

lots (4 specimens) labelled *N. intermedius* and which form part of the Doflein collection; one of these specimens could be identified as the specimen figured by Balss (1914). All four specimens thus are syntypes of *N. intermedius* and the figured specimen is now selected as the lectotype of that species. In addition the Munich Museum holds five lots of *Metanephrops japonicus*, all labelled *Nephrops japonicus* and all from Sagami Bay. Three of those lots (5 specimens) definitely form part of the material dealt with by Balss (1914), as one of them was collected in 1904 by Doflein and two others were collected in 1903 (one by K.A. Haberer, of the other the collector is not indicated but this could well be Haberer also). The two remaining lots only carry the indications "Sagamibai, Japan", but may well have belonged to Balss' (1914) material. Finally there is one lot of *Metanephrops japonicus* collected in Sagami Bay by Doflein, and thus certainly part of the 1914 material; however, this lot (1 specimen) bears in Balss' handwriting the incorrect label "*Nephrops sagamiensis* Parisi" it is not clear whether or not this is a syntype of *Nephrops intermedius*, most likely it is not. If it were, however, then the type series of *Nephrops intermedius* would consist of two species and a lectotype selection is required.

Parisi (1917), when describing his new *N. sagamiensis* included in it all of Balss' (1914) *Nephrops japonicus* material; therefore all of Balss' specimens, both those of *N. intermedius* and those of *N. japonicus* are syntypes of *N. sagamiensis* as are also the two specimens before Parisi. The type material of *N. sagamiensis* thus is definitely heterogeneous and a lectotype should be chosen. The lectotype of *N. intermedius* is here chosen to be also the lectotype of *N. sagamiensis*; this action now definitely establishes the identity of the two species, at the same time making their names objectively synonymous.

***Metanephrops sibogae* (De Man, 1916)**

Nephrops sibogae De Man, 1916, *Siboga Expedition monograph*, 39(a2): 102, pl. 4 fig. 18.

FAO Names : En - Siboga lobster

Type : Type locality: Near the Kai Islands, Indonesia, "5°40'S., 132°26'E., 310 m. Bottom fine, grey mud". Syntypes (5 males, 4 females) in ZMA, no. De 104.197, condition fair.

Geographical Distribution : Indo-West Pacific region: Indonesia (type locality only) and Australia (Coral Sea north east of Cape York, and north west of Melville Island, Western Australia) (Fig. 155).

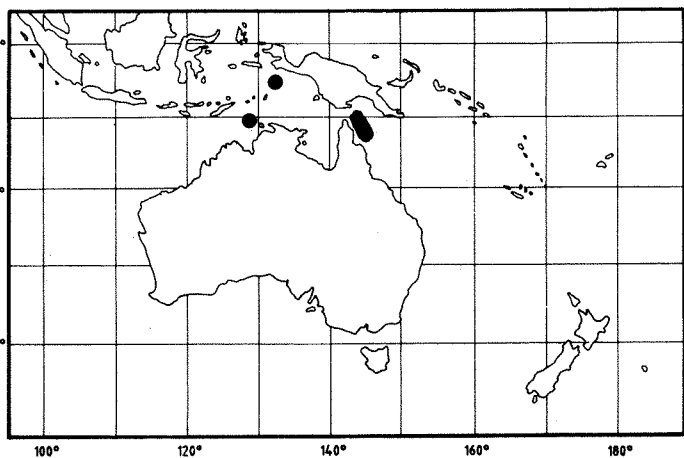


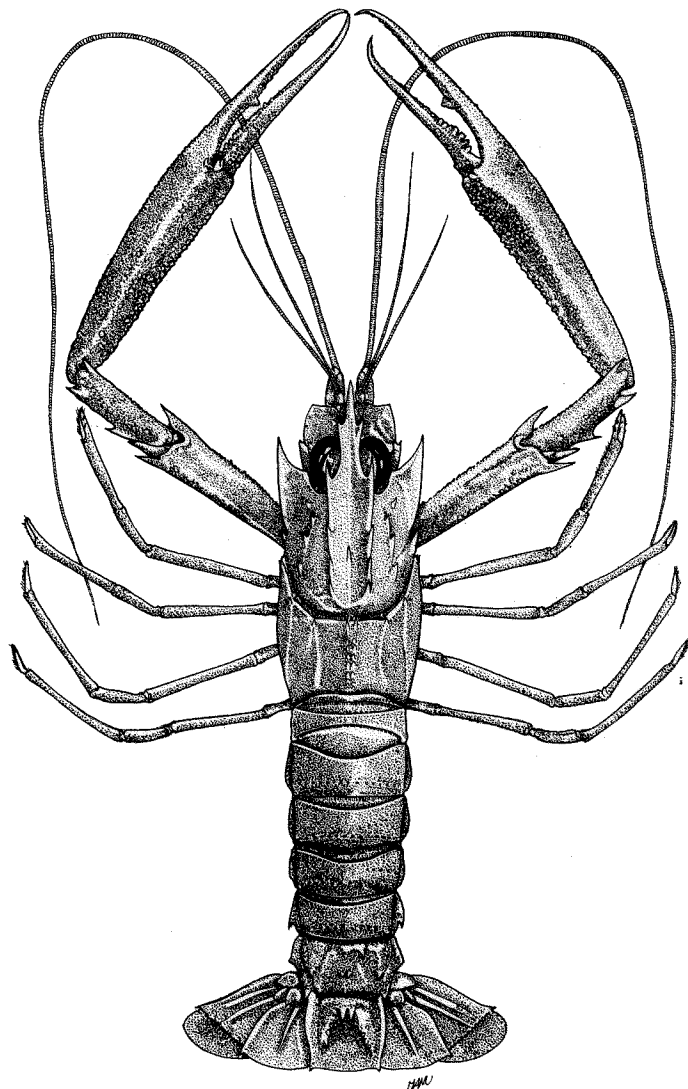
Fig. 155

Habitat and Biology : Depth range from about 300 to 310 m; bottom: soft sediments, like fine grey mud. Ovigerous females found in December.

Size : Total body length 11.5 to 18 cm; ovigerous females 13 and 13.5 cm.

Fig. 154

NEPH Metan 12



(after De Man, 1916)

Fig. 154

Interest to Fisheries : Potential. The size of the specimens, the fact that they are not solitary (the type haul contained 9 specimens) and that they live on trawlable bottoms, makes them of potential interest for commercial fisheries. But too little is known about the habits and actual habitat of the species.

Local Names : AUSTRALIA: Siboga's scampi.

Literature : Original description.

Metanephrops sinensis (Bruce, 1966)

Nephrops sinensis Bruce, 1966, *Crustaceana*, 10: 155, pls 10-12.

FAO Names : En - China lobster.

Type : Type locality: South China Sea, "Cape St. Mary" Sta. 63, Trawl 54, 15°53.0'N 109°26.0'E to 15°53.7'N 109°25.3'E (approx.)... depth 155 fms [=283.5 m] (and deeper)". Holotype female in BM, no. 1964.9.28.2; allotype in BM, no. 1964.9.28.3 (both in alcohol, condition good); paratypes in RMNH, ZSI, and Fisheries Research Station Hong Kong.

Geographical Distribution : Indo-West Pacific region. Only known from the four localities in the South China Sea mentioned in the original description, all situated between 15°53'N-16°00'N and 109°25.3'E 109°33'E (Fig. 157).

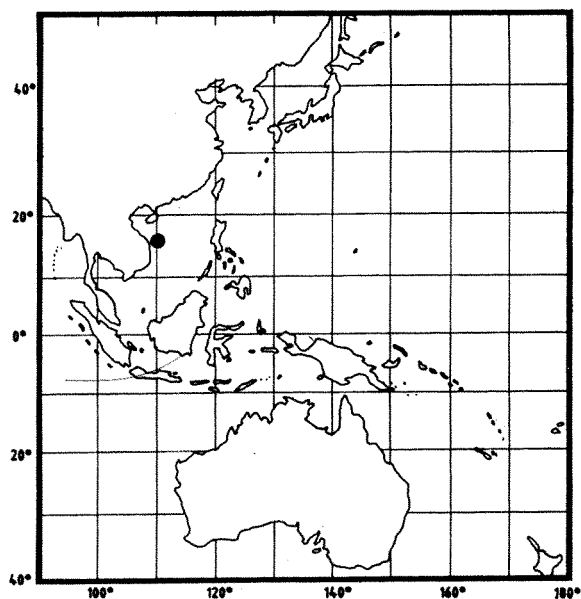
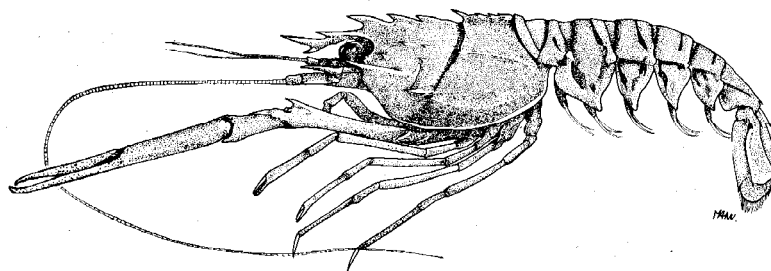


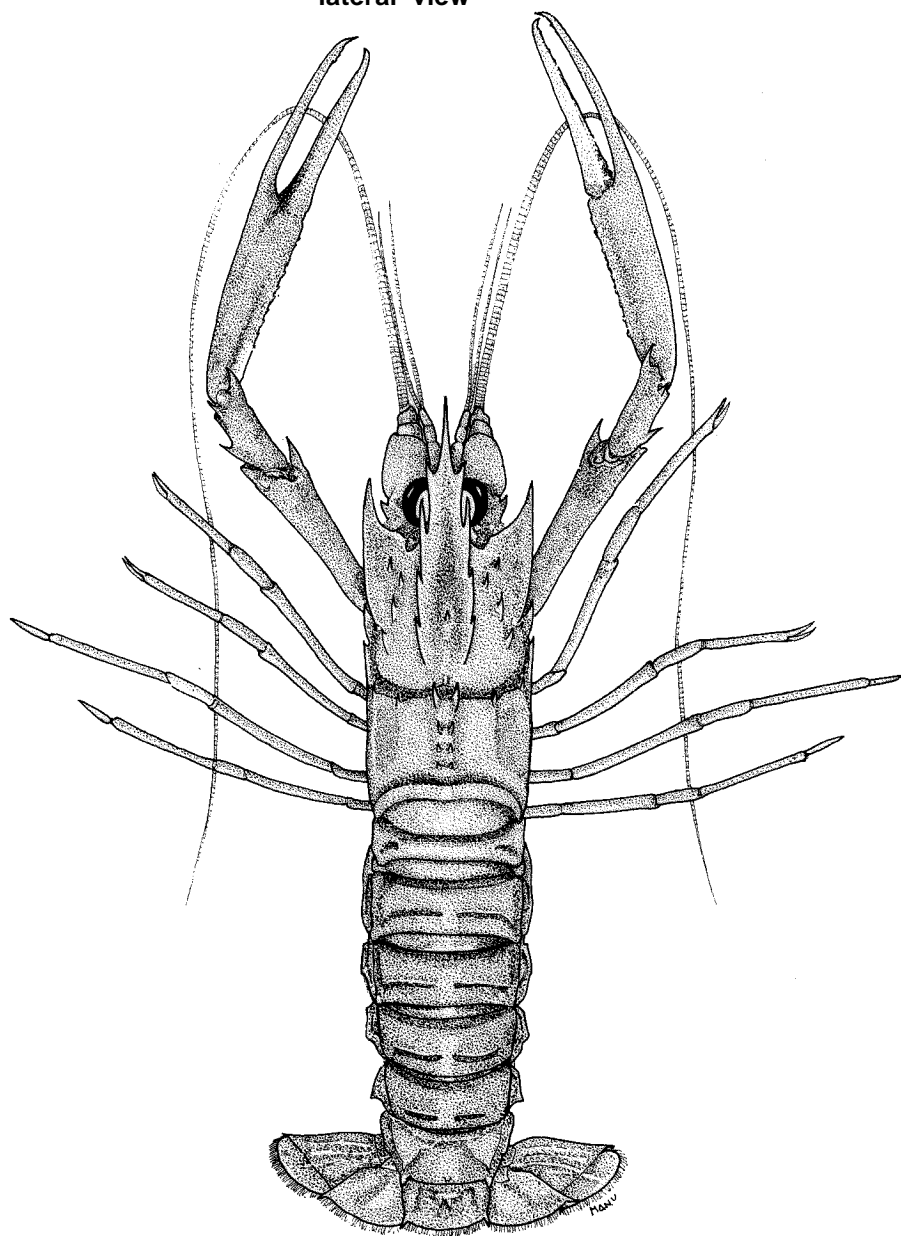
Fig. 157

Fig. 156

NEPH Metan 13



lateral view



dorsal view

(after Bruce, 1966)

Fig. 156

Habitat and Biology : Depth range from (205-) 260 to 373 (-390) m. Bottom: mud, sometimes with shells. Ovigerous females were obtained in September.

Size : Total body length 6 to 15 cm.

Interest to Fisheries : One of the type lots was obtained with a commercial Granton trawl and consists of no less than 137 specimens (including 47 ovigerous females). Two other lots (also taken with a Granton trawl) contained 4 and 11 specimens, and the fourth (with Agassiz trawl) 5 specimens. The size of the specimens, their gregariousness and the configuration of the substrates where they are found, indicate that the species may be of commercial interest.

Literature : Original description

***Metanephrops thomsoni* (Bate, 1888)**

Nephrops thomsoni Bate, 1888, Report Voyage Challenger. Zool., 24: 185, pl. 25 fig. 1, pl. 26 figs. 1-9.

FAO Names : En - Red-banded lobster.

Type : Type locality: "Challenger" "Station 204A, .. lat. 12°43'N., long. 122°9'E.; between Zamboanga [= Zamboanga] and Manila; depth, 100 fathoms [= 182 m]; bottom, green mud". Male lectotype in BM, no. 88.22 (in alcohol, condition good).

Geographical Distribution : Indo-West Pacific region: Korea (Korea Strait), China (Yellow Sea, East China Sea, South China Sea), Japan (from Tosa Bay on the east coast of Shikoku Island, and the west coast of Kyushu south to the Ryukyu Islands), Taiwan, and the Philippines (off Tablas) (Fig. 159).

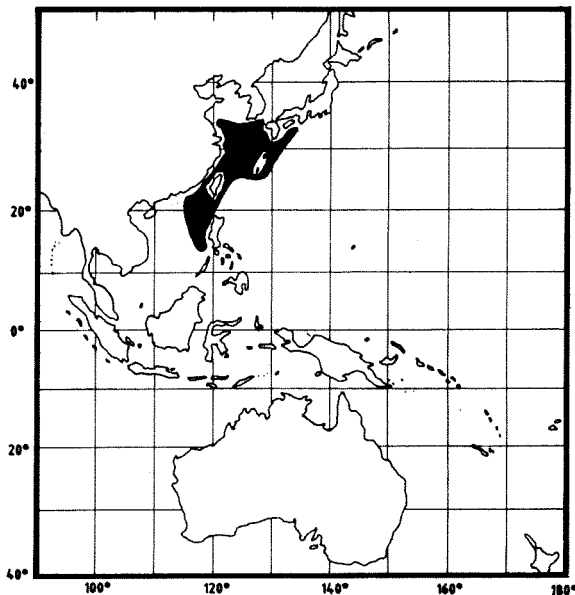


Fig. 159

Fig.158

NEPH Metan 14

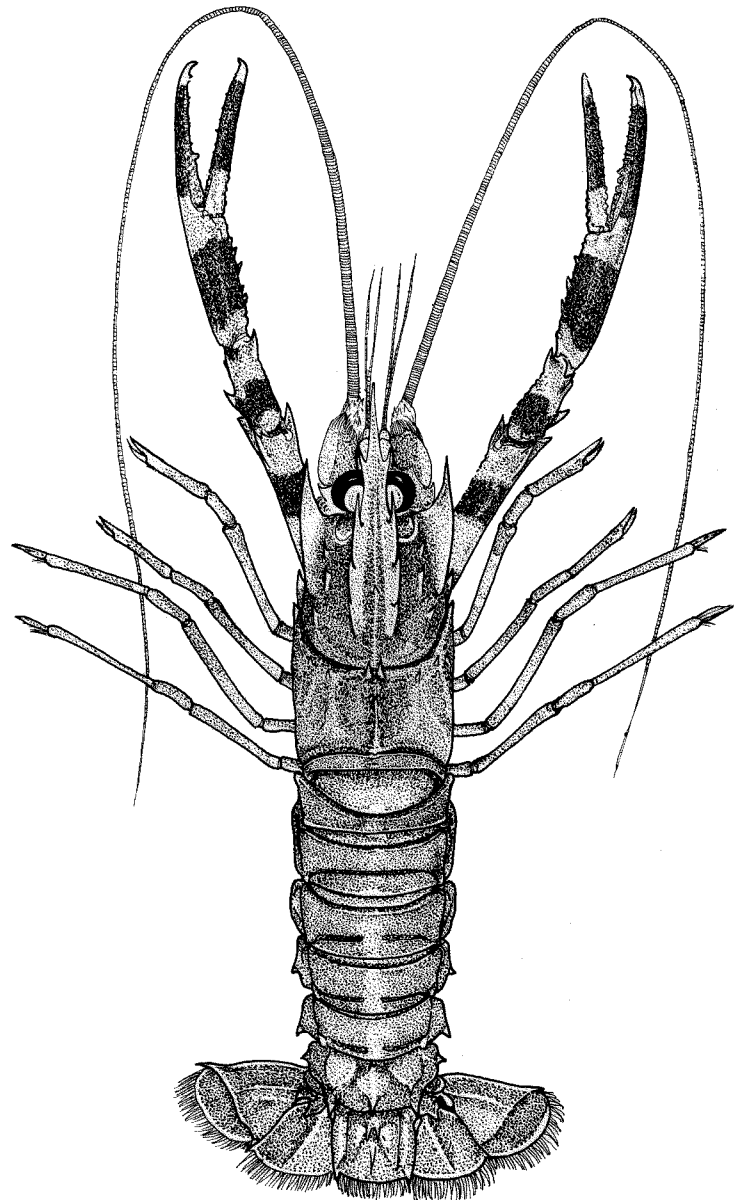


Fig. 158

Habitat and Biology : Depth range from 50 to 500 m, on sandy mud bottom. Ovigerous females are generally caught in the East China Sea from the middle of September to the middle of April. The larval development has been described by Uchida & Dotsu (1973:23-35).

Size : Maximum total body length about 15 cm, usually not more than 12 cm.

Interest to Fisheries : In Korea the species is offered for sale at the Busan markets. According to Uchida & Dotsu (1973:23) the species "is usually caught in the East China Sea by trawl net fishing and used as food". In Taiwan the species is sold in markets, and its price is higher than that of *M. formosanus*, which is found in greater quantities (Chan & Yu, 1987:183); it is sold there throughout the year, but is "not valuable" (Chang, 1965:48). Motoh, Dimaano & Pution (1978:22) mention that "a kind of red shrimp (probably *Nephrops thomsoni*)" is caught by a bobo ("a kind of baited trap") "at deeper water exceeding to 40 m", in Mindanao, Philippines.

Local Names : JAPAN: Minami akaza-ebi ; CHINA (Province of Taiwan): Te-Chia Shia (also used for other species of the genus).

Literature : Baba et al.. 1986:280.

***Metanephrops velutinus* Chan & Yu, 1991**

Fig. 160

NEPH Metan 17

Metanephrops velutinus Chan & Yu, 1991, *Crustaceana*, 60(1):35, pls 2b,4b, 6c, 8a,c,d.

FAO Names : En - Velvet lobster.

Type : Type locality: "Philippines, 13°51'N 120°30'E, 300-330 m". Male holotype, NTOU no. PM 1. Paratypes MP, RMNH, USNM, WAM.

Geographical Distribution : Indo-West Pacific region: Philippines (south-west of Luton), Western Australia (Cape Leveque to Eucla) (Fig. 161)

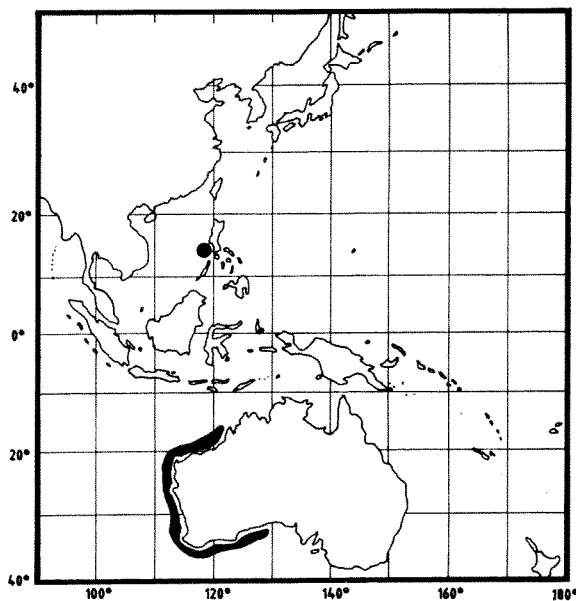
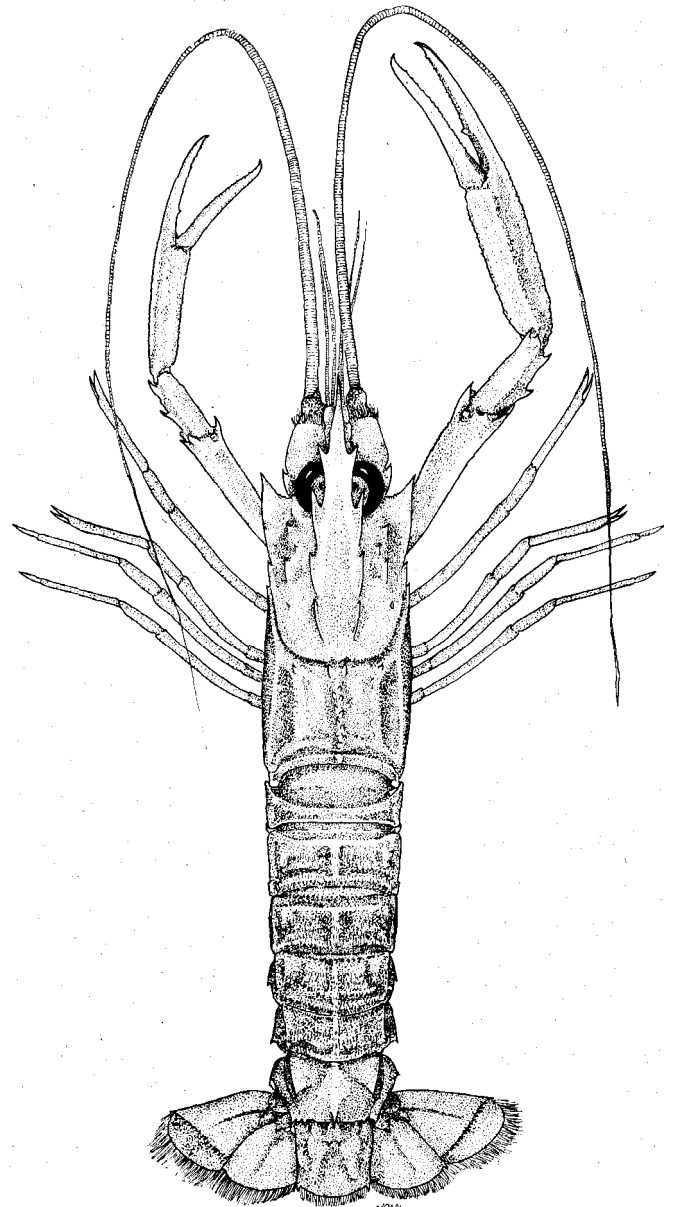


Fig. 161



(after Chan & Yu, 1991)

Fig. 160

Habitat and Biology : Depth range 238 to 702 m, most common at 350 to 450 m. Substrate hard mud.

Size : Carapace length: 3-8.6 cm (males), 2-7.4 cm (females), 4.7-8.2 cm (ovigerous females).

Interest to Fisheries : "*M. velutinus*, which appears slightly larger than *M. armatus*, is fished commercially on the North West Shelf of Australia since 1985 (Wallner & Phillips, 1988, under the name of *M. andamanicus*). Its price is higher than that of the spiny lobsters in Australia and many are used for export; however, the demand of the local markets has greatly increased recently (Bremner, 1985; Ward, Phillips pers.comm.). However, probably due to the low recovery rate of this lobster and the fact that the fishing gear is more selective for ovigerous females, the catch of the species has fallen significantly in the last few years (Wallner & Phillips, 1988)" (Chan & Yu, 1991:38).

Literature : Chan & Yu, 1991:35, pls 2b, 4b, 6c, 8a,c,d.

Remarks : Until 1991 specimens of this species were, often with some doubt, identified as *M. andamanicus*.

Nephrops Leach, 1814

NEPH Neph

Nephrops Leach, 1814, Brewster's Edinburgh Encyclopaedia, 7:398, 400. Gender masculine. Name placed on the Official List of Generic Names in Zoology in Opinion 104 (published in 1928).

Type Species : by monotypy: ***Cancer norvegicus*** Linnaeus, 1758.

Although previously several Indo-West Pacific and tropical West Atlantic species have been assigned to this genus, at present it contains a single north east Atlantic species only. All other species are now placed in the genus ***Metanephrops***.

The single true ***Nephrops*** species, ***N. norvegicus***, is of considerable economic interest.

Nephrops norvegicus (Linnaeus, 1758)

fig. 162

NEPH Neph 1

Cancer norvegicus Linnaeus, 1758, Systema Naturae, (ed. 10)1:632. Name placed on the Official List of Specific Names in Zoology, in Direction 36 (published in 1956).

Synonyms : ***Astacus norvegicus*** - Fabricius, 1775; ***Homarus norvegicus*** - Weber, 1795; ***Astacus rugosus*** Rafinesque, 1814; ***Nephropsis cornubiensis*** Bate & Rowe, 1880; ***Nephrops norvegicus meridionalis*** Zariquiey Cenarro, 1935.

FAO Names : **En** - Norway lobster; **Fr** - Langoustine; **Sp** - Cigala.

Type : Type locality for ***Cancer norvegicus***: "in Mari Norvegico", restricted by lectotype selection by Holthuis (1974:824) to Kullen Peninsula in southern Sweden, 56°18'N 12°28'E: Lectotype and paralectotypes lost.

Type locality for ***Astacus rugosus***: Sicily. Type no longer extant.

Type locality for ***Nephropsis cornubiensis***: "off the Dudman" [= Dodman Point, Cornwall, UK, 50°13'N 4°48'W]. Type specimen supposed to be deposited "in the museum of the Athenaeum at Plymouth", but probably no longer extant.

Type locality of ***Nephrops norvegicus meridionalis***: Spain (both the Atlantic coast:Huelva, San Sebastian and Coruña, and the Mediterranean coast: Rosas, Barcelona, Alicante; and Spanish Morocco: Melilla). Type material in Zariquiey collection of the Instituto de Investigaciones Pesqueras, (at present: Instituto de Ciencias del Mar), Barcelona.

Geographical Distribution : Eastern Atlantic region: from Iceland, the Faeroes and northwestern Norway (Lofoten Islands), south to the Atlantic coast of Morocco; western and central basin of the Mediterranean; absent from the eastern Mediterranean east of 25°E; also absent from the Baltic Sea, the Bosphorus and the Black Sea. A record from Egypt is doubtful (Fig. 163).

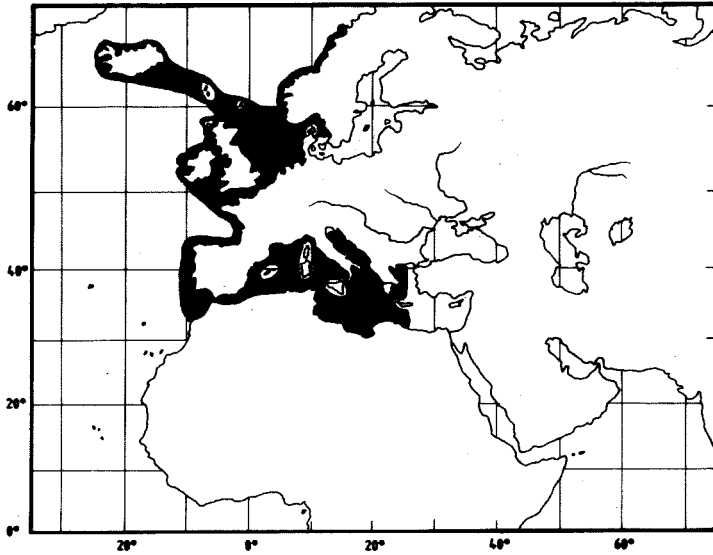


Fig. 163

Habitat and Biology : Depth range from 20 to 800 m; the species lives on muddy bottoms in which it digs its burrows. It is nocturnal and feeds on detritus, crustaceans and worms. Ovigerous females are found practically throughout the year, the eggs laid around July are carried for about 9 months.

Size : The total body length of adult animals varies between 8 and 24 cm, usually it is between 10 and 20 cm.

Interest to Fisheries : The species is of considerable commercial value and is fished for practically throughout its range. According to FAO statistics 59 767 tons were caught in 1987, 62 382 tons in 1988, mainly in the northeastern Atlantic (Fishing Area 27). The species is fished mostly in spring and summer. On the continental shelf, the fishery is most efficient in the very early morning, at twilight or on nights with full moon; on the continental slope, however, the fishery is most productive in daytime. It is caught mostly by trawling, more rarely with lobster pots. Sold fresh and frozen; also canned, either as plain peeled tails or prepared as "bisque de langoustines". Under the Italian name Scampi (plural of Scampo) it was sold all over Europe as a highly esteemed food; but soon the name Scampi became also used for large Penaeid shrimps.

Local Names : DENMARK: Bogstavhummer ; FRANCE: Langoustine, Cacadouete; GERMANY: Norwegischer Hummer, Buchstabenkrebs, Kaisergranat, Kaiserhummer; GREECE: Karavida; ICELAND: Letur humar; ITALY: Scampo, Scampolo; MONACO: Lengustina; MOROCCO: Azeffane, Langoustine; NETHERLANDS: Noorse kreeft; NORWAY: Bokstavhummer, Keiserhummer, Sjskreps; PORTUGAL: Lagostim; SPAIN: Cigala, Escamarlanc, Maganto; SWEDEN: Kejsarhummer, Havskrafta; TUNISIA: Jarradh el bahr; UK: Norway lobster, Dublin bay prawn, Dublin prawn; YUGOSLAVIA: Skamp.

Literature : Palombi & Santarelli, 1961:365-365 (local Italian names); Farmer, 1975; Fischer, Bianchi & Scott (eds), 1981:vol.5; Fischer, Bauchot & Schneider (eds), 1987:302.

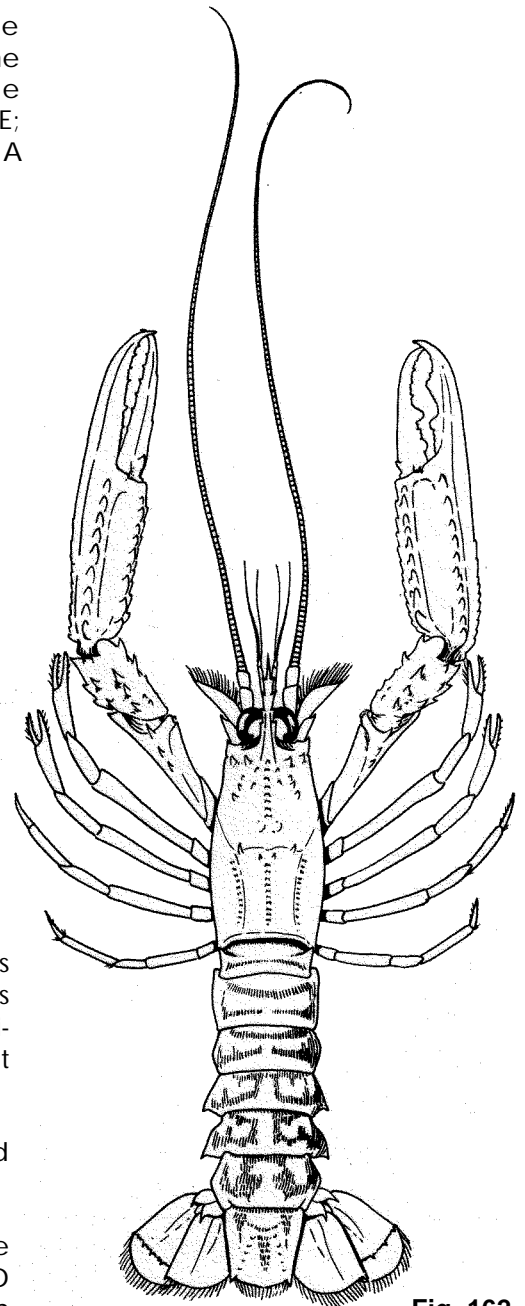


Fig. 162

Thymopides Burukovsky & Averin, 1977

NEPH Thy

Thymopides Burukovsky & Averin, 1977, *Crustaceana*, 32:216. Replacement name for ***Bellator*** Burukovsky & Averin, 1976 (non ***Bellator*** Jordan & Evermann, 1896). Gender masculine.

Type Species: by original designation and monotypy for ***Bellator*** Burukovsky & Averin: ***Bellator grobovi*** Burukovsky & Averin, 1976.

Synonyms : ***Bellator*** Burukovsky & Averin, 1976, *Zoologicheskii Zhurnal, Moscow*, 55:296. Type species, see under ***Thymopides***. Gender masculine.

So far only one species of this genus is known; it may be potentially of economic value.

Thymopides grobovi (Burukovsky & Averin, 1976)

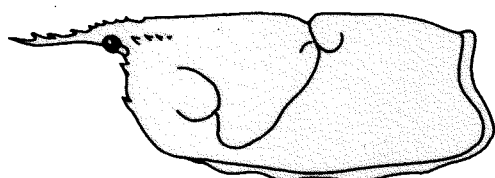
Fig.164

NEPH Thy 1

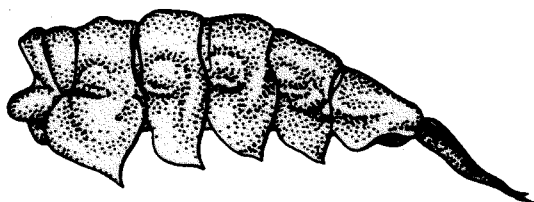
Bellator grobovi Burukovsky & Averin, 1976, *Zoologicheskii Zhurnal, Moscow*, 55:296, figs 1-4.

FAO Names : En - Bellator lobster.

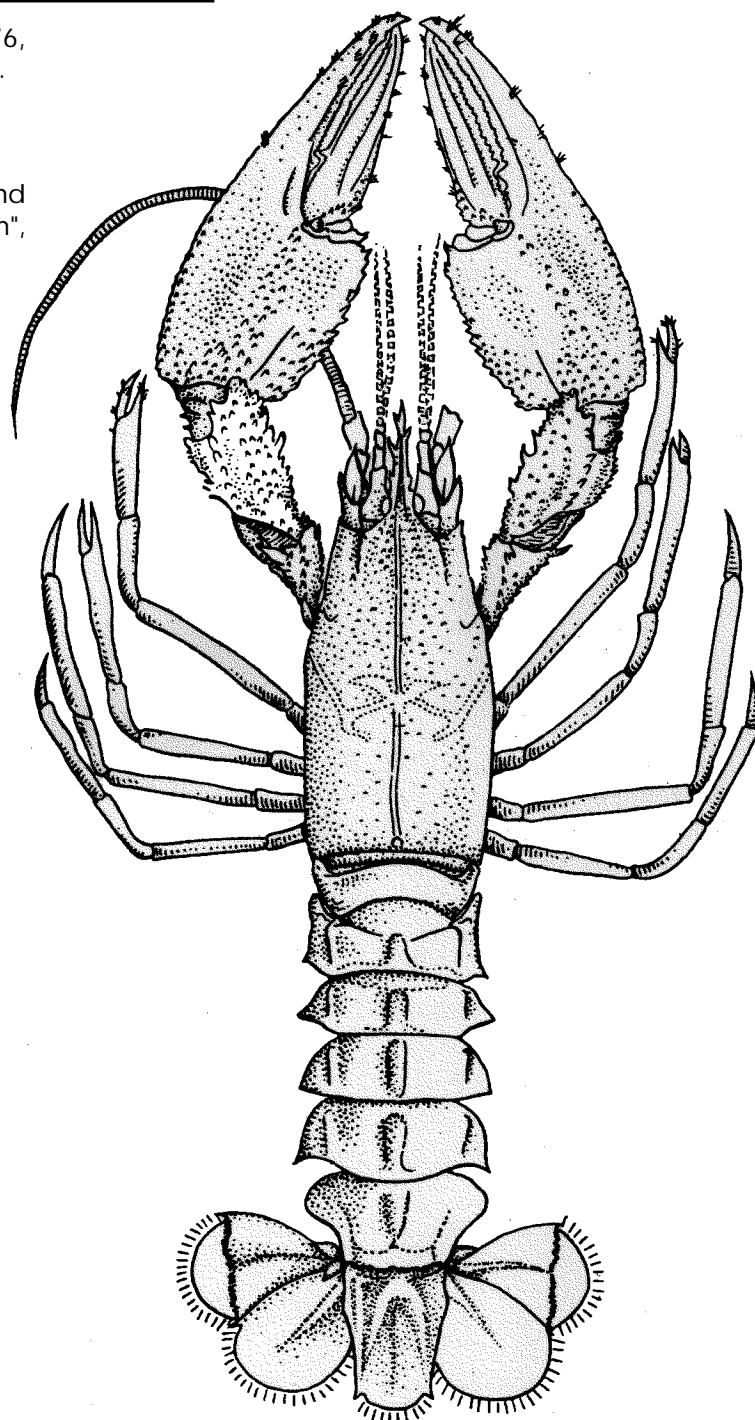
Type : Type locality: "in the Herd [= Heard] Island region [near Kerguelen] at a depth of 1,010 m", 51°30'S 69°37'E. Holotype male in ZISL.



**carapace
(lateral view)**
(after Ledoyer, 1979)



abdomen (lateral view)
(from Burukovsky & Averin, 1976)



dorsal View (from Burukovsky & Averin, 1976)

Fig. 164

Geographical Distribution : Southern Indian Ocean: area of Kerguelen Islands and Heard Island (47°-51.5°S 66°-75.5°E) (Fig. 165).

Habitat and Biology : Depth range from 560 to 1220 m, on muddy substrate.

Size : Total body length between 3 and 11 cm, mostly between 6 and 11 cm.

Interest to Fisheries : The size of the animals and the fact that they occur in relatively great numbers (see Ledoyer, 1979) suggest that the species might be of potential commercial value. So far, however, this possibility has not been tested experimentally.

Literature : Ledoyer, 1979: 123, figs 1,2.

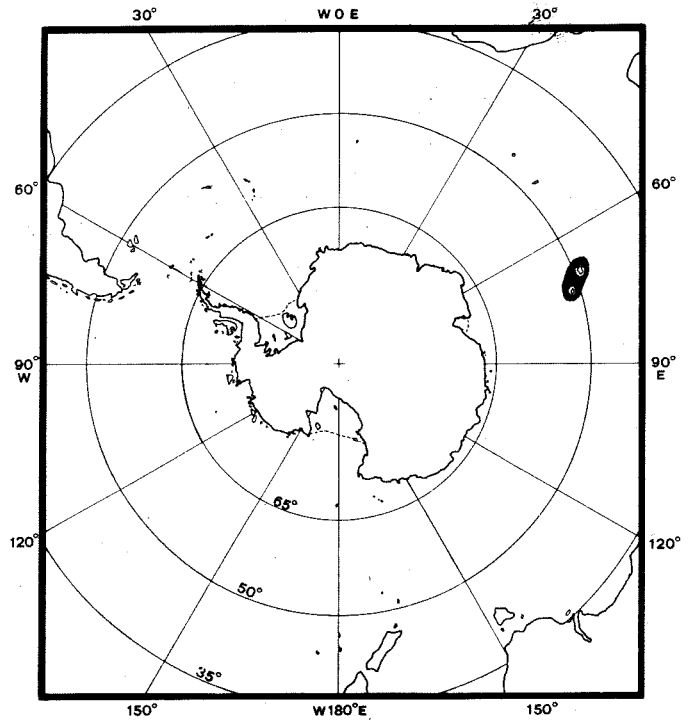


Fig. 165