

Jasus Parker, 1883

PALIN Jas

Jasus Parker, 1883, Nature, London, 29:190. Gender masculine. Name placed on the Official List of Generic Names in Zoology in Opinion 612 (published in 1961).

Type Species : by selection by Holthuis (1960; Bulletin Zoological Nomenclature, 17:193): **Palinurus lalandii** H. Milne Edwards, 1837.

Synonyms : **Palinosytus** Bate, 1888, Report Voyage Challenger, Zool., 24:93. Type species, by selection by Holthuis (1960, Bulletin of Zoological Nomenclature, 17:193): **Palinurus lalandii** H. Milne Edwards, 1837. Gender masculine. Name placed on the Official Index of Rejected and Invalid Genus-Group Names in Zoology in Opinion 612 (published in 1961).

Palinostus Bate, 1888, Report Voyage Challenger, Zool., 24:56,76,85. An incorrect original spelling of **Palinosytus** Bate, 1888, and therefore unavailable. Name placed on the Official Index of Rejected and Invalid Genus-Group Names in Zoology in Opinion 612 (published in 1961).

The genus consists of seven species, all of which are of commercial interest, and live in restricted zones in the temperate area of the southern hemisphere.

The genus **Jasus** can be divided into two subgenera: the nominate subgenus, **Jasus** or "scalloped rock lobsters", includes all but one of the species, and is characterized by the scalloped sculpturation of the upper surface of the abdominal somites. The other subgenus is **Sagmariasus** nov. subgen. and includes as type and only species the Packhorse rock lobster, **Jasus verreauxi** (H. Milne Edwards). It is characterized by that the abdominal somites do not show any scalloped sculpturation.

Subgenus **Jasus** Parker, 1883

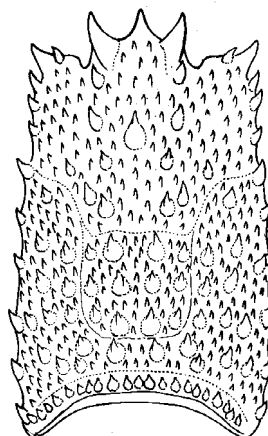
Six species are known in this subgenus.

Key to Species:

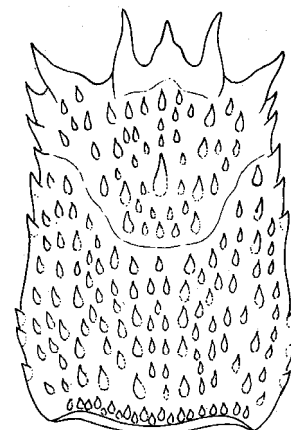
1a. Large spines of carapace broad and flattened, about as wide as long, and much larger than the small spines (Fig. 184a). Sculpturation of abdomen wide, with relatively few squamae, and with an extensive smooth area on the anterior part of each somite (Fig. 185a,b,c). Eastern Pacific, South Central Atlantic, Western Indian Ocean (exclusive of South Africa) "**frontalis**" subgroup

2a. First abdominal somite without any squamiform sculpturation. The following somites with only a single transverse row of large squamae before the transverse groove of the somite, sometimes with some very small squamae just before or just behind it. Posterior half of the abdominal somites behind the transverse groove without squamiform structures (Fig. 185a) (Juan Fernandez Island) **J. frontalis** (Fig. 189)

2b. First and following abdominal somites with a transverse row of squamiform sculpturation behind the transverse groove (Figs 185 b,c)



a. "**frontalis**" subgroup



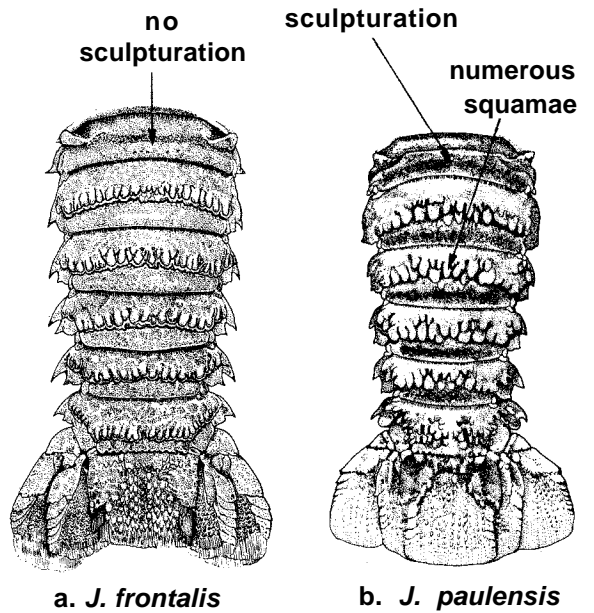
b. "**lalandi**" subgroup

carapace (dorsal view)

Fig. 184

3a. Indian Ocean area (St. Paul and Amsterdam Islands, rarely at Ker-gueien). Frontal horns almost equilaterally triangular, shorter and broader than in *J. tristani*. Squamiform sculpturation of the abdomen with the squamae narrower and more numerous than in *J. tristani* (Fig. 185b)..... *J. paulensis* (Fig. 195)

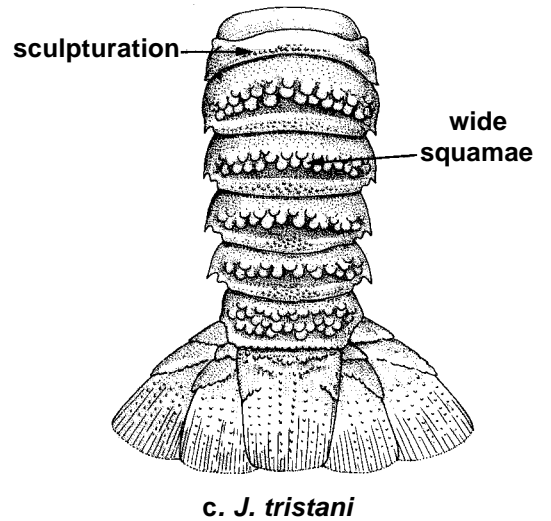
3b South Atlantic Ocean area (Tristan da Cunha Archipelago, Gough Island, Vema Seamount). Frontal horns with the upper margin slightly more convex than the lower, more slender than in *J. paulensis*. Squamiform sculpturation of the abdomen coarser than in *J. paulensis* with the squamae fewer and wider (Fig. 185c). *J. tristani* (Fig. 197)



1b. The large spines of the carapace are narrow, often 3 or 4 times as long as wide and not very different from the small spines (Fig. 184b). The sculpturation of the abdomen is more dense, with relatively smaller squamae and a narrower smooth anterior area (Fig. 186a,b,c). South Africa, Australia, New Zealand "*lalandii*" subgroup

Anterior half of first abdominal somite with a squamiform sculpturation both anteriorly and posteriorly of the transverse groove (Fig. 186a). South Africa *J. lalandii* (Fig. 191)

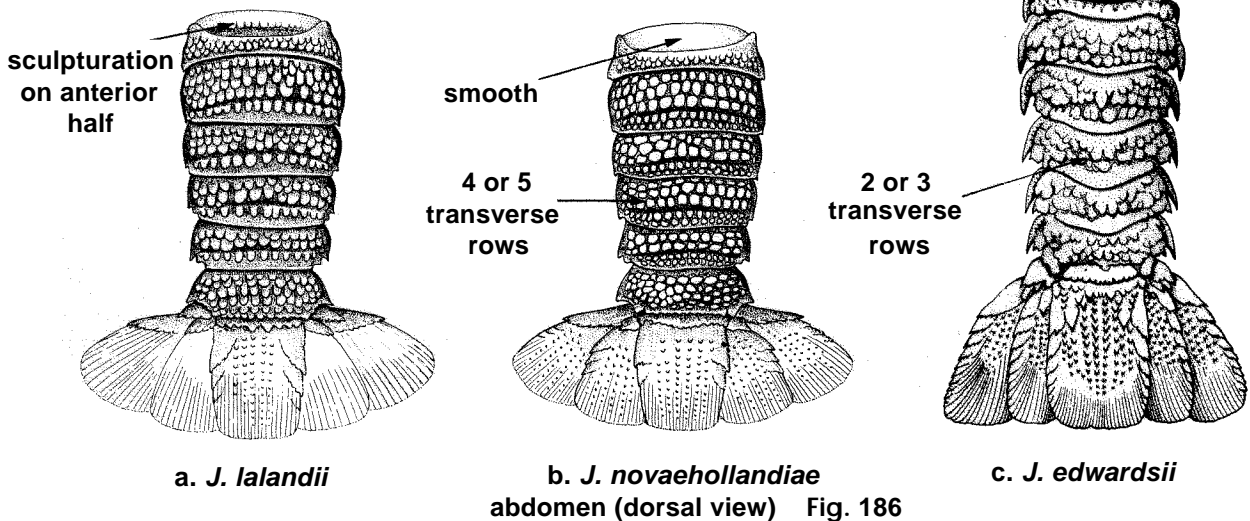
4b. Anterior half of first abdominal somite before the transverse groove entirely smooth, without sculpturation



5a. South and East Australia, Tasmania. The squamiform sculpturation on the posterior half of the second to fifth abdominal somites (behind the transverse groove) dense and covering the entire surface, the squamae arranged in 4 or 5 transverse rows (Fig. 186b) *J. novaehollandiae* (Fig. 193)

5b New Zealand. The squamiform sculpturation on the posterior half of the second to fifth abdominal somites (i.e. the part behind the transverse groove) less dense, with larger squamae, which are arranged in 2 or 3 transverse rows (Fig. 186c) *J. edwardsii* (Fig. 187)

abdomen (dorsal view) Fig. 185



abdomen (dorsal view) Fig. 186

Jasus (Jasus) edwardsii (Hutton, 1875)

Patinurus edwardsii Hutton, 1875, Transactions Proceedings New Zealand institute, 7:279.

Synonyms : No synonyms known. The species for a long time has incorrectly been synonymized with *J. lalandii* (H. Milne Edwards).

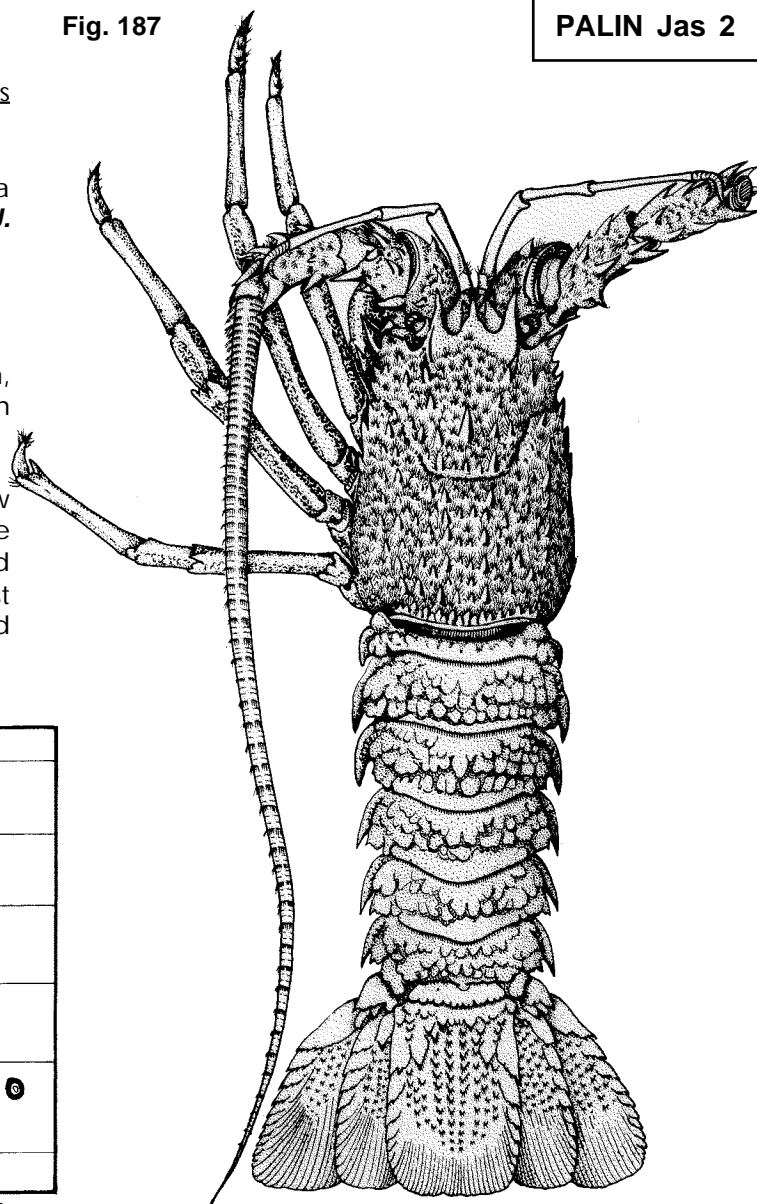
FAO Names : En - Red rock lobster.

Type : Type locality: "Otago Heads" near Dunedin, South Island, New Zealand. Syntypes supposedly in DMW, now lost, at least not located in 1988

Geographical Distribution : All coasts of New Zealand, from Three Kings Islands (north west of the northern tip of North Island) south to the Auckland Islands, also found at the Chatham Islands; most common off the south west part of South Island, and the east coast south of East Cape (Fig. 188).

Fig. 187

PALIN Jas 2



(from Kensler, 1967) Fig. 187

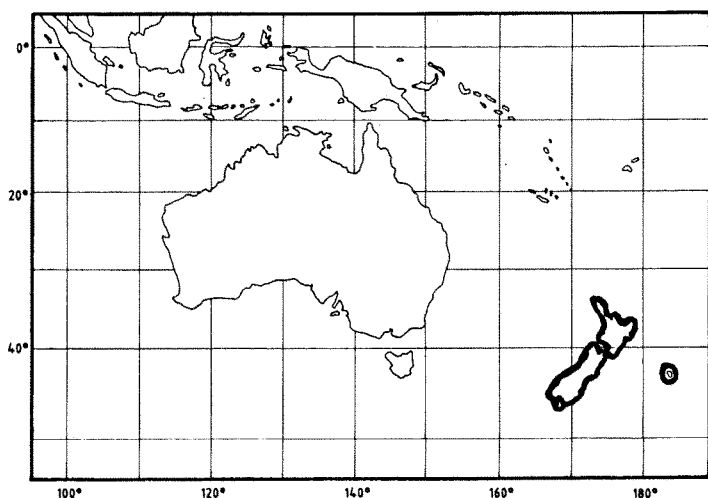


Fig. 188

Habitat and Biology : The species lives in crevices of the rocky shores and among algae at depths between 5 and 200 m. Soft shelled specimens are occasionally caught in December and January.

Size : Maximum total body length is 58 cm (males), and 43 cm (females); maximum carapace lengths 23.5 cm (males), 18 cm (females); minimum legal carapace lengths 10 cm (males), and 9 cm (females).

Interest to Fisheries : The species is usually caught with baited lobster pots, sometimes obtained by trawling and by diving. Protective laws have been introduced, like size limits, prohibition of some gear, prohibition of taking ovigerous females or soft specimens, bag limits for sports fishermen, etc. The specimens are sold as frozen tails (mostly to the USA) and whole live specimens (mainly to Japan). According to FAO statistics, 5 000 tons were caught in 1987 and 1242 tons in 1988. According to Kensler (1969:516) this species sustains "New Zealand's main and most valuable export fishery". It represents 99% of the total lobster fishing in the area (the other 1% is formed by *J. verreauxi*). In 1988 the species represented the fourth most valuable fishery of New Zealand, after the fishes Orange Roughy (*Hoplostethus atlanticus*), Hoki (*Macruronus novaezelandiae*), and squid (Booth, in litt.). Since 1965, the species is also commercially fished at the Chatham Islands. The Chatham fishery expanded rapidly since 1966 and in 1967 provided about 50% of the total New Zealand catch.

Local Names : NEW ZEALAND: Red crayfish, Red spiny lobster, Common crayfish, Marine spiny crayfish, Rock lobster, Southern crawfish, Spiny crayfish; Koura (Maori language).

Literature : Kensler, 1968:81-89; Kensler, 1969:506-517; Williams, 1986: 13, figs 26,78d-e.

Jasus (Jasus) frontalis (H. Milne Edwards, 1837)

Fig. 189

PALIN Jas 3

Palinurus frontalis H. Milne Edwards, 1837, *Histoire naturelle des Crustacés*, 2:294.

Synonyms : *Palinostus frontalis* - Bate, 1888. The species has often, incorrectly, been synonymized with *J. lalandii*.

FAO Names : **En** - Juan Fernandez rock lobster; **Fr** - Langouste Juan Fernandez; **Sp** - Langosta de Juan Fernandez.

Type : Type locality: "Habite le Chili", now restricted to Juan Fernandez Archipelago, Chile. Type material in MP, no longer extant (not found in 1989).

Geographical Distribution : The range of the species is restricted to: (1) the waters around the Juan Fernandez Archipelago, 33°35'-33°49'S 78°45'-80°49'W: Isla Robinson Crusoe (= Isla Más a Tierra), Isla Marinoero Selkirk (= Isla Alejandro Selkirk, = Isla Más Afuera) and Isla Santa Clara, and (2) the waters around the Islas Desventuradas, 26°17'-26°22'S 79°50'-80°6'W: Isla San Felix and Isla San Ambrosio (Fig. 190).

Habitat and Biology : A species inhabiting a rocky and partly sandy environment at depths of 2 to 200 m. Water temperature between 13° and 19°C. Eggs spawned between August and November and carried for about 11 months. Although there is some migration to deeper waters from the end of September onwards, the species never disappears completely from the coast. In January, the migration back to shallow waters starts. The food consists of algae, smaller and larger molluscs and crustaceans, and dead animal matter of any kind. The species is predated by various fishes.

Size : Maximum body length 48 cm (males) and 46 cm (females), carapace length 22 cm (males) and 19 cm (females). Reports of total body lengths of 60-70 cm have to be considered with much reserve.

Interest to Fisheries : The early navigators who visited Juan Fernandez like Jacob Roggeveen in 1722 and George Anson in 1741 already mentioned that the lobsters were found there "in such abundance near the water's edge [of Isla Robinson Crusoe] that the boat-hooks often struck into them, in putting the boats to and from the shore" (Wafter, 1776: 125, 126), also their excellent quality as food was commented upon. Molina (1808: 144; English translation of Molina's original (1782) Italian edition) mentioned that "Lobsters. are also found in such quantities that the fishermen have no other trouble to take them, than to strew a little meat upon the shore, and when they come to devour this bait, as they do in immense numbers, to turn them on their backs with a stick. By this simple method many thousands are taken annually, and the 'tails which are in high estimation, dried and sent to Chili" Albert (1898:6) mentioned that the species was usually fished at depths between 7 and 14 m. Skottsberg (1956: 178), almost 50 years later, stated that "nowadays the best catch is made in depths from 40 to 80 meters". Evidently, the intensity of fishing drove the species to deeper water, and the easy method of picking them by hand was replaced by lobster pots.

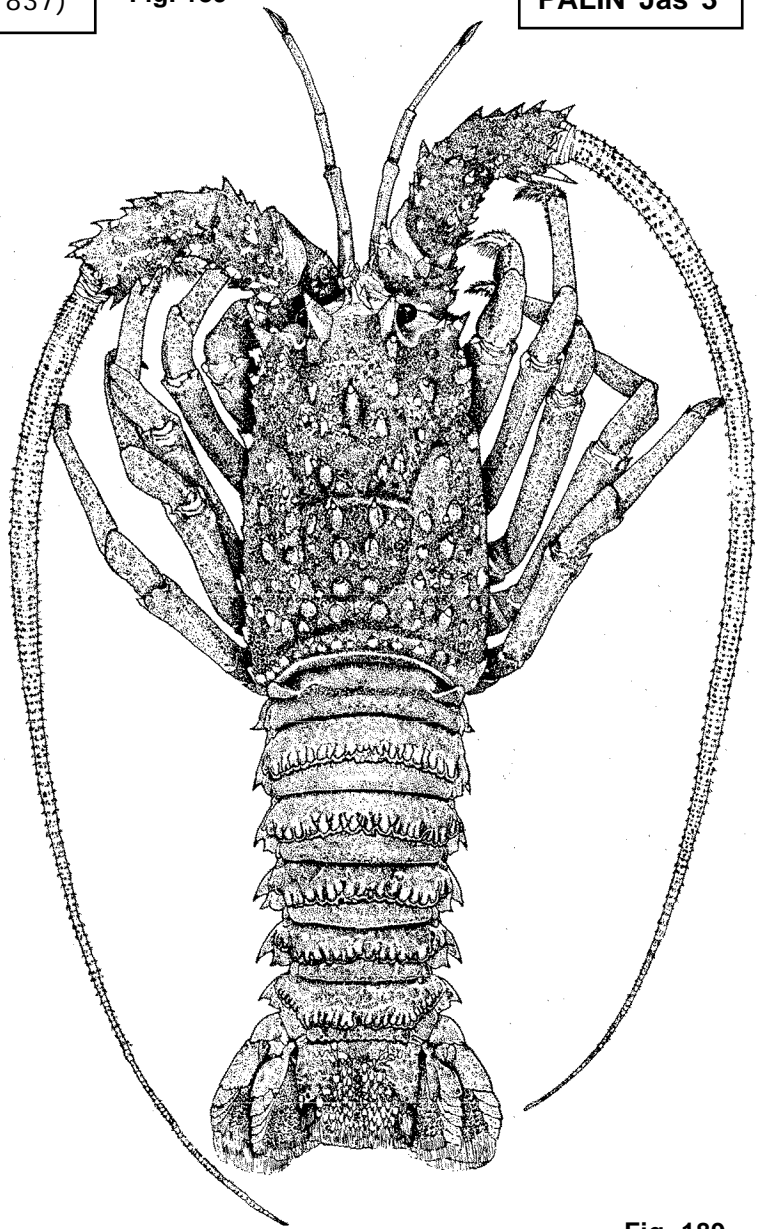


Fig. 189

(combined from Holthuis & Sivertsen, 1967 and Pizarro & Tiffon, 1974)



Fig. 190

By the end of the 19th century, canning lobster tails was tried without too much success; canned and live lobsters were then exported to Chile. In 1970, the main gear for catching the lobsters were lobster pots and they perhaps still are. Evidently, most lobsters are exported live to the mainland. According to FAO statistics, the annual catch of the species was 36 tons in 1987 and 29 tons in 1988. The fishery is of the greatest importance in the Archipelago and gives employment to a large part of the population. Experimental work on reproduction and development in captivity of this species is being conducted in Chile.

Protective measures are in force and well adhered to: (1) the minimum legal size is a carapace length of 11.5 cm, (2) ovigerous females have to be put back into the sea, (3) the season is closed from 15 May to 30 September.

local Names : CHILE: Langosta de Juan Fernandez, Langosta de tiempo (for larger forms).

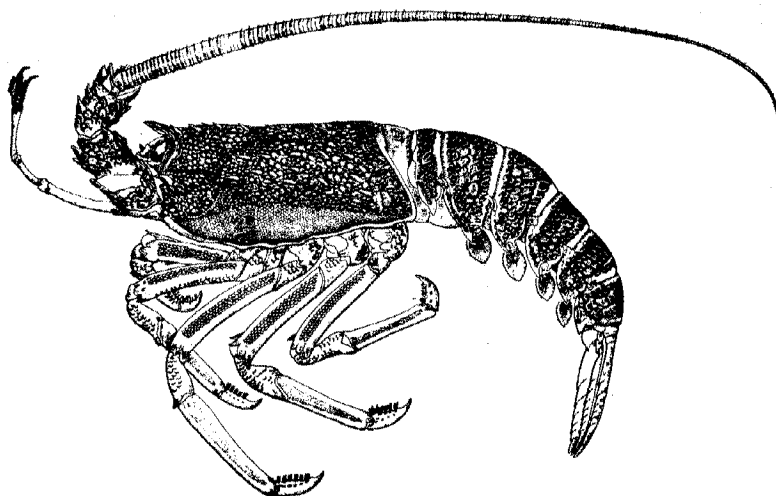
Literature : Holthuis & Sivertsen, 1967:25-32, pl. 5; Arana Espina et al., 1971-1973; Pitarro et al., 1974; Pavez Carrera et. al., 1974; Retamal, 1977:13-14, fig. 5; Williams, 1986:13, fig. 27.

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

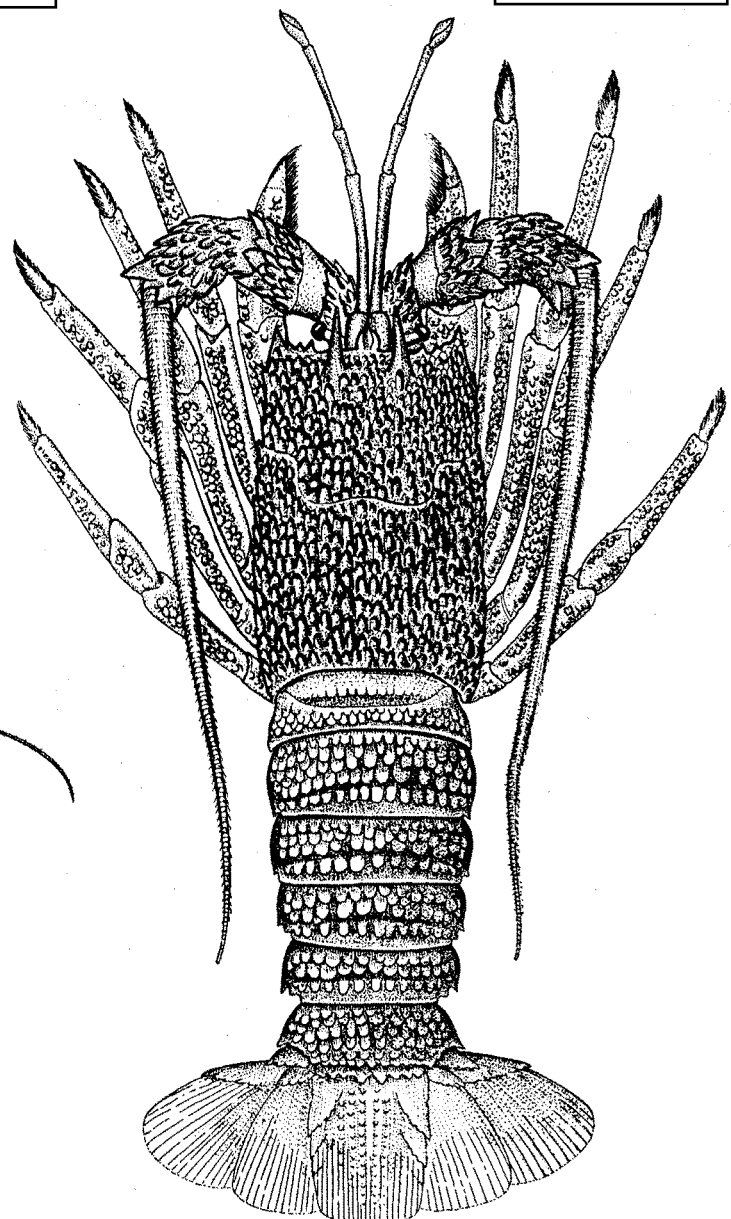
Palinurus lalandii H. Milne Edwards, 1837, *Histoire naturelle des Crustacés*, 2:293. Name placed on the Official List of Specific Names in Zoology in Opinion 612 (published in 1961).

Synonyms : *Palinostus lalandii* - Bate, 1888; *Palinosytus lalandii* - Stebbing, 1893. The question whether the specific name should be written *lalandii* or *lalandei* (named for Pierre de la Lande) has been definitely settled in favour of *lalandii* by the International Commission on Zoological Nomenclature in their Opinion 612. The specific name *lalandii* has, at times, been used for other species of the subgenus *Jasus*.

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



lateral view (from Paterson, 1968)



dorsal view

Fig. 181

Fig. 191

PALIN Jas 4