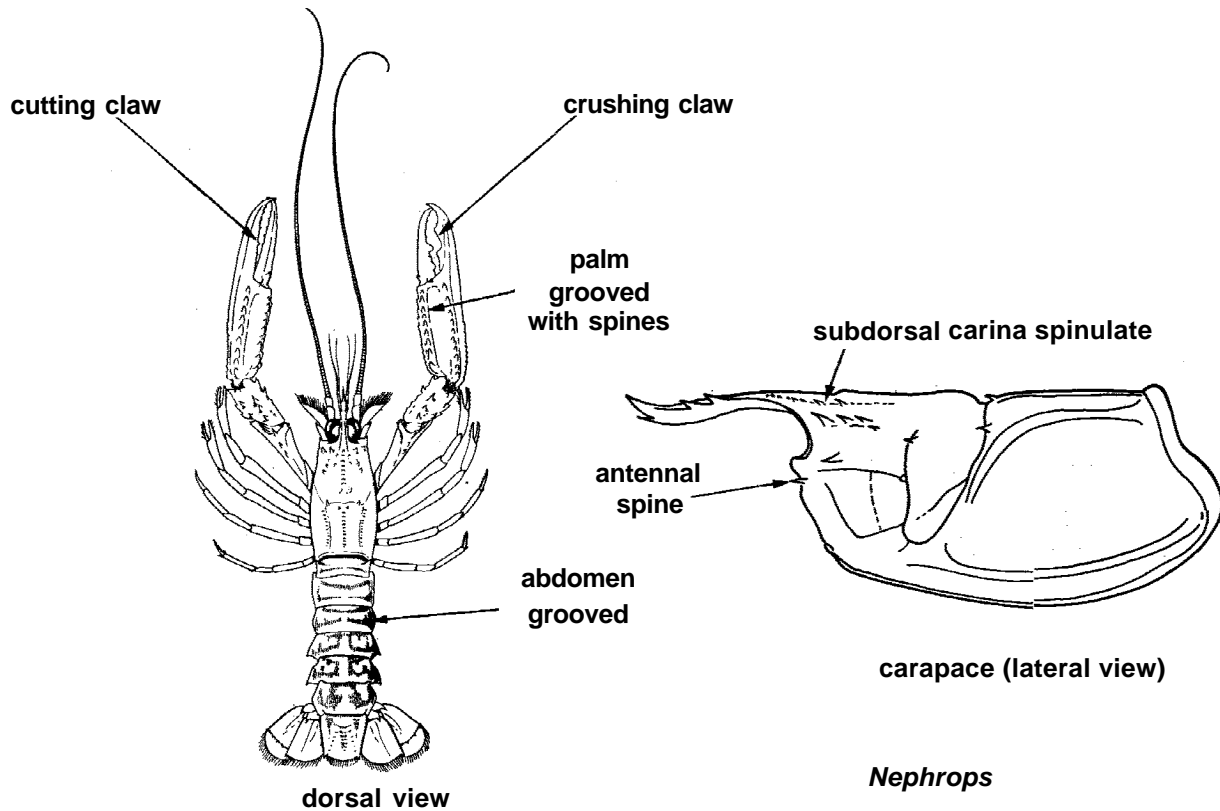


Fig.90

- 2b. Palm of first chelipeds with distinct longitudinal grooves, ridges and rows of spines. Subdorsal carinae spinulate. Abdominal somites dorsally with distinct transverse grooves, a blunt carina separates the tergites from the pleura (Fig. 91). *Nephrops*



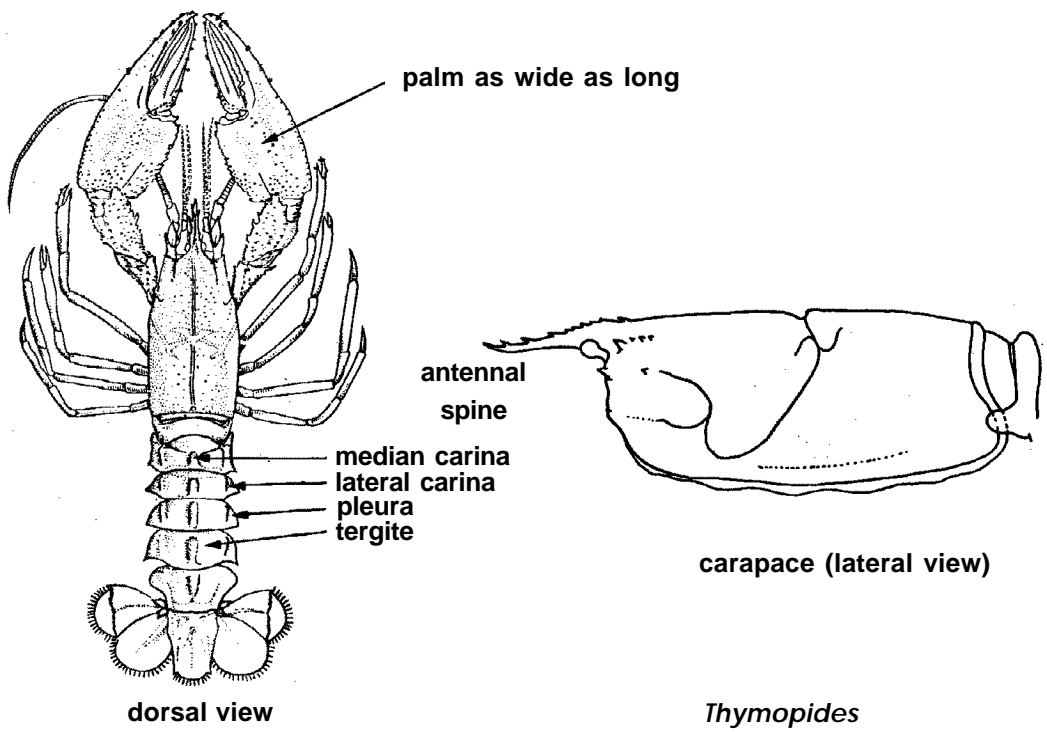
Nephrops

Fig. 91

- 1b. Left and right chelipeds of the first pair similar in site and shape. Antennal spine in most species followed by a strong carina. A distinct carina separates the abdominal tergites from the pleura. First abdominal sternite of the male with a median spine (this character not known from *Thymopides*)

- 3a. Antennal spine not followed by a strong carina. Palm of first chela as wide as long. Abdomen with a blunt median carina (Fig. 92). *Thymopides*

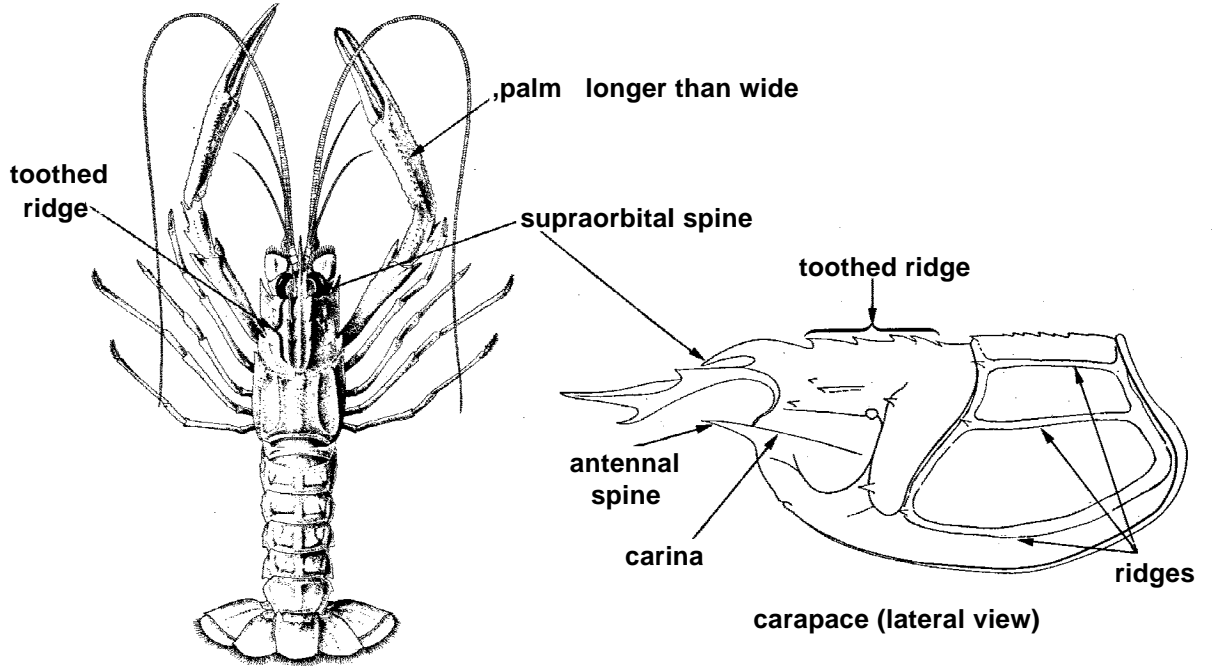
- 3b. Antennal spine followed by a strong carina. Palm of first chela distinctly longer than wide



Thymopides

Fig. 92

- 4a. Supraorbital spine followed by a strong toothed ridge which extends almost to the postcervical groove. Posterior part of carapace with several longitudinal carinae (Fig. 93) *Metanephrops*

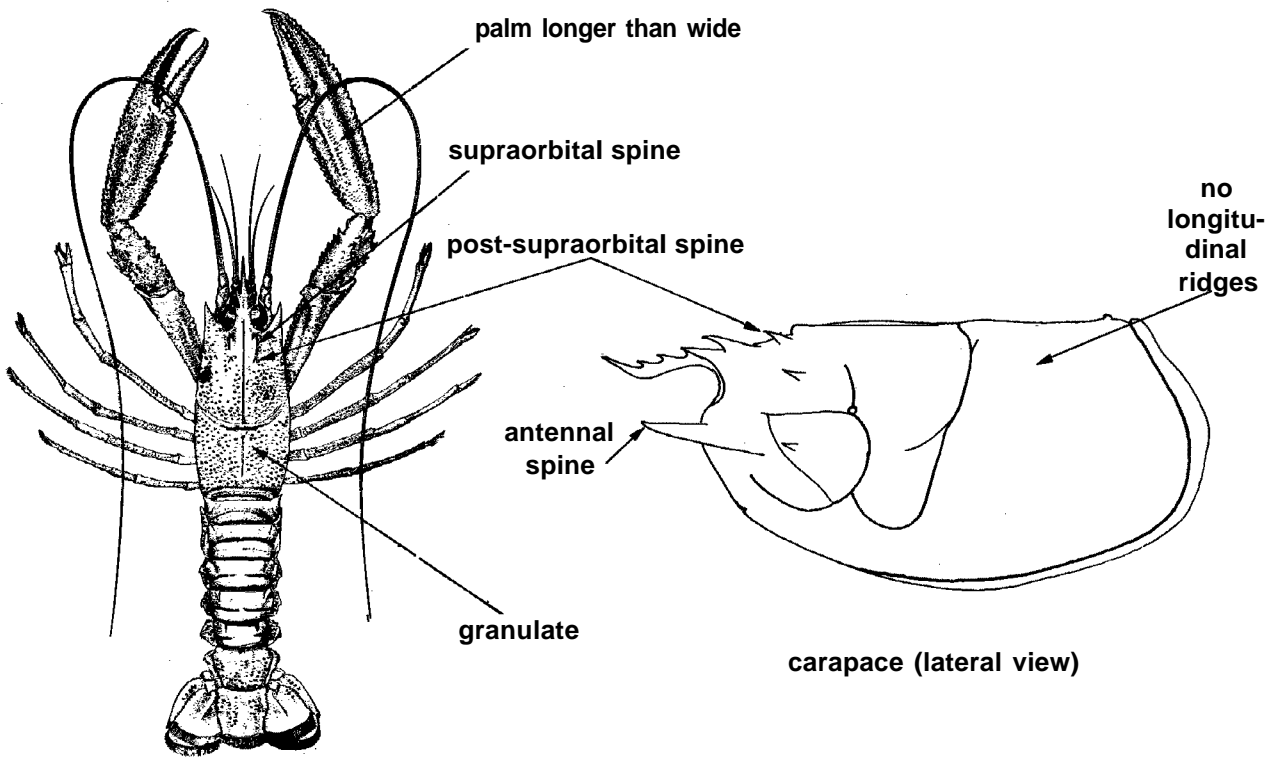


dorsal view

Metanephrops

Fig. 93

- 4b. Supraorbital spine followed by a single post-supraorbital spine, no supraorbital carina is present. The posterior part of the carapace is evenly granulate, without longitudinal carinae (Fig. 94) *Eunephrops*



dorsal view

Eunephrops

Fig. 94

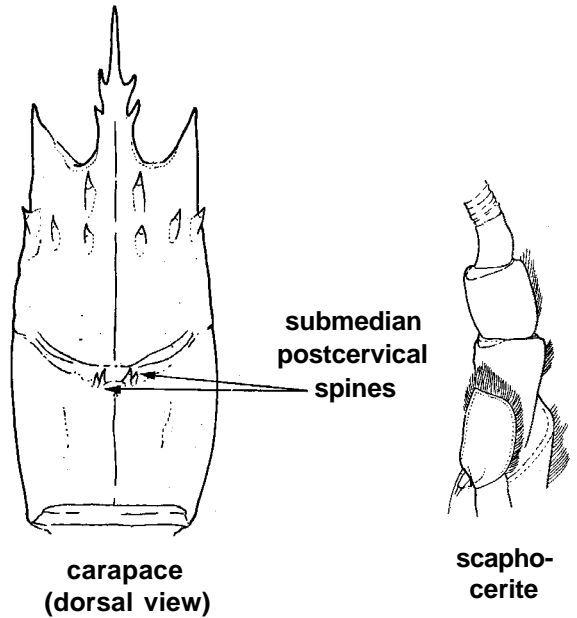
Eunephrops S.I. Smith, 1885, *Proceedings United States National Museum*, 8: 167. Gender masculine.

Type Species : by monotypy: *Eunephrops bairdii* S.I. Smith, 1885.

The genus is restricted to the Western Atlantic and has three known species, all of which inhabit the deep sea. They are of potential interest for fishery.

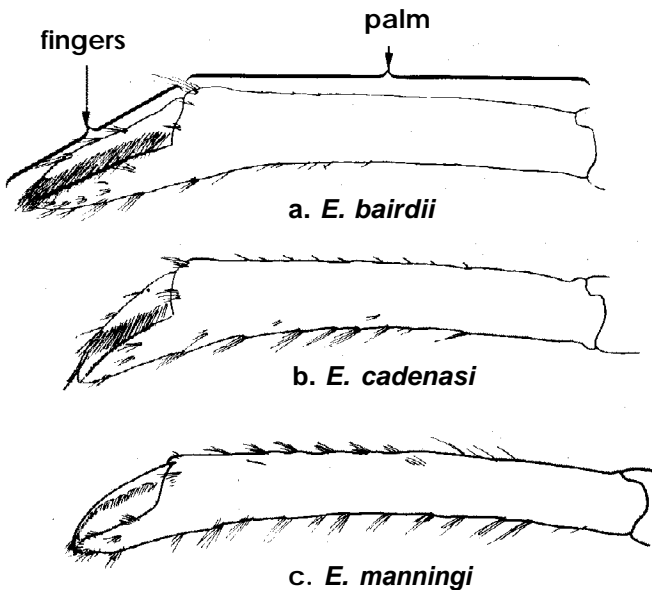
Key to Species:

- 1a. Carapace with submedian postcervical spines. No spine at the base of the scaphocerite (Fig. 95). Second pereiopod with the fingers slightly less than half as long as the palm (Fig 96a) ***E. bairdii*** (Fig. 98)
- 1b. Carapace without postcervical spines. A spine on the antennal peduncle near the base of the scaphocerite. Second pereiopod with the fingers less than 1/3 as long as the palm (Fig. 96 b,c)
- 2a. Abdominal somites with distinct longitudinal median carina (Fig. 97a). Scaphocerite reaching to the base of the ultimate segment of the antennal peduncle. Third pereiopod with the fingers about 1/3 of the length of the palm ***E. cadenasi*** (Fig. 100)
- 2b. Abdominal somites with a single transverse groove, which is interrupted in the middle; no median carina is present (Fig. 97b). Scaphocerite small, failing to reach the middle of the penultimate segment of the antennal peduncle. Third pereiopod with the fingers about 1/5 of the length of the palm ***E. manningi*** (Fig. 102)

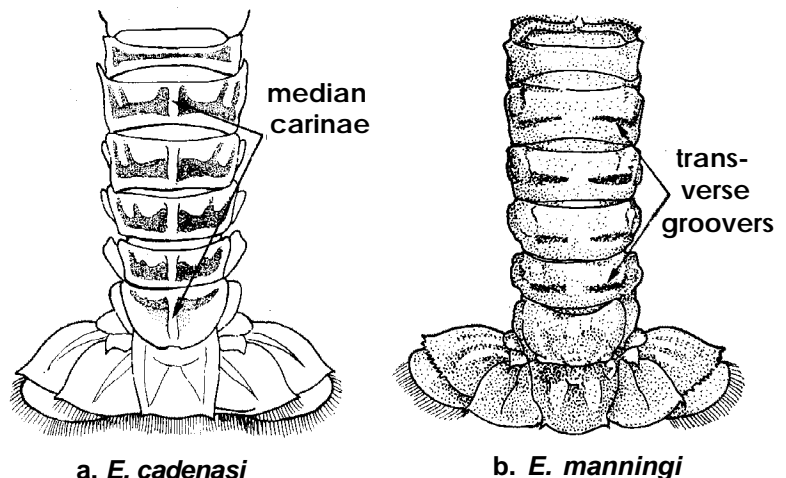


E. bairdii
(after Holthuis, 1974)

Fig. 95



chela of second pereiopod **Fig. 96**
(from Holthuis, 1974)



abdomen (dorsal view)

Fig. 97

Eunephrops bairdii S.I. Smith, 1885

Fig. 98

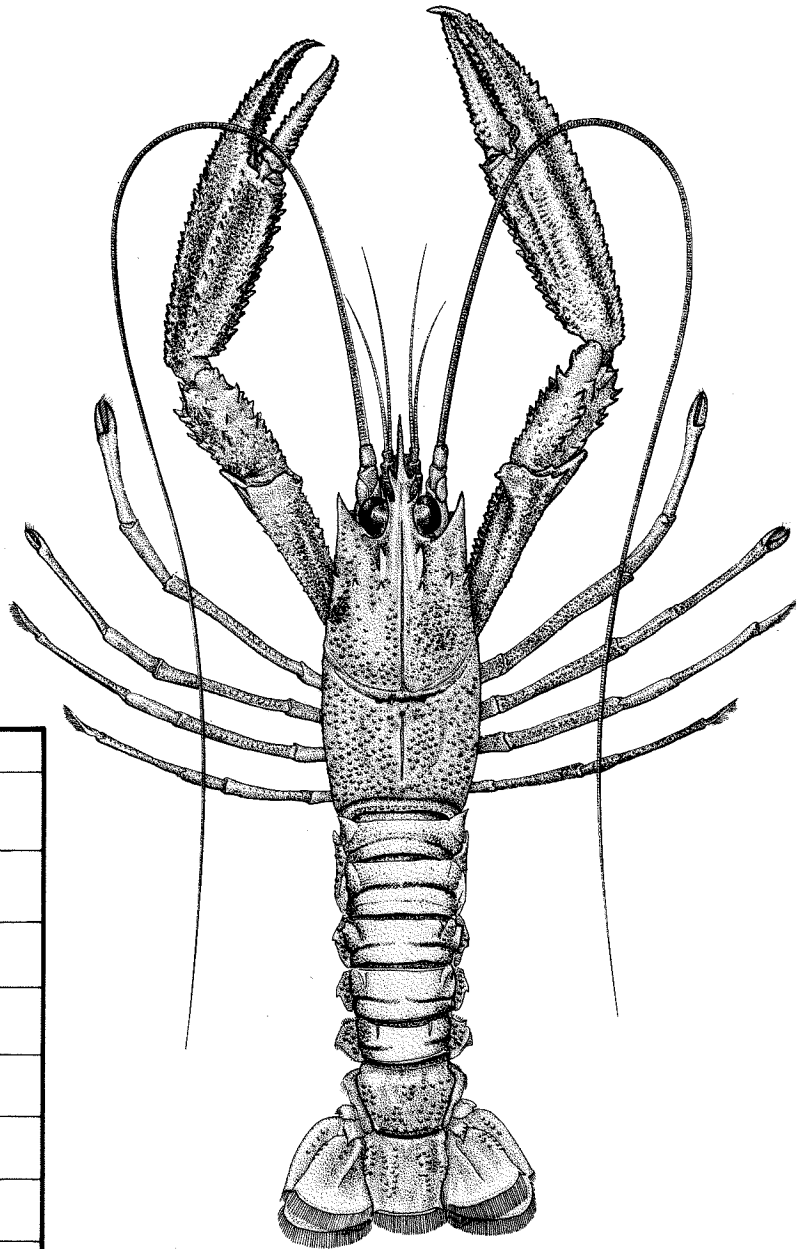
NEPH Euneph 1

Eunephrops bairdii S.I. Smith, 1885, Proceedings United States National Museum, 8: 167.

FAO Names : **En**- Red lobster; **Fr** - Langoustine rouge; **Sp** - Cigala colorada.

Type : Type locality: "Albatross" "Station 2143, March 23, 1884; Gulf of Darien; north latitude 9°30'45", west longitude 76°25'30"; 155 fathoms [=284 m]; green mud". Female holotype in USNM, No. 6937.

Geographical Distribution : Western Atlantic: southwest Caribbean Sea off Colombia and Panama (Fig. 99).



(after Holthuis, 1974)

Fig. 98

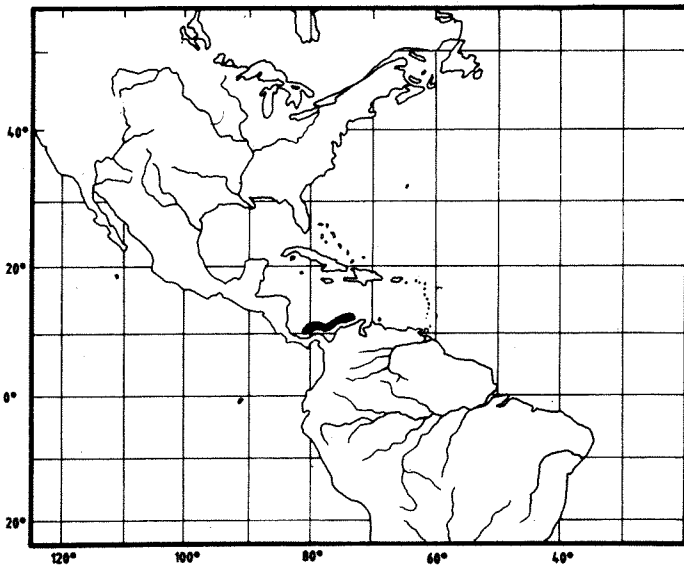


Fig. 99

Habitat and Biology : Depth range between 230 and 360 (-400) m. Soft substrate (mud or coralline rubble).

Size : Carapace length between 4 and 9 cm. Maximum total length about 20 cm.

Interest to Fisheries : The species has been taken occasionally during exploratory commercial fishing. Its large size makes it an attractive fishery subject, but the fact that it seems to be scarce and lives in great depths detracts from its possible commercial value.

Literature : Holthuis, 1974:842, figs 27-29; Fischer (ed.), 1978: vol. 6.

Eunephrops cadenasi Chace, 1939

Fig. 100

NEPH Euneph 2

Eunephrops cadenasi Chace, 1939, Memorias Sociedad Cubana Historia natural, 13:40.

FAO Names : En - Sculptured lobster.

Type : Type locality: "Nicholas Channel south of Cay Sal Bank, Lat. 23°21 'N, Long. 79°58'W, 300-315 fathoms [= 550-576 m]". Holotype female in MCZ.

Geographical Distribution : Western Atlantic: off Bahama Islands and Dominica; Caribbean Sea near Jamaica and Colombia (Fig. 101).

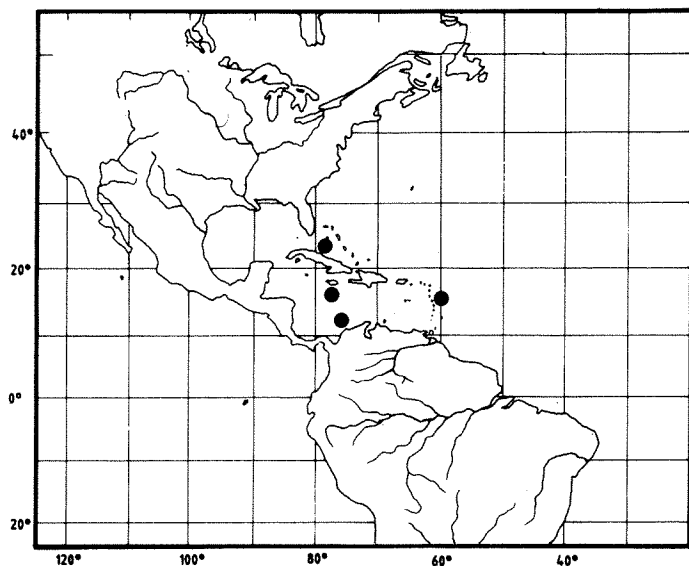


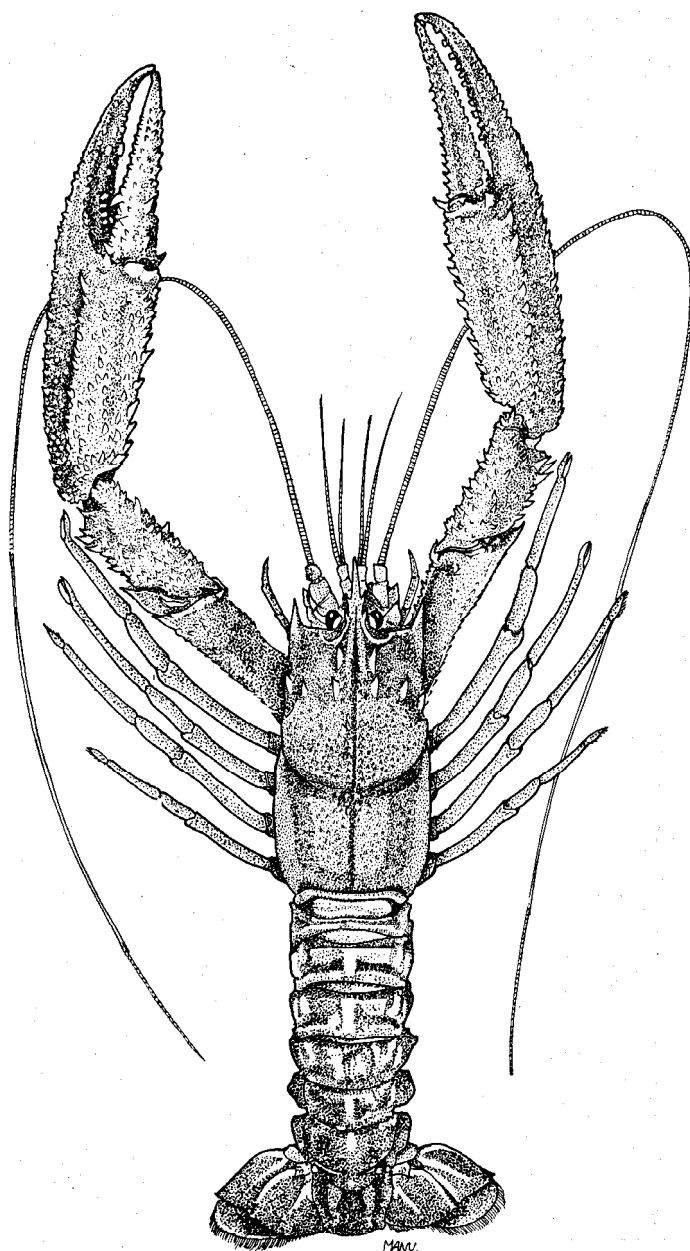
Fig. 101

Habitat and Biology : Depth range between 434 and 591 m.

Size : Maximum total body length (males) about 30 cm. Carapace length 5-14 cm (males), 4-5 cm (females).

Interest to Fisheries : The large size, that the species may attain, makes it of potential interest to fisheries. Its apparent scarcity and the fact that it inhabits great depths, however, are important obstacles.

Literature : Holthuis, 1974:849, figs 30-32.



(after Holthuis, 1974)

Fig. 100

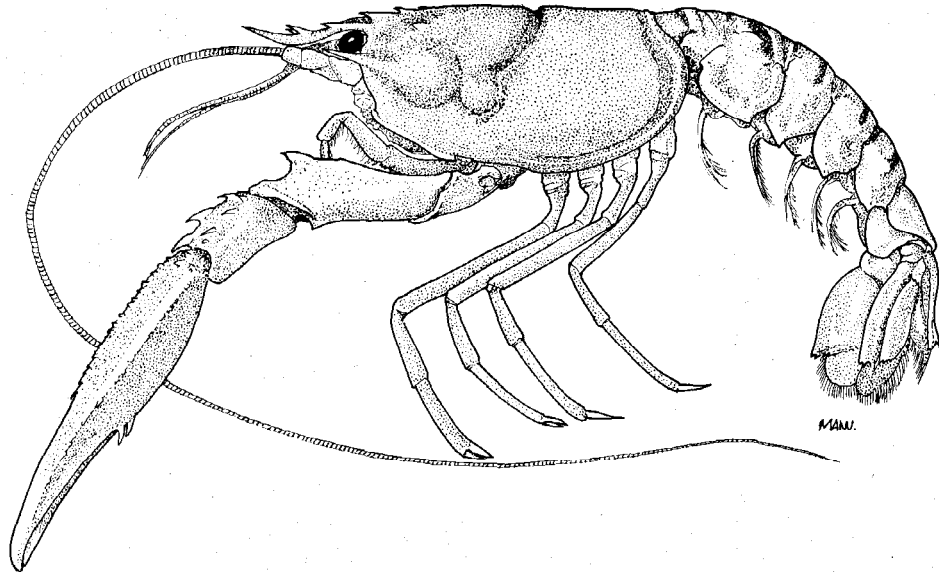
Eunephrops manningi Holthuis, 1974

Fig. 102

NEPH Euneph 3

Eunephrops manningi Holthuis, 1974, Bulletin Marine Science, University of Miami, 24(4):854, figs 33-35.

FAO Names : En - Banded lobster.



Type : **Type locality:** "Florida Straits, 550 m, Silver Bay stat. 2483" [= 26°25.5'N 79°01'W]. Male holotype in USNM no. 139626; paratypes in USNM, RMNH.

Geographical Distribution : Western Atlantic: Florida Straits and northwest of Anguilla (Fig. 103).

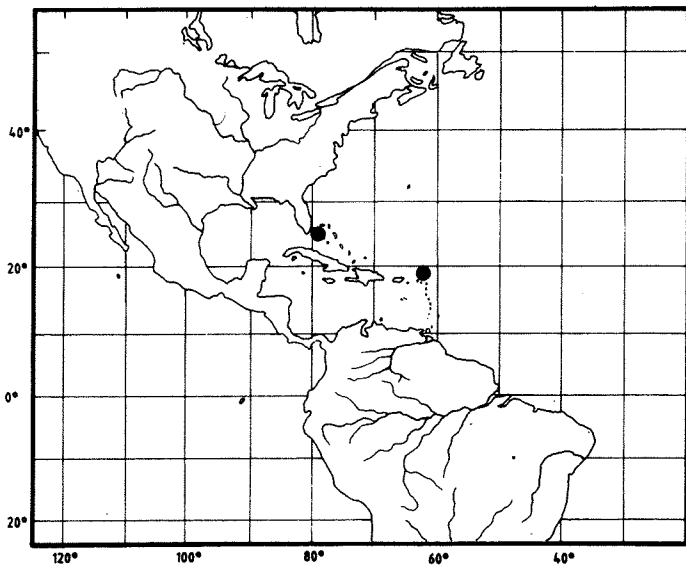
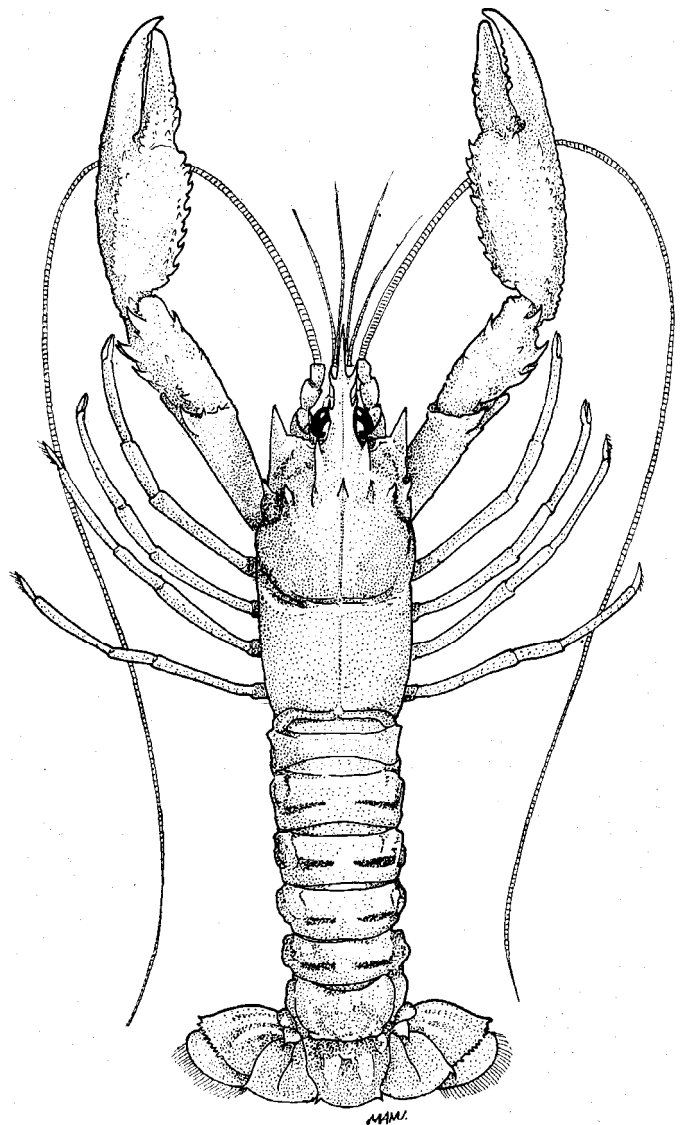


Fig. 103



(after Holthuis, 1974)

Fig. 102

Habitat and Biology : Depth range between (393-) 451 and 550 m Substrate: mud.

Size : Maximum total body length about 15 cm, carapace length 4 to 7 cm.

Interest to Fisheries : Since so far only three specimens of this species are known, nothing concrete can be said about its fisheries potential. Its size is attractive, but the depth range and low abundance are negative factors.

Literature : Original description.

Homarus Weber, 1795, Nomenclator entomologicus: 94. Gender masculine. Name placed on the Official List of generic Names in Zoology, in Opinion 104 (published in 1928).

Type Species: selected by Fowler, 1912, Annual Report New Jersey State Museum, 1911:333: **Astacus marinus** Fabricius, 1775 (= **Cancer gammarus** Linnaeus, 1758).

Synonyms: **Homarus** Guérin Méneville, 1825, Encyclopédie méthodique. Histoire naturelle. Insectes, 10:768. Type species by original designation and monotypy: **Cancer gammarus** Linnaeus, 1758. Gender masculine.

Homarus H. Milne Edwards, 1837, Histoire naturelle des Crustacés, 2:333. Type species, selected by E. Desmarest, 1858, in Chenu, Encyclopédie Histoire naturelle (Crustacés. Mollusges. Zoophytes):38: **Homarus vulgaris** H. Milne Edwards, 1837. Gender masculine.

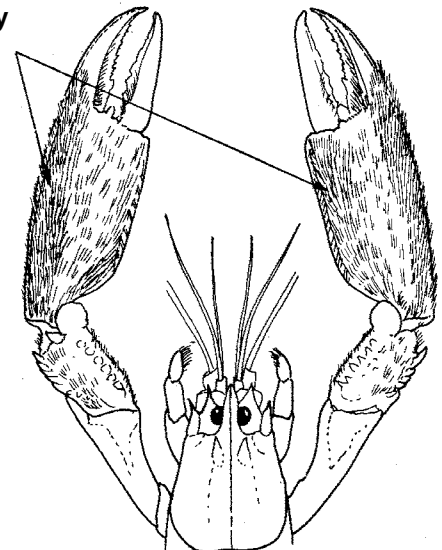
The name **Homarus** has been independently chosen for this genus by three different authors. Notwithstanding the fact that these three homonyms all have different nominal species as their types, they still are objectively synonymous, as these three different nominal species are objectively synonymous themselves.

The genus **Homarus** has three species, two of which belong to the economically most important lobsters in the world. The importance of the genus is well expressed by Herrick (1895:6), who in his monograph "The American Lobster" stated that the lobster "may be rightfully called the King of the Crustacea".

Key to Species :

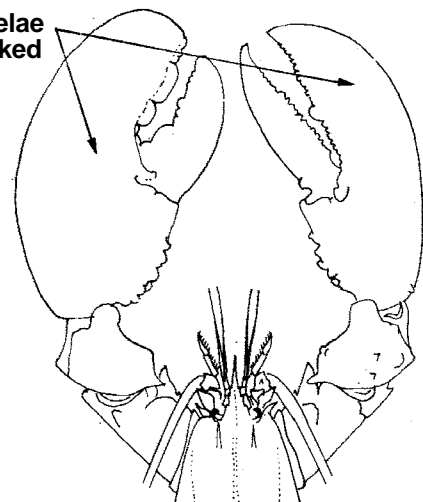
- 1a.** Palm of first chelipeds covered with hairs, especially near the lower margin (Fig. 104a). Small species, attaining a total body length of 10 cm. Found only off South Africa south of 30°S **H. capensis** (Fig. 108)
- 1b.** Palm of first chelipeds naked, without hair cover (Fig. 104b). Large species, attaining lengths of 40 to 65 cm. Found in the northern Atlantic, north of 30°N
- 2a** Rostrum without ventral teeth (Fig. 105a). Found in the eastern Atlantic (Norway to Morocco) **H. gammarus** (Fig. 110)
- 2b.** Rostrum as a rule with one or more ventral teeth (Fig. 105b). Found in the western Atlantic (Newfoundland, Canada to North Carolina, USA) **H. americanus** (Fig. 106)

chelae
hairy

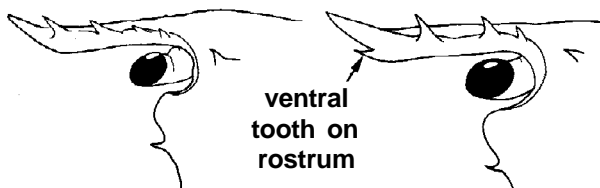


a. *H. capensis*

chelae
naked



b. *H. americanus*



a. *H. gammarus*

b. *H. americanus*

front of carapace (lateral view)

Fig. 105

front part

Fig. 104

Homarus americanus H. Milne Edwards, 1837

Homarus americanus H. Milne Edwards, 1837, *Histoire naturelle des Crustacés*, 2:334.

Synonyms : *Astacus marinus* Say, 1817 (non Fabricius, 1775); *Astacos americanus* - Stebbing, 1893; *Homarus mainensis* Berrill, 1956.

FAO Names : En - American lobster; Fr - Homard américain; Sp - Bogavante americano.

Type : Type locality of *A. marinus* Say and *H. americanus* H. Milne Edwards: "Long-branch, part of the coast of New Jersey" (Say, 1817: 166), USA. Lectotype, if extant, in ANSP (not located in 1989); paratype(s) in MP.

Type locality of *H. mainensis*: "Maine waters". No types indicated.

Geographical Distribution : Western Atlantic: Atlantic coast of North America between Newfoundland (Canada) and North Carolina (USA) (Fig. 107).

Habitat and Biology : Sublittoral to 480 m depth, most common between 4 and 50 m. Hard bottom (hard mud, rocks). As the females carry their eggs for 10 to 11 months, ovigerous females are found throughout the year. Migration does not occur, or only on a limited scale.

Size : Maximum total body length 64 cm, usually around 25 cm or less. This probably is, with *Jasus verreauxi*, the largest known Decapod species as far as body length is concerned.

Interest to Fisheries : The species is the subject of one of the most important Crustacea fisheries in the northwest Atlantic. According to FAO statistics, the catches in 1987 and 1988 amounted to 60 096 and 62 457 tons, respectively. The animals are mostly caught with traps, but in recent years trawling proved to be commercially feasible, especially in the southern part of the range of the species. These lobsters are sold fresh or frozen. The meat is also canned.

Local Names : CANADA: Lobster (English), Homard (French); USA : American lobster, Maine lobster, Northern lobster

Literature : Herrick, 1895; Herrick, 1911; Fischer (ed.), 1978:vol. 6; Williams, 1984: 168, fig.119; Squires, 1990:326, figs 172-174.

Fig. 106

NEPH Hom 2

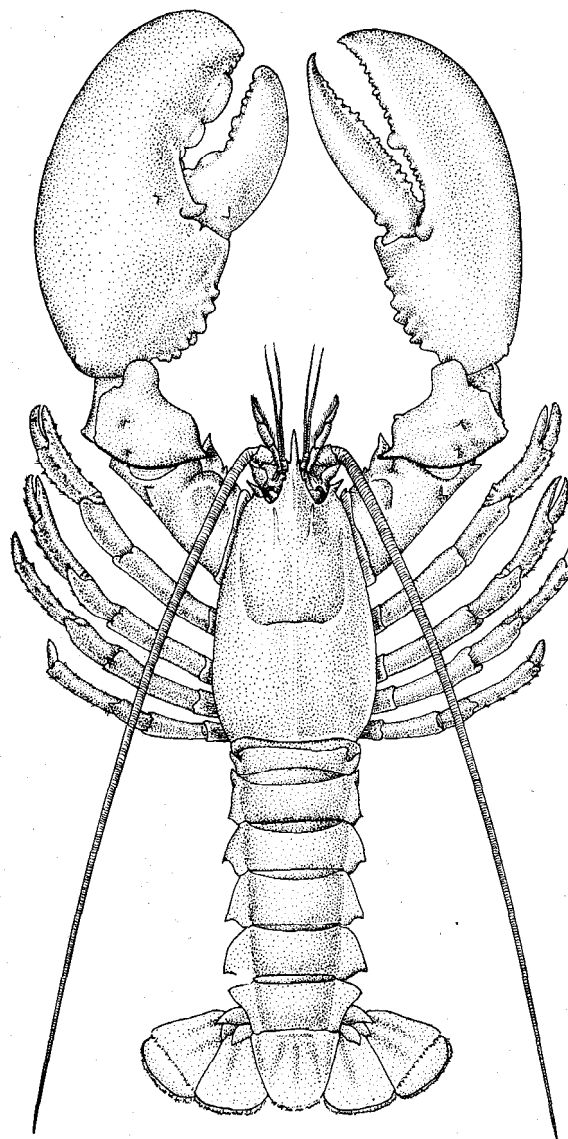


Fig. 106

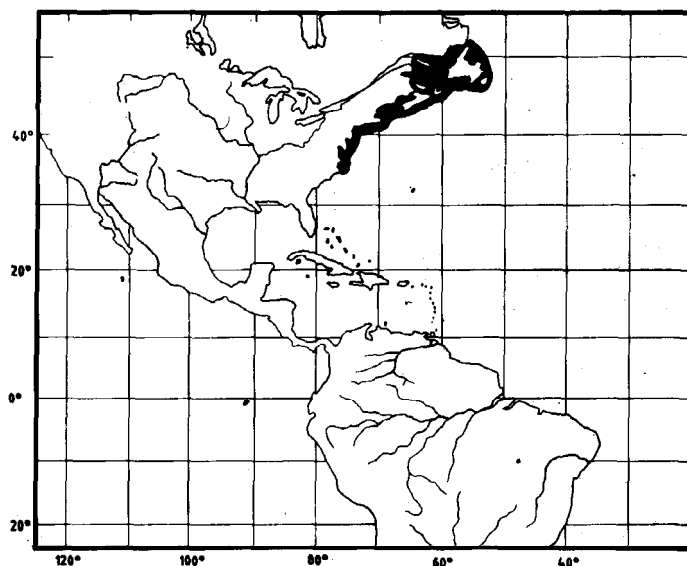


Fig. 107

Homarus capensis (Herbst, 1792)

Fig. 108

NEPH Hom 3

Cancer (Astacus) capensis Herbst, 1792, *Versuch einer Naturgeschichte der Krabben und Krebse*, 2:49, pl. 26 fig. 1.

Synonyms : **Astacus fulvus** Fabricius, 1793; **Homarus fulvus** - Weber, 1795; **Astacus capensis** - Latreille, 1802; **Cancer (Astacus) fulvus** - Turton, 1806.

FAO Names : **En** - Cape lobster; **Fr** - Homard du Cap; **Sp** - Bogavante del Cabo.

Type : Type locality of **Cancer capensis**: "aus dem Kap." (= Cape of Good Hope, South Africa). Holotype in collection L. Spengler, Copenhagen; present whereabouts unknown, but the possibility exists that the specimen is identical with the holotype of **Astacus fulvus** Fabr. (see next paragraph).

Type locality of **Astacus fulvus**: "in Oceano". Holotype (possibly also holotype of **Cancer capensis** Herbst) in UZM.

Geographical Distribution : South Africa, from Table Bay to East London, 33°55'S-33°06'S 18°22'E-27°49'E (Fig. 109).

Habitat and Biology : Shallow coastal waters, rock pools, etc. The extreme rarity of the species is the cause that very little is known about its habitat and biology. Old records, reporting that it is found in fresh water, are definitely incorrect.

Size : Total body length 8 to 10 cm; carapace length 4 to 5 cm.

Interest to Fisheries : None. The species is extremely rare. Although it lives in shallow water and in a well explored region of the globe (the marine fauna of South Africa is better known than that of any other African country), and although it is almost 200 years since it was first described, so far only 14 specimens (13 males and 1 female) are known to exist in collections. Gilchrist (1918:46) remarked that the species "is not even known to Cape fishermen".

Literature : Holthuis, 1986:243, fig. 1

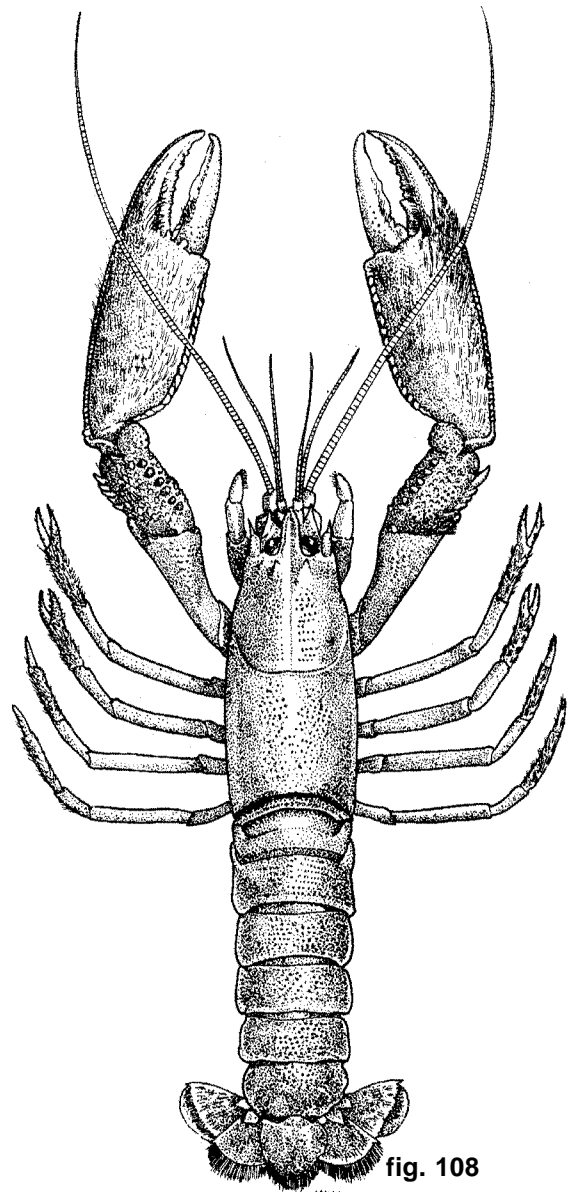


fig. 108

(after H Milne Edwards, 1851)

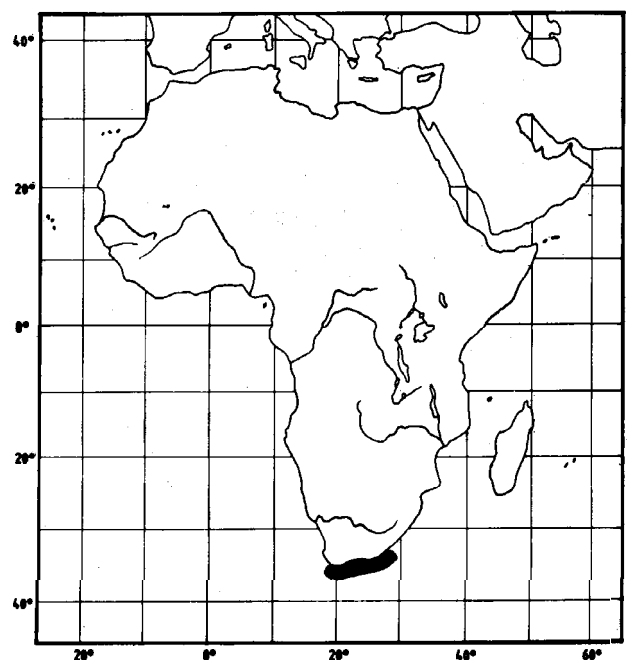


fig. 109

Homarus gammarus (Linnaeus, 1758)

Fig. 110

NEPH Hom 1

Cancer gammarus Linnaeus, 1758, *Systema Naturae*, (ed.10) 1:631. Name placed on Official List of Specific Names in Zoology in Direction 51 (published in 1956).

Synonyms : **Astacus marinus** Fabricius, 1775; **Astacus gammarus** - Pennant, 1777; **Homarus marinus** - Weber, 1795; **Astacus europaeus** Couch, 1837; **Homarus vulgaris** H. Milne Edwards, 1837.

FAO Names : **En** - European lobster; **Fr** - Homard européen; **Sp** - Bogavante.

Type : Type locality of **Cancer gammarus**, **Astacus marinus**, **Astacus europaeus** and **Homarus vulgaris**: Marstrand, west coast of Sweden, about 57°53'N 1°32'E. Lectotype selected by Holthuis (1974:820); lectotype and paralectotypes now lost.

Geographical Distribution : Eastern Atlantic from north-western Norway (Lofoten Islands) south to the Azores and the Atlantic coast of Morocco. Also along the northwest coast of the Black Sea. and in the Mediterranean (but lacking in the extreme eastern part, east of Crete). Not present in the Baltic Sea (Fig. 111).

Habitat and Biology : Continental shelf between 0 and 150 m depth; usually not deeper than 50 m. Found on hard substrates: rock or hard mud. The animals are nocturnal and territorial, living in holes or crevices. Females with eggs are found almost throughout the year. The eggs are laid around July and carried for 10 or 11 months.

Size : Maximum total body length about 60 cm (weight 5 or 6 kg), large size specimens usually 23 to 50 cm.

Interest to Fisheries : The European lobster is a highly esteemed food source and is fished throughout its range, fetching very high prices. It is mostly taken with lobster pots, although it occasionally turns up in trammel nets and dredges. Bait (usually pieces of octopus or cuttle fish) tied to lines can tempt them out of their burrows, after which they are caught by hand or with nets. In some areas captured specimens are kept alive in enclosures. The species is sold fresh, frozen or either canned or in powdered form. According to FAO statistics the annual catch of the species was 2 124 tons in 1987 and 2 052 tons in 1988 from the northeastern Atlantic (Fishing Area 27). Experiments in aquaculture of the species are underway in France and Spain.

Local Names : DENMARK: Hummer; FRANCE: Homard; GERMANY: Europäischer Hummer; GREECE: Astakós; ITALY: Astice (official name), Elefante di mare, Lupicante, Lupo di mare; MALTA: Liunfant; MONACO: Leguban; MOROCCO: Taroucht (Chleuh language); NETHERLANDS: Zeekreef-t; NORWAY: Hummer; PORTUGAL: Lavagante, Labugante, Navegante; SPAIN: Bogavante (official name), Abricanto, Homar, Llangant, Lubricante; SWEDEN: Hummer; TUNISIA: Saratan il bahr; TURKEY: Istakoz, Stacoz; U.K.: Common lobster, Lobster; USSR: Omar; YUGOSLAVIA: Hlap.

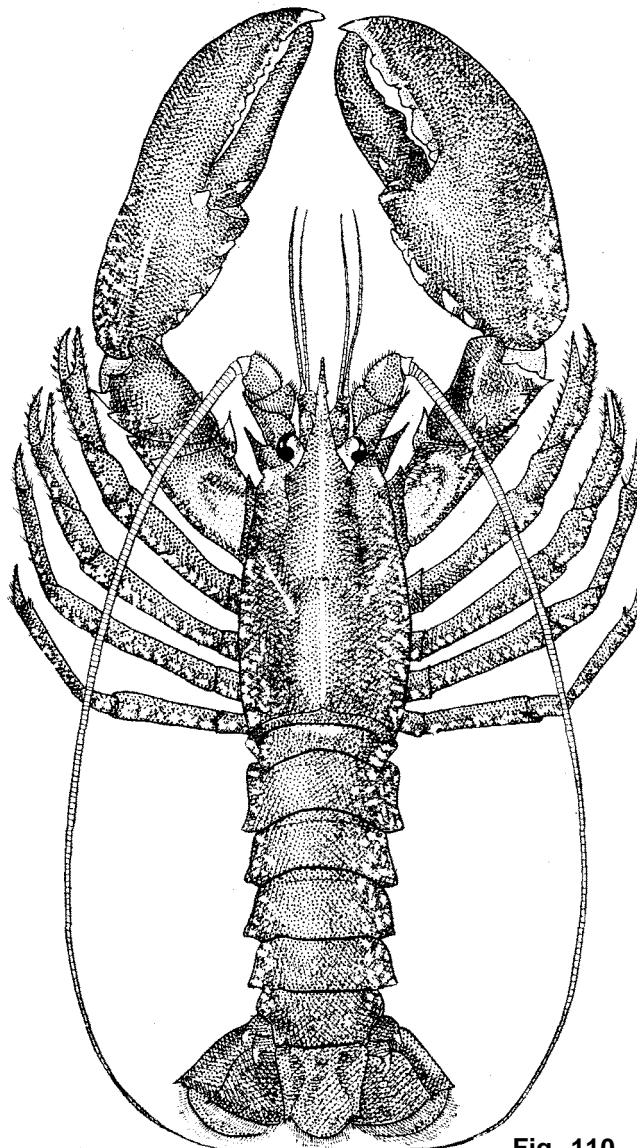


Fig. 110

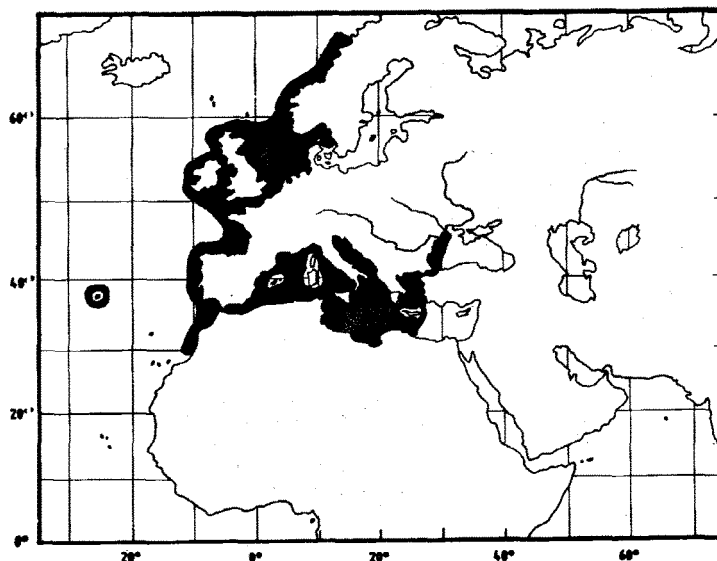


Fig. 111