

***Panulirus penicillatus*** (Olivier, 1791)

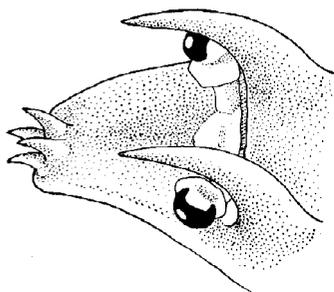
Fig. 285

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*Astacus penicillatus* Olivier, 1791, *Encyclopedie méthodique. Histoire naturelle. Insectes*, 6:343.

**Synonyms:** *Palinurus gigas* Lamarck, 1801; *Palinurus penicillatus* - Olivier, 1811; *Palinurus ehrenbergi* Helter, 1861; *Palinurus (Panulirus) ehrenbergi* - Heller, 1865; *Palinurus (Senex) penicillatus* - Pfeffer, 1881; *Cancer theresae* Curtiss, 1938.

**FAO Names :** En - Pronghorn spiny lobster; Fr - Langouste fourchette; Sp - Langosta horquilla.



antennular plate

**Type :** Type locality of *A. penicillatus* (and *P. gigas*, which is a replacement name for *A. penicillatus*): unknown ("Elle se trouve . . ."). Type material in Lamarck collection, in MP? In the Paris Museum there are 7 specimens of this species labelled "Mer des Indes", or without locality indication. One or more of these may belong to the type lot, but this cannot be made certain.

Type locality of *P. ehrenbergi*: "Coseir" (= Quseir, Red Sea coast of Egypt). Type in NMW.

Type locality of *Cancer theresae*: "At Tautira, in the barrier reef", Tahiti; whereabouts of type material unknown.

**Geographical Distribution :** Indo-West Pacific and Eastern Pacific regions: Red Sea, E. and S.E. Africa to Japan, Hawaii, Samoa and the Tuamotu Archipelago and further east to the islands off the west coast of America (Clipper-ton Island, Revillagigedo Archipelago, Cocos Island, Galapagos Archipelago) and in some localities near the continental coast of Mexico (Sinaloa, Nayarit and Guerrero) (Fig. 286).

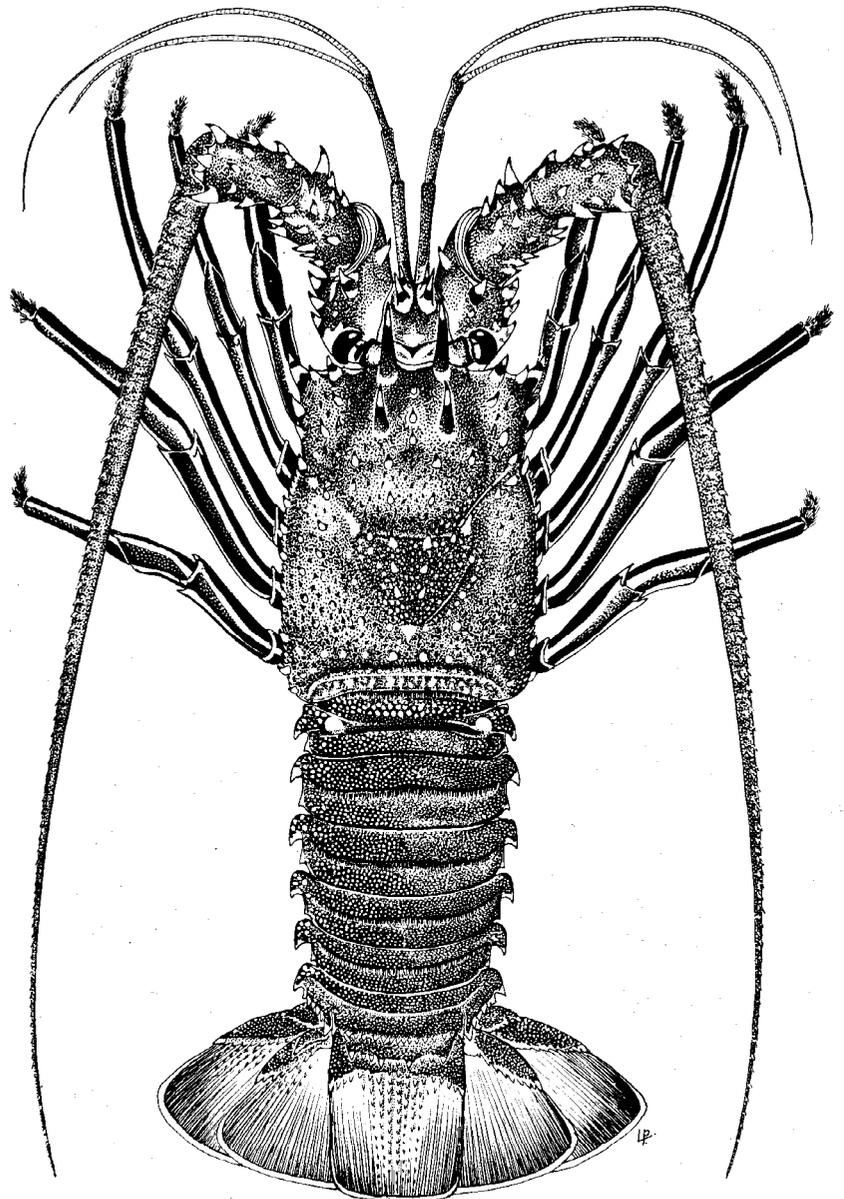


Fig. 285

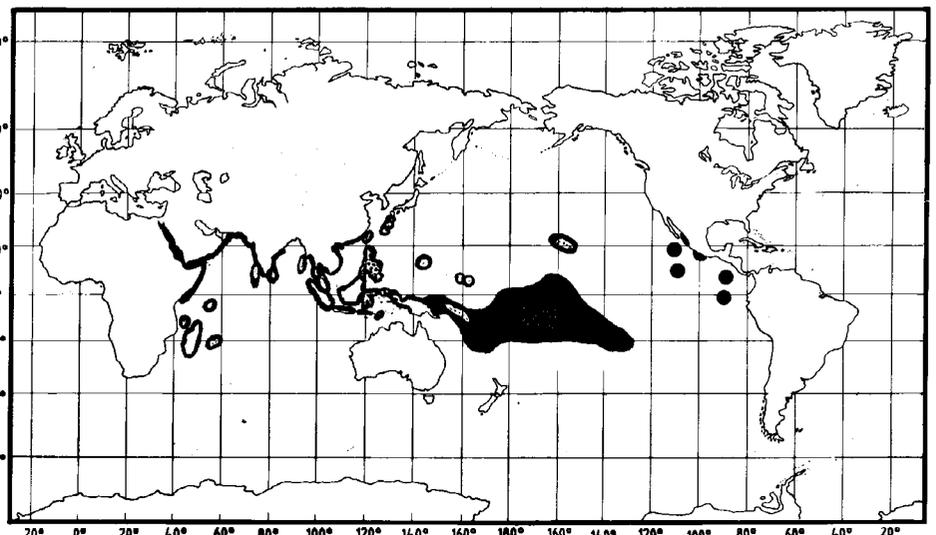


Fig. 286

**Habitat and Biology** : Depth range from 1 to 4 m, rocky substrates. In clear water, not influenced by rivers, often in surf zone and in surge channels. Therefore often near arid coasts and on small islands. The species is not gregarious and is nocturnal, hiding in the daytime in crevices in the rocks and coral reefs.

**Size** : Maximum total body length about 40 cm, average adult length about 30 cm. Males usually much larger than females.

**Interest to Fisheries** : The species is fished wherever it occurs. Mostly taken by hand or with spears during diving in daytime, or with torch light near the surface at night. Traps do not seem not to be very effective, but are used in places; trammel nets seem to give better results. On the west coast of Thailand the species is sold in local markets or directly to restaurants. In the Galapagos the average catch is 50 to 100 lobsters per day. They are sold fresh for local consumption or as frozen lobster tails.

**Local Names** : AUSTRALIA: Coral cray, Double spined rock lobster; FIJI: Golden rock lobster, Uraukuta, Urauvatuvatu; GALAPAGOS ISLANDS: Langosta roja, Red lobster; HAWAII: Tufted spiny lobster, Uta; INDONESIA: Udang barong; JAPAN: Shima ise-ebi; MALAYSIA: Udang karang; MEXICO: Langosta de Isla Socorro; MOZAMBIQUE: Lagosta cornuda; NEW CALEDONIA: Grosses têtes (name used for large males), Vraie tangouste verte; PALAU: Raiklius; PHILIPPINES: Banagan, Spiny lobster, Tufted spiny lobster; SOUTH AFRICA: Variegated crayfish; TAHITI: Oura-miti; THAILAND: Kung king kong (for large specimens, Phuket), Kung mangkon; TUAMOTU ISLANDS: Komanga; USA: Socorro spiny lobster; VIETNAM: Tôm hum.

**Literature** : Fischer & Bianchi (eds), 1984:vot. 5; Williams, 1986:18, figs 40,78 m-n.

*Panulirus polyphagus* (Herbst, 1793)

Fig. 287

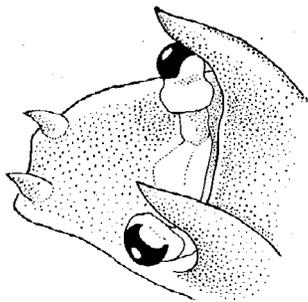
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*Cancer (Astacus) polyphagus* Herbst, 1793, Versuch einer Naturgeschichte der Krabben und Krebse, 2:90, pl.32.

**Synonyms**: *Palinurus fasciatus* Fabricius, 1798; *Palinurus polyphagus* - Bosc 1802; *Panulirus orientalis* Doflein, 1900.

**FAO Names** : **En** - Mud spiny lobster; **Fr** - Langouste de vase; **Sp** - Langosta fanguera.

**Type** : Type locality of *Cancer polyphagus*: "Das Vaterland ist Ostindien". The dry holotype or lectotype in ZMB, no. 1973, in good condition.



antennular plate

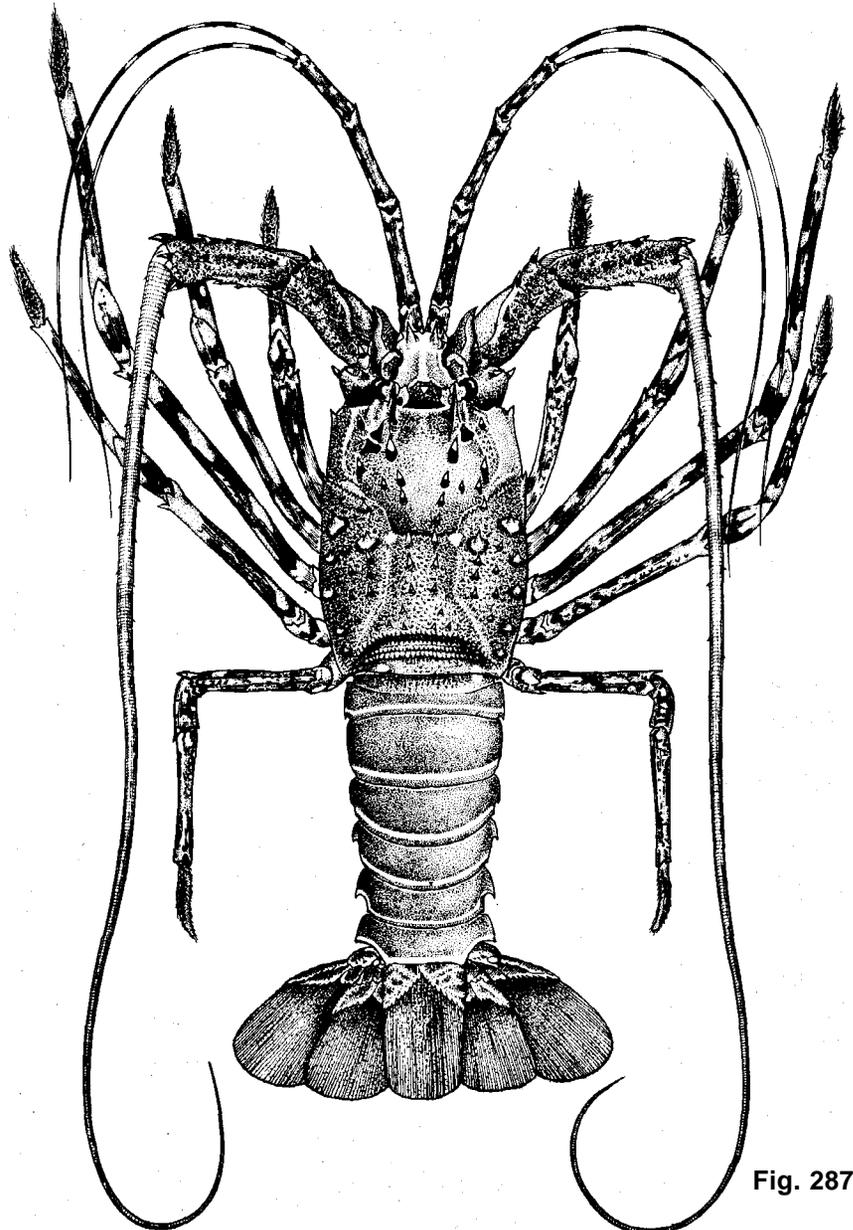


Fig. 287

Type locality of *P. fasciatus*: "Habitat in Oceano Indico Dom. Daldorff". I.K. Daldorff, a Danish officer at Tranquebar, SE. India, collected there for Fabricius and also Herbst obtained material from him. The type material of *P. fasciatus* almost certainly came from the Tranquebar area, and there even is a possibility that Herbst's material of *C. polyphagus* was also obtained from Daldorff, so that the type localities of the two species would be very close, but this is only a guess. Three syntypes of *P. fasciatus* are in UZM, preserved in alcohol, condition reasonable.

The statement of the type locality of *P. orientalis* is: "Japan. Salmin". Balss (1914:76), who examined Doflein's type specimen and synonymized *P. orientalis* with the present species, remarked that the locality indication "Japan" is doubtful "da auf Salmins Fundorte in unserer Sammlung kein Verlass ist" and as the species was not known from Japan. C-L. Salmin was a dealer in natural history objects in Hamburg in the second half of the last century (the Lei den Museum had dealings with him between 1863 and 1875) and evidently, like several of such dealers at that time was not very accurate with labelling his material. The true type locality of *P. orientalis* thus is unknown; the holotype was in ZSM, now probably lost (not located in 1989).

**Geographical Distribution** : Indo-West Pacific region, from the coasts of Pakistan and India to Vietnam, the Philippines, Indonesia, N.W. Australia and the Gulf of Papua (Fig. 288).

**Habitat and Biology** : The species is found on muddy substrates and sometimes on rocky bottoms. Often found near river mouths, in turbid water. Depth range from 3 to 90 m, but usually far less than 40 m.

**Size** : Maximum total body length: about 40 cm, common from 20 to 25 cm.

**Interest to Fisheries** : In the Bay of Bengal and the Gulf of Thailand, the species is quite important commercially. In India, the main fishing season extends from November to March. The animals are caught by trawling, but also with set nets, seines, etc.; they rarely enter traps. Sold fresh and frozen in local markets and also transported to the larger towns. Served regularly in restaurants in Thailand, and else-where. In Thailand, mounted dry specimens, usually in fancy glass cases, are sold as curios to tourists.

**Local Names** : BURMA: Kyauk-pazun; INDONESIA: Udang barong; PAKISTAN: Kikat (Sindhi), Kikka (Baluchi); PHILIPPINES: Banag, Banagan; THAILAND: Kung mangkon; VIETNAM: Tom hum.

**Literature** : Fischer & Bianchi (eds), 1984: vol. 5.

**Remarks**: As the specific name *fasciatus* formerly has often been used not for this species but for *P. versicolor*, old records of *P. fasciatus* have to be treated with much reserve.

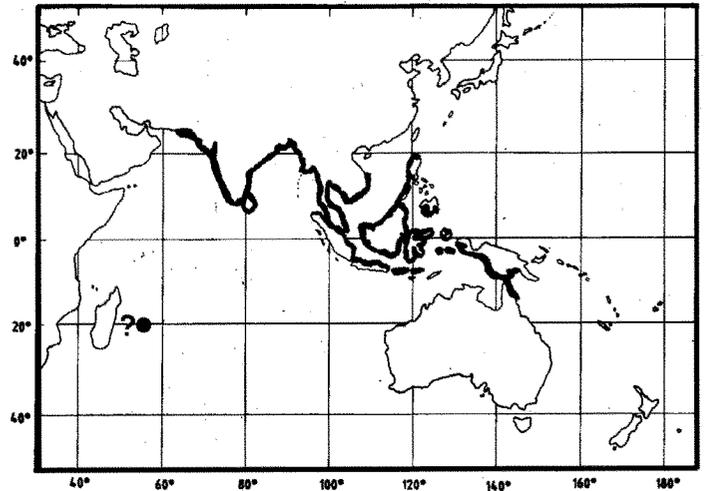


Fig. 288

*Panulirus regius* De Brito Capello, 1864

Fig. 289

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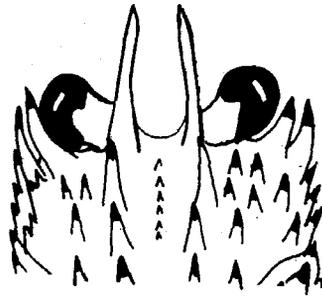
*Panulirus regius* De Brito Capello, 1864, Memorias Academia real ciencias Lisboa (classe ciencias matematicas, physicas e naturaes), (2)3:5, fig. 1.

**Synonyms**: *Phyllosoma commune* Leach, 1817; *Palinurus rissonii* Desmarest; 1825; *Palinurus (Senex) longipes* Pfeffer, 1881 (non A. Milne Edwards, 1868); *Palinustus phoberus* De Rochebrune, 1883; *Puer atlanticus* Bouvier, 1905.

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

**Type** : Type locality of *P. regius*: "Habita os mares das ilhas de Cabo-Verde. Na ilha de S. Vicente d'este archipelago foi encontrado . . . . . o exemplar que nos serviu de typo" (= São Vicente, Cape Verde Archipelago). Holotype in MNL, Lisbon, Portugal, lost in the fire of 1978.

Type locality of *Phyllosoma commune*: "Taken at Porto Praya and during the voyage until 2,58,0 S lat. 9,21,22 E long." (West Africa from Porto da Praia, Ilha de São Tiago, Cape Verde Islands, 14°54'N, 23°31'W, and from there to off Gabon 2°58'S, 9°21'22"E). Four syntypes in BM, no. 170 (dry, condition fair).



front margin of carapace

Type locality of *P. rissonii*: "Nice", s. France. Whereabouts of type material unknown.

Type locality of *P. longipes* Pfeffer: "Monrovia" (Liberia, 6°19'N 10°48'W) and "St. Thomé West-Afrika" (Ilha de São Thomé 0°12'N, 6°39'E). Syntypes in ZMH.

Type locality of *Palinustus phoberus*: "Embouchure de la Gambie et de la Casamence" (= mouths of the Gambia River, Gambia, and of the Casamence River, southern Senegal). Types in MP, no longer extant.

Type locality of *Puer atlanticus*: " dans le trémail, par 20 mètres de profondeur, au voisinage de Sainte-Lucie, île du Cap Vert " (= Ilha de Santa Luzia, Cape Verde Islands, 16°46'N 24°45'W); holotype in MOM, no. 380624 (in alcohol).

**Geographical Distribution** : Eastern Atlantic region: west coast of Africa between Cape Juby (Morocco) and Mocâmedes (S. Angola), and western Mediterranean (east coast of Spain, south coast of France) (Fig. 290).

**Habitat and Biology** : The species inhabits shallow water from the sublittoral to 40 m, but is mostly found between 5 and 15 m. It seems to prefer rocky bottoms.

**Size** : Maximum total body length 35 cm, usually not more than 25 cm.

**Interest to Fisheries** : The species is fished for throughout its range, mostly with vertical nets or by trawling; it is also taken by hand or with lobster pots. The lobsters are sold fresh locally. French (Breton) and Spanish fishing boats bring the specimens alive (or frozen) to France and Spain where they are marketed. In some places in Spain, the lobsters are kept alive in "viviers" before being sold. In Angola "the quantity of "lobsters" is not sufficient to assure the development of fisheries on large commercial scale" (Da Franca, 1966: 1).

**Local Names** : ANGOLA: Lagosta Verde; CAPE VERDE ISLANDS: Lagosta Verde; GAMBIA: Soum; GHANA: Blue crawfish; MOROCCO: Azeffane, Bakhouche, Langusta (also used for *Palinurus* species); SENEGAL: Soum, Soumpé

**Literature** : Fischer, Bianchi & Scott (eds), 1981 :vol 5; Williams, 1986:21, figs 50, 79 j-k; Fischer, Bauchot & Schneider (eds), 1987:311.

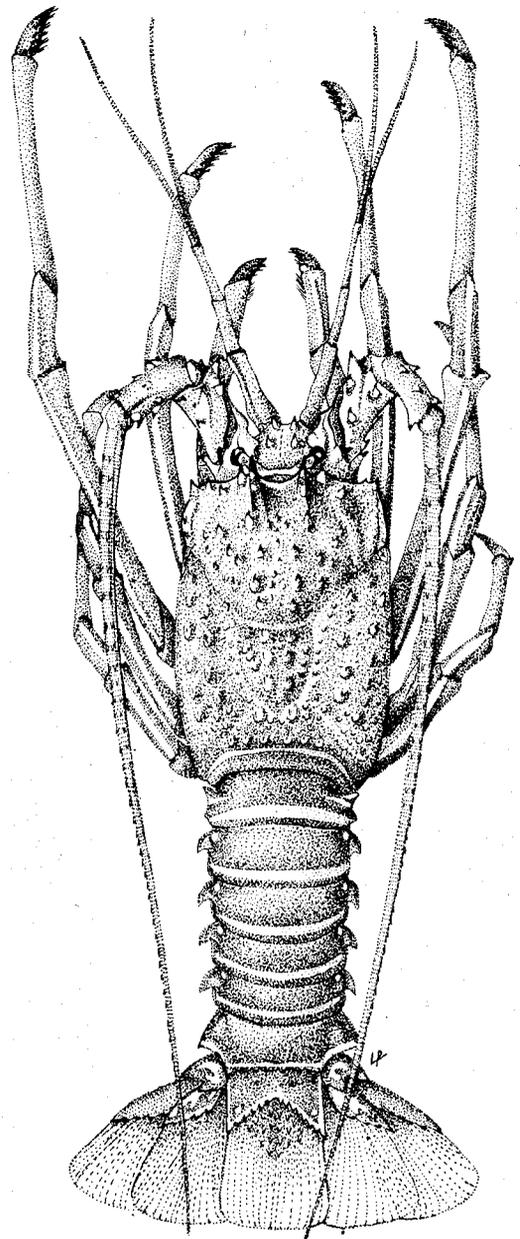


Fig. 289

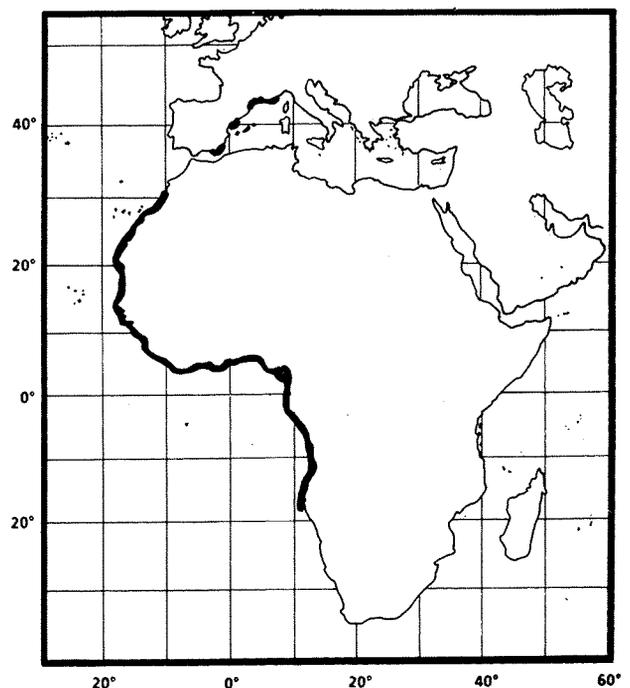


Fig. 290

*Panulirus stimpsoni* Holthuis, 1963

Fig. 291

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*Panulirus stimpsoni* Holthuis, 1963, *Proceedings Koninklijke Nederlandse Akademie Wetenschappen*, (C) 66:54.

**Synonyms:** *Palinurus godeffroyi* (Pfeffer MS.) Holthuis, 1978.

**FAO Names :** En - Chinese spiny lobster.

**Type :** Type locality of *Panulirus stimpsoni*: "Hong Kong". Holotype female in RMNH, no. D 3541.

Type locality indication of *Palinurus godeffroyi*: "Südsee" [= Pacific Ocean], indication probably incorrect. Holotype male in ZMH, no. 8005.

**Geographical Distribution :** Indo-West Pacific region. Coast of southern China between Shanghai and Shantou (= Swatow); Hong Kong; Taiwan. Recently also found in the Gulf of Thailand off Chonburi province (Fig. 292).

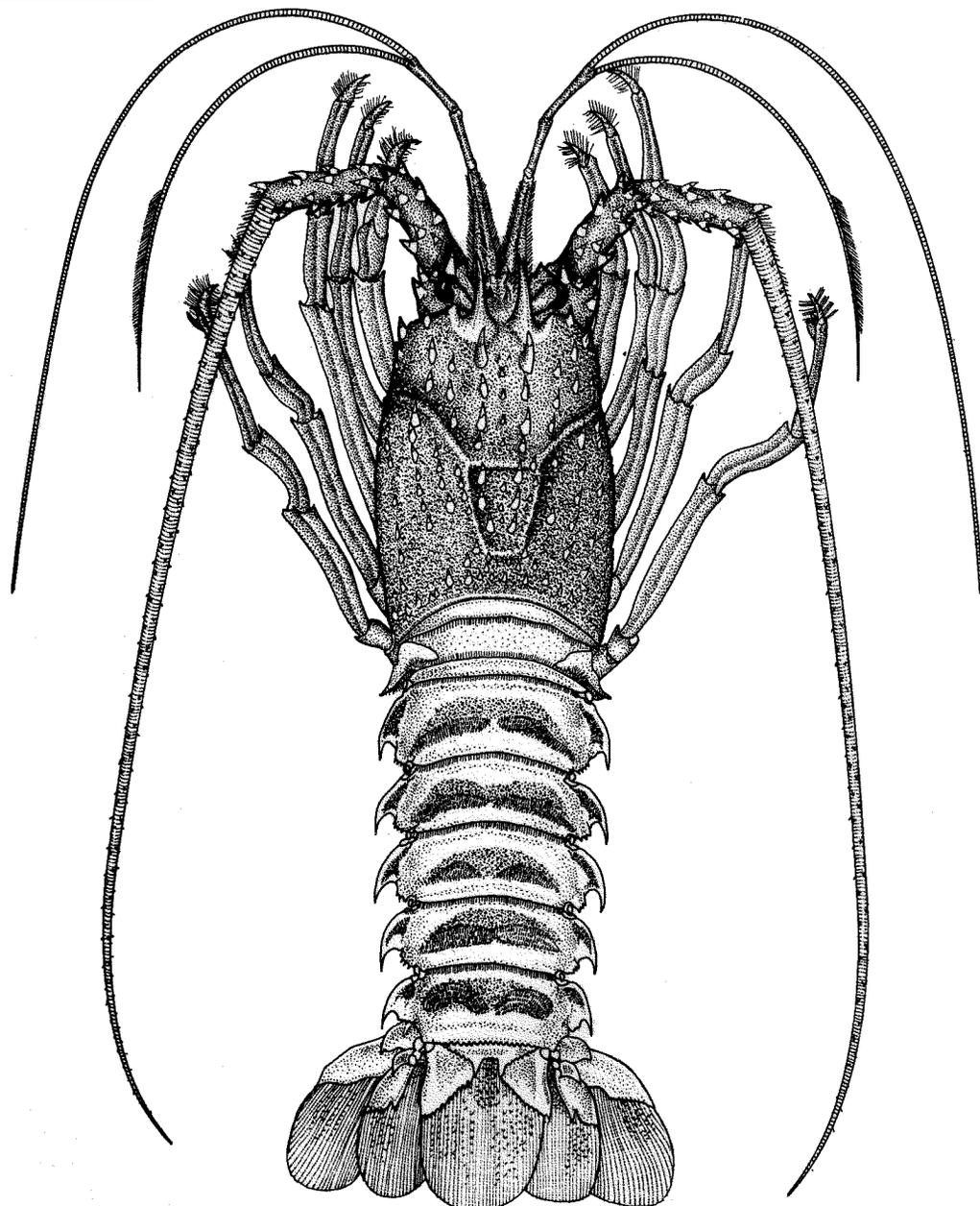
**Habitat and Biology :** The species seems to inhabit rocky areas in shallow water.

**Size :** Known carapace lengths: 6.5 to 10.5 cm (males), and 5 to 6.5 cm (females). The corresponding total body lengths are about 16 to 28 cm (males), and 13 to 16 cm (females).

**Interest to Fisheries :** The species is of commercial interest notwithstanding its relatively small size. Caught throughout its range, mostly with tangle nets, rarely by lobster traps. Sold fresh on local markets. In Hong Kong, it is mainly caught in February/March and August, September. The species is reared and cultured in China (Liu, 1986:44).

**Local Names :** HONG KONG: Green lobster, Luk Sik Lung Ha; THAILAND: Kung mangkon

**Literature:** George & Fischer, 1978:93-95,fig1; Holthuis,1978:95-100, pl. 1 Liu, 1986:45



(after George & Fischer, 1978)

Fig. 291

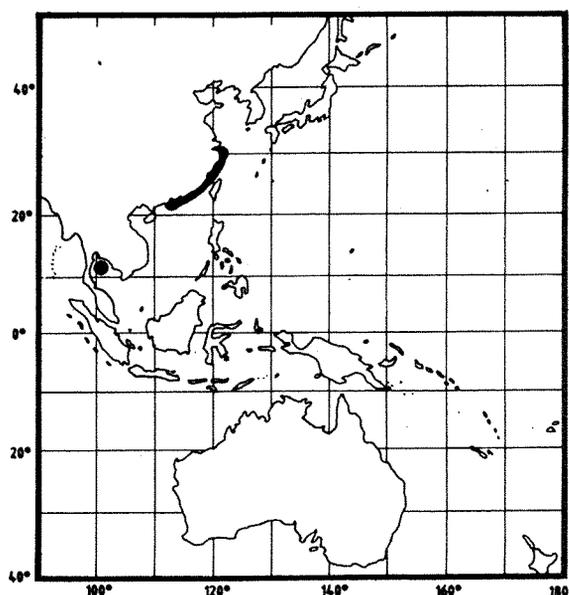


Fig. 292

***Panulirus versicolor*** (Latreille, 1804)

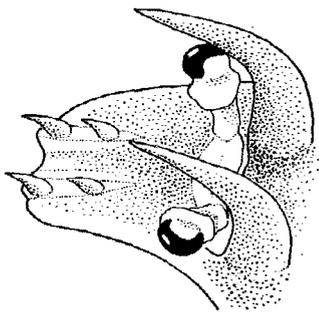
Fig. 293

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*Panulirus versicolor* Latreille, 1804, *Annales Muséum Histoire naturelle*, Paris, 3:394.

**Synonyms:** *Palinurus taeniatus* Lamarck, 1818; *Panulirus taeniatus* - White, 1847; *Palinurus (Panulirus) ornatus decoratus* Heller, 1865; *Puer spiniger* Ortmann, 1894; *Panulirus demani* Borradaile, 1899; *Senex ornatus laevis* Lanchester, 1901; *Puerulus spiniper* - Calman, 1909; *Panulirus ornatus laevis*- De Man, 1916.

**FAO Names :** En - Painted spiny lobster; Fr - Langouste barriolée; Sp - Langosta colorete.



antennular plate

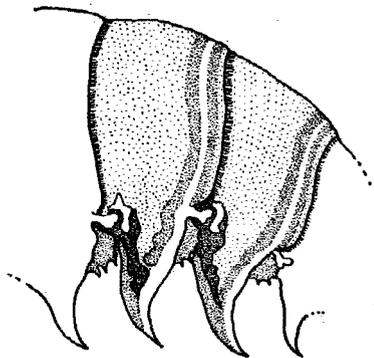
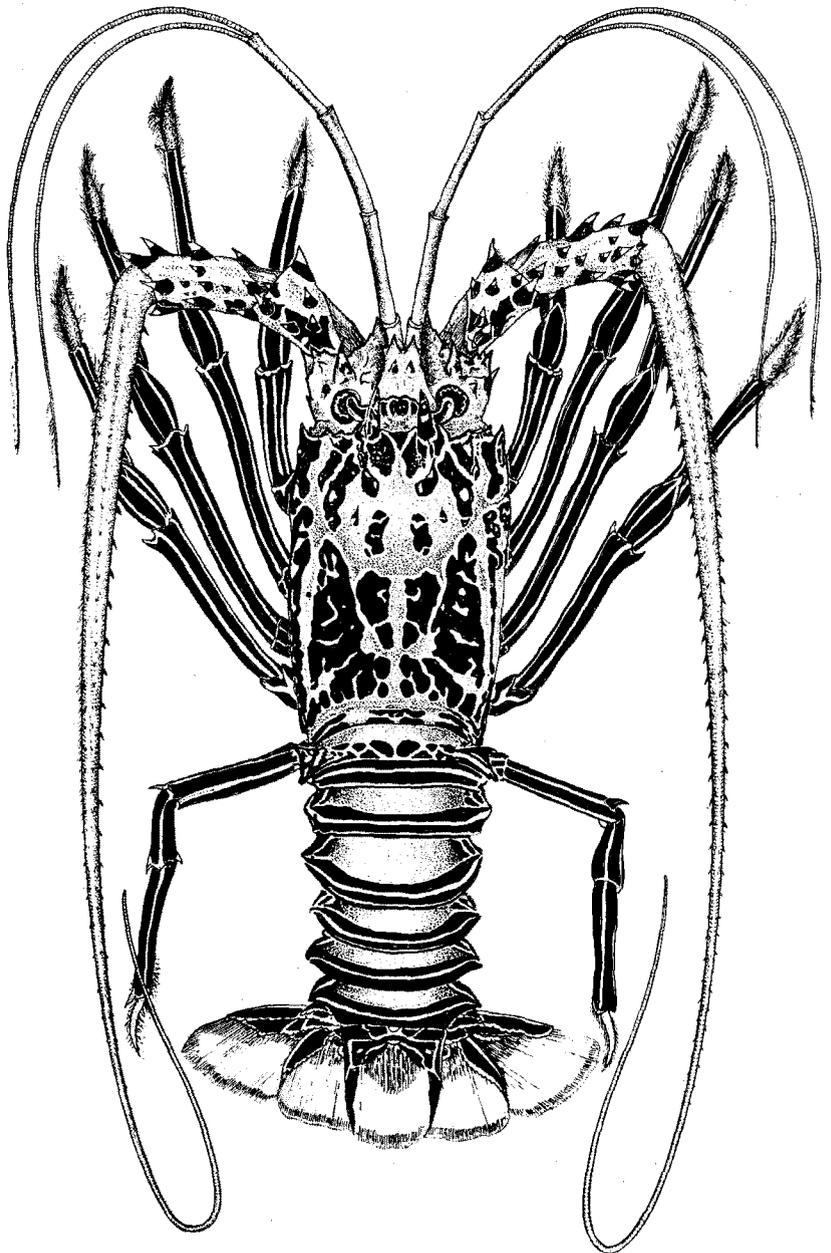
abdominal somites  
(lateral view)

Fig. 293

**Type :** Type locality of *Panulirus versicolor*: "Cette jolie espece nous est arrivée par la frégate le Naturaliste".. The "Naturaliste" together with the "Geographe" left Le Havre, France, on 18 October 1800 on a voyage of discovery to Australia. F. Peron and CA. Lesueur, whose names as zoologists are well known in connection with this expedition, shipped on the Géographe, the zoologists on board the "Naturaliste" were G.J.B.M. Bory de St Vincent and D. Dumont. Bory de St Vincent, however, did not travel beyond Mauritius, where he stayed for a year. The two ships arrived at Mauritius (Ile de France) on 16 March 1801 and left 25 April. The "Naturaliste" reached SW. Australia on 27 May 1801 and went from there to Timor where she stayed from 22 August to 13 November 1801. From Timor the "Naturaliste" went around S.W. Australia to Tasmania and Port Jackson, Sydney, and returned from there the same way to Shark Bay, Western Australia, which was left 23 March 1803 for Timor. On 3 June 1803 the ship headed home from Timor via Mauritius. The only two localities where the "Naturaliste" could have collected *Panulirus versicolor* are Mauritius and Timor. It seems best to select Mauritius as the restricted type locality. Types in MP, see under type of *P. taeniatus*.

Type locality of *P. taeniatus*: "Habite les mers de la Nouvelle Hollande" Lamarck (1818:211) cited *P. versicolor* Latreille as a synonym of his *P. taeniatus* (although he himself used the name *versicolor* for a species that probably is *P. penicillatus*). As Lamarck claims that the type specimens of his *P. taeniatus* are rather small, just as Latreille (1804) did for his own *P. versicolor*, it is possible, that *taeniatus* is just a new name for *versicolor* Latreille, and that the type material of the two is the same. The fact that the object of the voyage of the "Naturaliste" was to explore Australia ("Nouvelle Hollande"), may be the reason that Lamarck gave Australia as type locality for *P. taeniatus*, while its types probably were actually collected in Mauritius or Timor. In the Paris Museum, there are 3 specimens identified by Lamarck as *P. taeniatus* labelled "Ile de France" (= Mauritius), which may be the syntypes of this species and of *P. versicolor*.

Type locality of *P. ornatus decoratus*: "Java", Indonesia. Type material in NMW.

Type locality of *Puer spiniger*: "Amboina", Moluccas, Indonesia. Depository of syntypes unknown.

Type localities of *Panulirus demani*: "Blanche Bay, New Britian" (1 male syntype in ZMC, in alcohol, good condition), "Amboina" (Moluccas, Indonesia), "Neu-Guinea" (= southeast coast of Papua New Guinea between Yule Island and East Cape), "Thursday island" (Torres Strait, Australia) (material from the last three localities reported upon by Ortmann, 1894, the syntypes probably in the Zoological Institute, University of Jena, Germany), "Java-See" (Java Sea, Indonesia) (De Man, 1896; 2 juveniles syntypes in ZML).

Type locality of *Senex ornatus laevis* "Singora" (= Songkhla, S. Thailand on coast of Gulf of Thailand). Holotype male in ZMC, in alcohol, condition good.

**Geographical Distribution** : Indo-West Pacific region: entire Red Sea and east coast of Africa (south to Natal), to southern Japan, Micronesia, Melanesia, northern Australia and Polynesia (Fig. 294).

**Habitat and Biology** : In shallow water, from the sublittoral down to 15 m depth; in coral reef areas, often on seaward edges of the reef plateau. In clear water also in surf areas. The species is nocturnal and not gregarious; in daytime, it hides in crevices and cavities of the rocks.

**Size** : Maximum total length about 40 cm, average length less than 30 cm.

**Interest to Fisheries** : The species is taken wherever it occurs, mostly for local use; like all spiny lobsters it is considered to be excellent food. It is taken in daytime by divers, either by hand or with spears; at night it is hunted and speared at the reefs with the help of torch lights, it rarely enters traps. On the west coast of Thailand, it is sold fresh in markets or directly to restaurants; mounted specimens, usually in fancy glass cases are sold as curios to tourists.

**Local Names** : AUSTRALIA: Painted rock lobster; FIJI: Painted rock lobster, Uraudina; HONG KONG: Huk paak mun lung ha; INDONESIA: Udang barong; JAPAN: Goshiki ebi, Goshiki-ise-ebi; MALAYSIA: Udang karang; MOZAMBIQUE: Lagosta pintada; NEW CALEDONIA: La porcelaine, Porcelain crayfish; PAKISTAN: Kikat (Sindhi), Kikka (Baluchi); PHILIPPINES: Banag, Banagan, Marine crayfish, Painted crayfish; SOUTH AFRICA: Striped crayfish; THAILAND: Kung mangkon; VIETNAM: Tôm hum.

**Literature** : Fischer & Bianchi (eds), 1984:vol. 5; Williams, 1986:23, figs 55,80c-d.

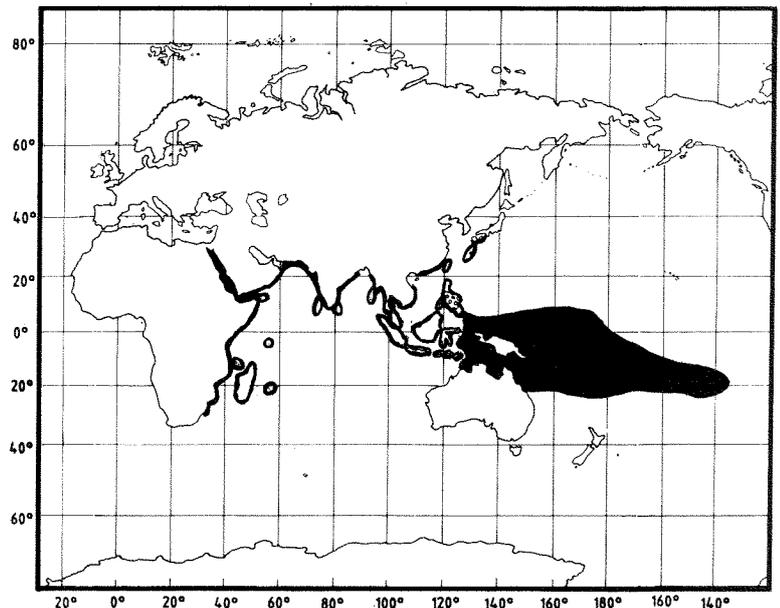


Fig. 294