

Records of Decapod Crustaceans from the Southwestern Atlantic Collected by the Japanese Fisheries Research Trawlers

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Abstract

In this paper are recorded 6 macruran, 6 anomuran, and 6 brachyuran species of decapod crustaceans from the southwestern Atlantic collected by the R/V *Shinkai-Maru* and *Kaiyo-Maru*. They are systematically and biogeographically discussed; a new species of the Lithodidae is described under the name of *Paralomis shinkaimaruae*, and *Lithodes murrayi* HENDERSON of the same family is new to Argentine waters.

The present paper is focused on the records of decapod crustaceans from the southwestern Atlantic preserved in the Far Seas Fisheries Research Laboratory, Fisheries Agency of Japan (Shimizu, Shizuoka Prefecture). Those crustacean specimens were obtained by trawl from the continental shelf and slope and the submarine plateau during the research investigations for fisheries resources by the R/V *Shinkai-Maru* and *Kaiyo-Maru*. They are represented by the large-sized species, but most of them are the deep-water inhabitants and thus worth noting because of biogeographical interests and of scarcity of the previous records.

In this report the following 18 species of 11 families from the southwestern Atlantic are systematically and biogeographically remarked. The species marked with an asterisk will be inserted with color photograph in the picture encyclopedia entitled "Fishes, Crustaceans and Cephalopods trawled off Patagonia", which will be published within this year by the Japan Marine Fishery Resource Research Center (Chiyoda-ku, Tokyo).

MACRURA

Oplophoridae

AcanthePHYRA pelagica (RISSO)*

Pasiphaeidae

Pasiphaea acutifrons BATE*

Campylonotidae

Campylonotus semistriatus BATE*

C. *vagans* BATE*

Pandalidae

Pandalopsis ampla BATE*

Nephropidae

Thymops birsteini (ZARENKOV et SEMENOV)*

ANOMURA

Galatheidae

Munida gregaria (FABRICIUS)

M. spinosa HENDERSON

Lithodidae

Lithodes antarcticus JACQUINOT**L. murrayi* HENDERSON**Paralomis granulosa* (JACQUINOT)**P. shinkaimaruae* sp. nov.

BRACHYURA

Majidae

Eurypodius latreillei GUÉRIN*Libidoelaea granaria* H. MILNE EDWARDS et LUCAS**Libinia spinosa* H. MILNE EDWARDS

Atelecyclidae

Peltarion spinosulum (WHITE)*

Portunidae

Ovalipes trimaculatus (DE HAAN)*

Platyxanthidae

Platyxanthus patagonicus A. MILNE EDWARDS*

Family Oplophoridae

Genus *Acanthephyra* A. MILNE EDWARDS, 1881*Acanthephyra pelagica* (RISSO, 1816)

Specimens examined. FSFL EM287 (2 ♂♂, 3 ♀♀ – 39°30'S, 54°57'W, 1,222 m deep; June 7, 1978; R/V *Shinkai-Marū*); EM209, EM210 (2 ♂♂, 5 ovig. ♀♀, 4 ♀♀ – 40°31'S, 56°24'W, 800 m deep; June 30, 1978; R/V *Shinkai-Marū*). Total length from tip of rostrum to posterior margin of telson, ca. 12 and 13.5 cm in a male and a female (EM287), respectively.

Remarks. The identification of this bathypelagic red species is chiefly based on SIVERTSEN & HOLTHUIS (1956) and BOSCHI (1973), and the synonymy is referred to CROSNIER & FOREST (1973). This species is very similar to *A. eximia* SMITH in the general shape of the carapace, but distinguished from it most remarkably by having 7–11 dorsolateral spines on the telson instead of 3–5.

This species has the worldwide distribution, being known from the East Atlantic from the vicinity of Iceland through the Mediterranean to South Africa, the southwestern Atlantic, and the Indo-Pacific between about 32° and 57°S, 150–3,600 m deep.

Family Pasiphaeidae

Genus *Pasiphaea* SAVIGNY, 1816*Pasiphaea acutifrons* BATE, 1888

Specimens examined. FSFL EM399, EM400 (2 ♂♂, 2 ovig. ♀♀ – 53°32'S, 60°10'W, 1,033 m deep; Aug. 5, 1978; R/V *Shinkai-Marū*). Total length from tip of rostrum to posterior margin of telson, ca. 11–13 cm.

Remarks. As pointed out by HOLTHUIS (1952), it is quite questionable whether the original material is homogenous or not. Of the two specimens, one from Patagonia was selected to be the lectotype by him, so that there is no trouble about the scientific name of the specimens at hand. The other specimen from Sagami Bay, Japan, must be reexamined in detail.

This species is mainly known from the Chilean coast, ranging geographically from the vicinity of 41°S through the Strait of Magellan to off the Falkland Islands, and bathymetrically from 300 to 1,033 m recorded at present. ZARENKOV (1968) reported this species from the Drake Passage, 3,065–3,669 m deep, but the rostrum

figured by him is surprisingly developed and extended far beyond the anterior margin of the carapace.

Family Campylonotidae

Genus *Campylonotus* BATE, 1888

Campylonotus semistriatus BATE, 1888

Specimens examined. FSFL EL804, EL805 (3 ♂♂, 1 ovig. ♀, 2 ♀♀ – 49°05'S, 59°52'W, 394 m deep; May 2, 1978; R/V *Shinkai-Maru*); EL728 (1 ♂ – 53°03'S, 64°51'W, 152 m deep; May 17, 1978; R/V *Shinkai-Maru*); EL963 (1 ovig. ♀ – 47°59'S, 60°W, 564 m deep; May 25, 1978; R/V *Shinkai-Maru*). Total length from tip of rostrum to posterior margin of telson, ca. 14 cm in the largest male, ca. 11.5 and 13 cm in two ovigerous females.

Remarks. At a first glance this species is somewhat similar to some species of *Heterocarpus* of the Pandalidae due to its monochromatic brick red color and also to two strong longitudinal ridges originating from the antennal and branchiostegal spines. This species was finely described and figured together with the following species by the original author (1888), HOLTHUIS (1952) and TORTI & BOSCHI (1973). It is distinguished from the closest congener, *C. capensis* BATE, by having the rostrum usually armed with 4 or 5 dorsal and 3 ventral teeth instead of 6 and 4, respectively.

This species is restricted to the Magellanic region of South America, from the vicinity of 41°S at the Chilean coast through Tierra del Fuego northward to about 47°S off Argentina. It is known from the depths of 30–815 m, mostly from shallower waters than 200 m.

Campylonotus vagans BATE, 1888

Specimens examined. FSFL EM485, EM486 (2 ovig. ♀♀ – 54°39'S, 58°04'W, 180 m deep; May 6, 1978; R/V *Shinkai-Maru*). Total length from tip of rostrum to posterior margin of telson, ca. 10.5 cm in both specimens.

Remarks. This beautiful species was excellently described, figured and noted on its variability by the original author (1888), HOLTHUIS (1952), BOSCHI (1963) and TORTI & BOSCHI (1973). Two ovigerous females examined are very well agreeable with them. As readily known from the revised keys made by YALDWYN (1962) and the above Argentine authors, this species differs from the other known species of the genus in question, *C. semistriatus* BATE from the Patagonian region, *C. capensis* BATE from off Marion Island far south of South Africa, off Argentina and Pernambuco, Brazil, and *C. rathbunae* SCHMITT from the Great Australian Bight and New Zealand, in having the rostrum armed with 7 or more ventral teeth and the scaphocerite narrowing gradually toward the distal tip and terminating in an acute tooth.

This species is known from southern South America, ranging from the Golfo de Ancud at the Chilean coast through the vicinity of the Strait of Magellan northward

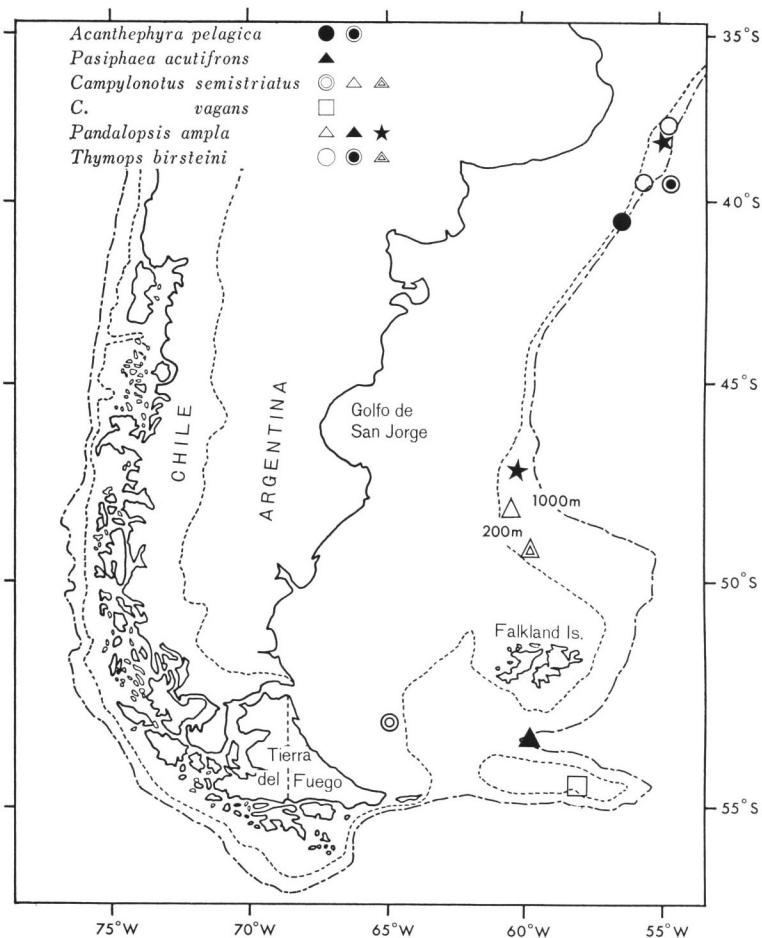


Fig. 1. Localities of the macruran species recorded in the present paper.

to about 41°S at the Argentine coast. It is otherwise known from South Georgia Island in the South Atlantic. Its bathymetric range is from 13 to 320 m.

Family Pandalidae

Genus *Pandalopsis* BATE, 1888

Pandalopsis ampla BATE, 1888

Specimens examined. FSFL EM122 (1 ovig. ♀ - 47°04'S, 60°06'W, 695 m deep; Apr. 23, 1978; R/V *Shinkai-Maru*); EL963 (1 ovig. ♀, 3 exs - 47°59'S, 60°W, 564 m deep; May 25, 1978; R/V *Shinkai-Maru*); EM334 (1 ovig. ♀, 2 exs - 37°56'S, 54°41'W, 795 m deep; June 21, 1978; R/V *Shinkai-Maru*); EM398 (1 ex - 53°32'S, 60°10'W,

1,033 m deep; Aug. 5, 1978; R/V *Shinkai-Marui*). Total length from tip of rostrum to posterior margin of telson, ca. 15.5 cm in a specimen (EM398).

Remarks. This deep-sea large, rare, beautiful species was redescribed and figured by BOSCHI (1973), with which the specimens examined are perfectly agreeable as well as with the original description. The type locality is off Montevideo, Uruguay, 600 fm deep, the recent records being within the range between 41° and 55° off Argentina, 480–1,250 m deep. In addition to the southwestern Atlantic records, this species had been recorded from some localities from Washington to Mexico by FAXON (1895) and RATHBUN (1904). It is not sure at present, without direct comparison of the specimens, whether the northeastern Pacific population is really identical or not with the Patagonian species. On the other hand, the general shape and color of the present species are very close to those of *P. coccinata* URITA from northern Japanese waters. The present species is, however, readily distinguished from it by having 12–16 lower rostral teeth instead of 8–10.

Family Nephropidae

Genus *Thymops* HOLTHUIS, 1974

Thymops birsteini (ZARENKOV et SEMENOV, 1972)

Specimens examined. FSFL EL802, EL803 (3 ♂♂ – 49°05'S, 59°52'W, 394 m deep; May 2, 1978; R/V *Shinkai-Marui*); EM286 (2 ♀♀ – 39°30'S, 54°17'W, 1,222 m deep; June 7, 1978; R/V *Shinkai-Marui*); EM593 (1 ♂ – 37°28'S, 54°27'W, 810 m deep; June 19, 1978; R/V *Shinkai-Marui*); EL911 (1 ♀ – 39°30'S, 55°32'W, 719 m deep; July 19, 1978; R/V *Shinkai-Marui*). Total length from tip of rostrum to posterior margin of telson, ca. 12.5–23 cm.

Remarks. This deep-water large species was excellently described and figured by the original Russian authors (1972), and also by HOLTHUIS (1974) who established a new genus to accommodate this Patagonian species. BOSCHI (1976) also published a good photograph of a female from south of the Falkland Islands, 1,400 m deep. The general shape of the carapace and chelipeds is close to that of *Nephropsis* or *Nephropides*, but the present species is generically distinct from them by having the abdominal pleura broadly overlapping, the lateral margin of the telson armed with 2–4 spines and the exopod of the second maxilliped without flagellum.

This species is known from the continental slope off Argentina between 37° and 55°S and between 54° and 61°W, 135–1,400 m deep, and also from the southern Chilean coast.

Family Galatheidae

Genus *Munida* LEACH, 1820

Munida gregaria (FABRICIUS, 1793)

Specimens examined. FSFL B3060 (14 ♂♂, 6 ♀♀ – 51°00.5'S, 58°59'W, 132 m

deep; Dec. 23, 1969; R/V *Kaiyo-Maru*). Most of the specimens are deformed and damaged.

Remarks. This surprisingly characteristic species was dealt with by HAIG (1955) with the full synonymy and a photograph. RETAMAL's figure (1981) is somewhat schematic, but good for understanding the distinguishing characters, especially the frontal armature and the third maxilliped.

This species ranges from the vicinity of the Falkland Islands through the Strait of Magellan and Tierra del Fuego northward to the Province of Llanquihue, Chile, and is also known from New Zealand. Its bathymetric range is from the shore to 132 m recorded at present.

Munida spinosa HENDERSON, 1885

Specimen examined. FSFL EM533 (1 ♂ – 46°03'S, 60°01'W, 581 m deep; May 26, 1978; R/V *Shinkai-Maru*). Length of carapace excluding rostral spine, ca. 2 cm.

Remarks. The present species was well described and figured by the original author (1885, 1888), and included in the effective key by CHACE (1942) and PEQUEGNAT & PEQUEGNAT (1970). It is distinguished from the West Atlantic congeners by the combination of the features that (1) the posterior margin of the carapace is unarmed, (2) there is no median spine on the cardiac region, (3) the rostral spine is not distinctly spinose on its margin, (4) the outer terminal spine on the basal antennular segment is longer than the inner one, and (5) the spines of the carapace and chelipeds are very strongly developed.

According to SCELZO & BOSCHI (1973), this species is restricted to Argentine waters from off Buenos Aires to the Falkland Islands, 120–1,250 m deep.

Family Lithodidae
Genus *Lithodes* LATREILLE, 1806
Lithodes antarcticus JACQUINOT, 1852

Specimens examined. FSFL D1944 (1 young ♀ – 52°34'S, 59°17'W, 65 m deep; Dec. 16, 1969; R/V *Kaiyo-Maru*); B3056 (1 ♂ – 54°17'S, 61°30'W, 212 m deep; Dec. 20, 1969; R/V *Kaiyo-Maru*); B828, V868, V872, V874 (2 ♂♂, 1 ♀, 2 juv. ♂♂, 1 juv. ♀ – 51°59'S, 57°47'W, 104 m deep; Dec. 22, 1969; R/V *Kaiyo-Maru*); EM469 (1 ♂ – 37°02'S, 54°29'W, 135 m deep; Apr. 12, 1978; R/V *Shinkai-Maru*); EM182 (1 ♂ – 53°59'S, 67°02'W, 51 m deep; May 15, 1978; R/V *Shinkai-Maru*). Breadth of carapace, ca. 12.5 cm in the largest male (V874) and ca. 15 cm in the largest female (V828).

Remarks. This large, shallow-water species is commercially important with common name as "Centolla" in Chile. The general shape of the carapace, chelipeds and ambulatory legs is similar to that of *L. aequispina* BENEDICT from the deep-water of the North Pacific, but the South American species is somewhat smaller and covered

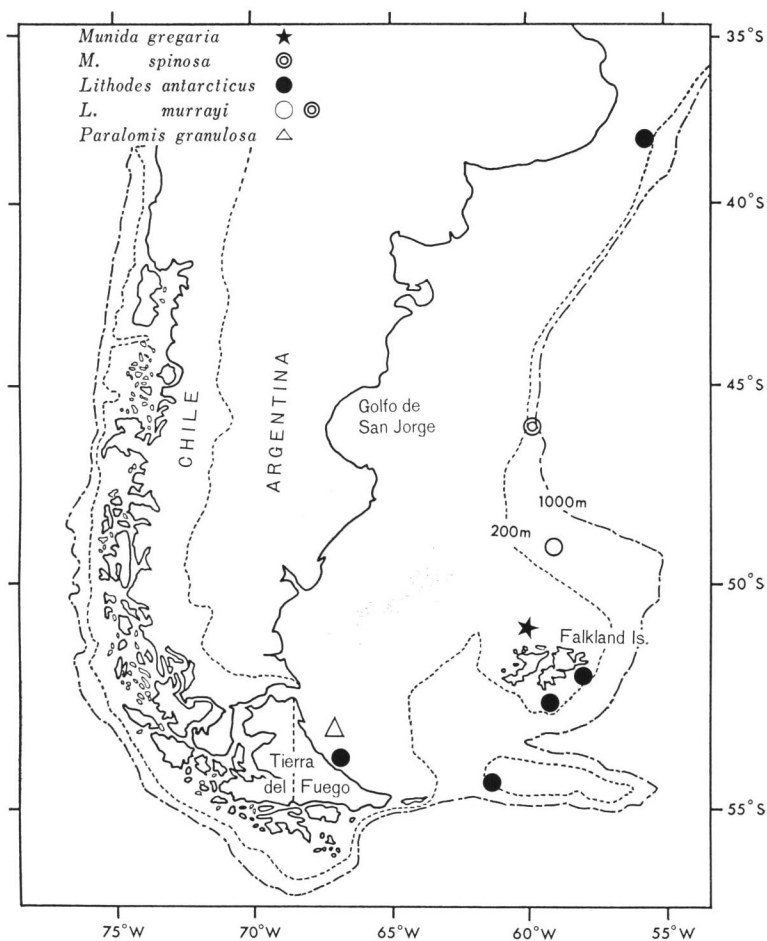


Fig. 2. Localities of the anomuran species recorded in the present paper.

with denser tubercles. In both species it is known that the armature is variable with developing ages. In the larger individuals of the present species the carapace, chelipeds and ambulatory legs are covered with strong tubercles of nearly equal size, but in the individuals smaller than 5 cm in carapace breadth the tubercles are replaced by long spines, and remarkably so in the individuals smaller than 3 cm. The contour of the carapace is also somewhat variable; in the young and juvenile specimens the carapace is almost triangle, but the large individual exceeding 10 cm in breadth has the pentagonal carapace with the developed branchial regions of both sides.

This species ranges geographically from off Buenos Aires through the Strait of Magellan northward to about 42°S at the Chilean coast, and bathymetrically from

the lower littoral zone to 212 m recorded at present.

Lithodes murrayi HENDERSON, 1888

Specimens examined. FSFL EL788 (1 ♂—48°58'S, 59°W, 554 m deep; May 2, 1978; R/V *Shinkai-Maru*); EM531 (1 ♂—46°03'S, 60°01'W, 581 m deep; May 26, 1978; R/V *Shinkai-Maru*). Breadth of carapace excluding lateral spines, ca. 5 and 6 cm.

Remarks. The specimens examined are small and armed with long spines different from tubercles in the larger individuals recorded in literature. There is, however, no doubt about its identification due to the excellent figures and photographs by the original author (1888), HALE (1941), YALDWYN & DAWSON (1970), ARNAUD (1971) and KENSLEY (1977). The researches on the biology and experimental fishing were conducted by ARNAUD *et al.* (1976) and ARNAUD & DO-CHI (1977) at the vicinity of the Croze Islands in the southern Indian Ocean.

This species is widely distributed in Subantarctic waters, but new to the southwestern Atlantic, being previously known from off the Prince Edward and Crozet Islands in the southern Indian Ocean, off east coast of South Africa, southern New Zealand, Macquarie Island and off southern Chilean coast, 75–700 m deep.

Genus *Paralomis* WHITE, 1856

Paralomis granulosa (JACQUINOT, 1852)

Specimens examined. FSFL V893 (2 ovig. ♀♀, 1 ♀—53°4.5'S, 67°53.5'W, 40 m deep; Jan. 16, 1970; R/V *Kaiyo-Maru*). Breadth of carapace, ca. 8.5–9.5 cm.

Remarks. The full synonymy of this well-established, but rather rare species was given by HAIG (1955). The general formation of the carapace, chelipeds and ambulatory legs is similar to that of *P. doffeini* BALSS from Japanese waters. In the present species, however, the granules are sharp, small and fewer, and the lateral margins of the carapace and the anterior margins of the ambulatory legs are fringed with sharp spiniform teeth.

This species is restricted to southern South America from off Lio de Janeiro at the Atlantic coast through the Falkland Islands and the Magellanic district to the vicinity of Chiloé Island at the Pacific coast, being recorded from the lower littoral zone to about 100 m deep.

Paralomis shinkaimaruae TAKEDA, sp. nov.

(Figs. 3–5)

Specimen examined. FSFL EM920 (1 ♀, holotype—Bromley Plateau, 31°13'30'' S, 34°49'W, 668 m deep; Mar. 25, 1977; R/V *Shinkai-Maru*). Length and breadth of carapace excluding rostrum and marginal spines, ca. 7.5 and 7.8 cm, respectively.

It is now preserved in the National Science Museum, Tokyo (NSMT-Cr 8945).

Description of holotype. Carapace roughly triangular rather than pyriform, being thickly covered with elongate tubercles or stout spines of nearly equal length, which are tapering regularly from broad bases; few minute tubercles or spines present among main ones; gastric, cardiac and branchial regions demarcated as usual and evenly convex as a whole; gastric region longitudinal and deeply separated from cardiac region by a transverse short, smooth and deep furrow, having no median spine larger than others; cardiac region narrowing posteriorly, lateral margins of both sides confluent to each other in front of posterior margin of carapace, being covered with 16 spines symmetrically disposed; branchial region not convex, and its outer margin weakly rimmed and fringed with rather slender tubercles or spines; hepatic region outside of anterior half of gastric region small, its outer margin being shallowly separated from branchial margin; of some larger hepatic tubercles or spines first marginal one is shorter than external orbital spine, and last one is situated dorsally.

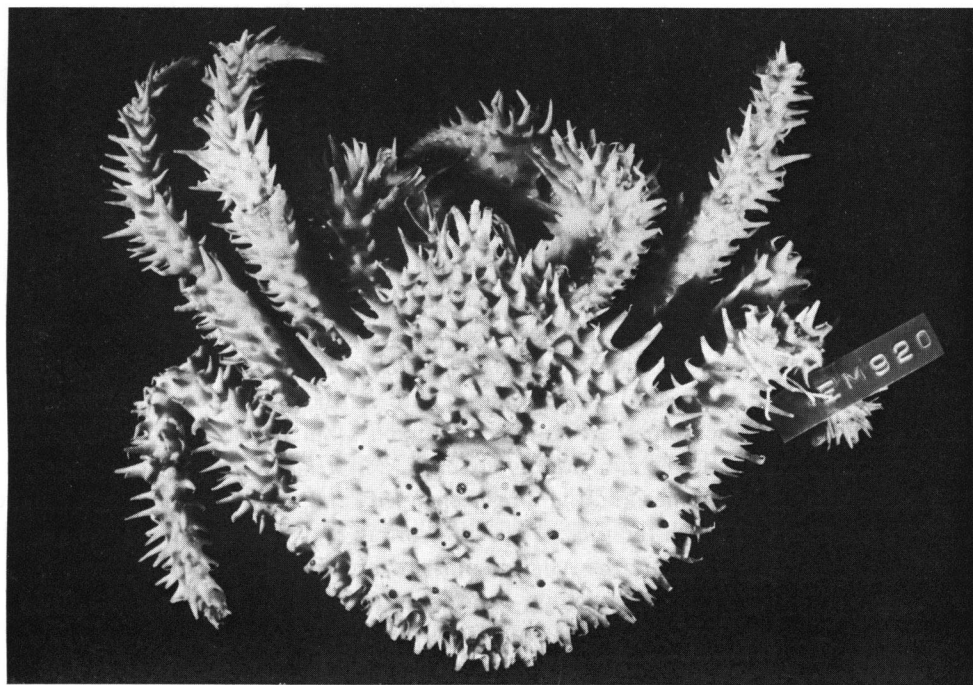


Fig. 3. *Paralomis shinkaimaruae* TAKEDA, sp. nov., holotype.

Frontal spines broken off at their tips; median spine very weakly curved upwards and probably as long as slender external orbital spine, being armed with a median spine at its basal part of lower margin and also with some accessory spinules; paired spines of upper margin also probably long and directed obliquely upwards and outwards, being followed by three much smaller spines in a transverse line with bottom

of orbit. Eyestalk attaining about distal two-thirds of external orbital spine, armed with three long equidistant spines in a longitudinal line on its upper surface. External angle of antennal basal segment produced to be a slender spine and two or three spinules; second segment with three spines at its outer angle and with one at its inner angle; antennal acicle very prominent, being composed of three long outer spines and two shorter inner spines; outer spines longer than antennal peduncle.

Chelipeds and ambulatory legs covered with long spines. Ambulatory legs comparatively short; anterior margin of each merus fairly convex and fringed with several spines.

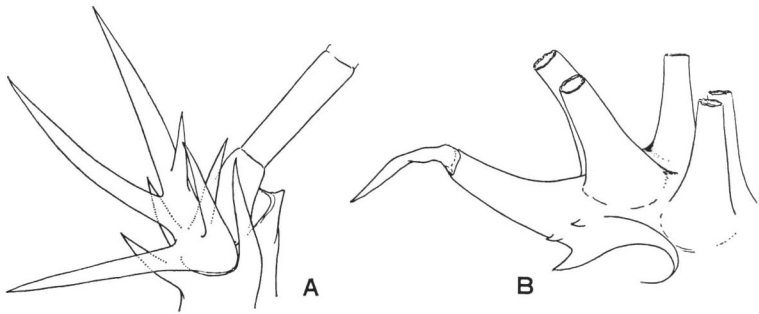


Fig. 4. *Paralomis shinkaimaruae* TAKEDA, sp. nov., holotype — A, left antennal acicle; B, frontal spines in lateral view.

Remarks. The present species is most closely related to *P. hystrix* (DE HAAN) from Japanese waters. In the Japanese species the carapace is thickly covered with slender spines, but as well remarked by SAKAI (1980) who described the closely allied species, each spine is basally swollen like a bulb in the full-grown specimens. In the present species the spines are apparently much stouter, without basal swelling, being better described as the elongate tubercles. *P. hystrixoides* SAKAI from Japanese waters has the slender spines and the longer chelipeds and ambulatory legs, which are also effective to distinguish the present species from it.

Two spinose species from the Atlantic must be brought up for comparison. One is *P. bouvieri* HANSEN from the vicinity of Iceland, 735–795 fm deep, and the other is *P. spinosissimus* BIRSTEIN et VINOGRADOV from the vicinity of South Georgia Island, 215–650 m deep. *P. bouvieri* is rather small species as indicated by the fact that the ovigerous female has the carapace with 43.5 mm in length including rostrum and 34 mm in breadth. Most of the spines are described to be slender each with a little tuft of bristles. It was noted by the original author that the antennal acicle is somewhat variable, but the acicle is typically short, fairly thick, ending with two spines and one spine behind the inner one. *P. spinosissimus* may differ from the present species in having the features that (1) the spines are slender and more crowded, (2) there is a median prominent spine on the gastric region, (3) of the spines on the branchial

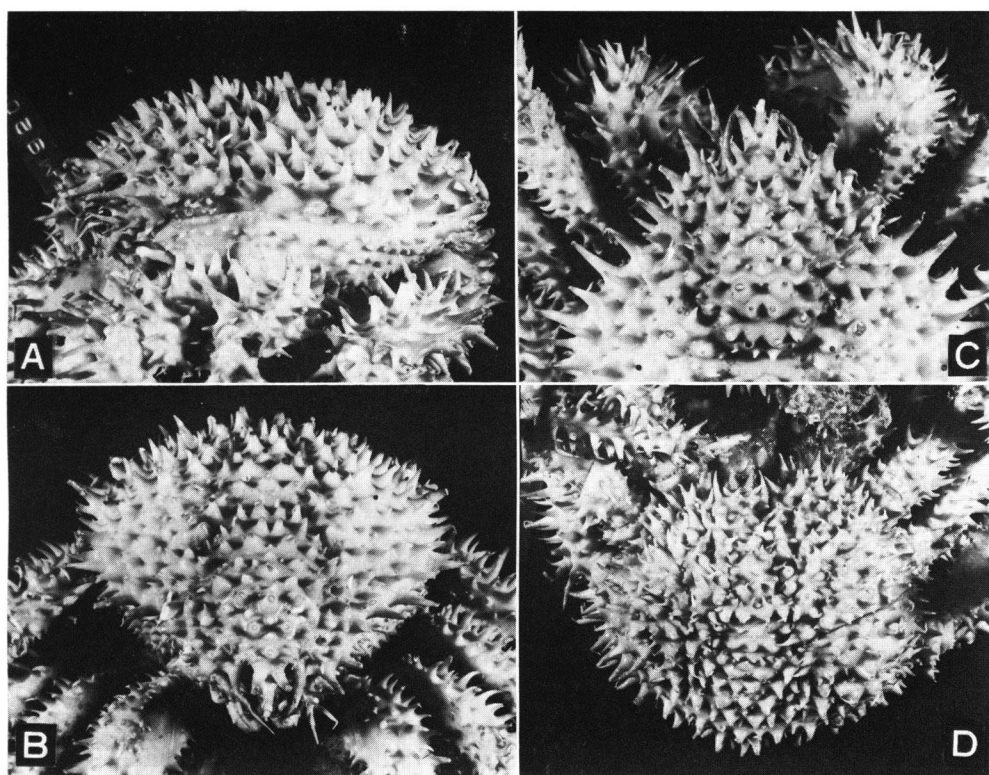


Fig. 5. *Paralomis shinkaimaruae* TAKEDA, sp. nov., holotype. — A and B, carapace in lateral view (A) and oblique frontal view (B); C, anterior half of carapace in dorsal view; D, abdomen.

region four marginal and one inner spines are prominent, (4) there is no strong external orbital spine, (5) the rostrum is armed with a median spine between the paired dorsolateral spines, but unarmed on the lower margin, and (6) each merus of the ambulatory legs is armed with more than ten spines.

Family Majidae

Genus *Eurypodius* GUÉRIN, 1825

Eurypodius latreillei GUÉRIN, 1825

Specimens examined. FSFL EL870, V880 (1 ♂, 3 ovig. ♀♀ - 40°06'S, 56°15'W, 155 m deep; June 8, 1978; R/V *Shinkai-Maru*). Length of carapace including rostrum, ca. 3.5–5 cm.

Remarks. This highly variable species was fully described and figured by GARTH (1958) with the perfect synonymy and previous records. Another representative of the genus, *E. longirostris* MIERS is known from some localities of the Magellanic

region (MIERS, 1886; RETAMAL, 1974), being differentiated from the present species in having the rostral spines divergent and inclined upwards, and the slender ambulatory legs.

This species ranges geographically from Peru through the coast of Chile, the Strait of Magellan and the Falkland Islands northward to San Matias Bay, Argentina, and bathymetrically from about 10 to 155 m, exceptionally to the depth of 250–300 m.

Genus *Libidoclaea* H. MILNE EDWARDS et LUCAS, 1842

Libidoclaea granaria H. MILNE EDWARDS et LUCAS, 1842

Specimens examined. FSFL EM411 (1 ♂ – 42°01'S, 63°58'W, 106 m deep; June 2, 1978; R/V *Shinkai-Maru*); EL869 (1 ♂ – 40°01'S, 61°01'W, 40 m deep; June 4, 1978; R/V *Shinkai-Maru*); EL873, EL874 (3 ovig. ♀♀ – 40°06'S, 56°15'W, 155 m deep; June 8, 1978; R/V *Shinkai-Maru*). Breadth of carapace including lateral tubercles, 3.8–9.2 cm.

Remarks. Another representative of the genus, *L. smithii* (MIERS) from the Chilean coast, has the longer and deeply bifurcated rostrum with the tips directed obliquely outwards, and the very long main tubercles on the carapace. GARTH (1957) mentioned the view that *L. granaria* is the shallow-water, *L. smithii* the deep-water, form.

This species is restricted to southern South America from off San Matias Bay, Argentina through the Strait of Magellan northward to Valparaiso, Chile, 30–155 m deep recorded at present.

Genus *Libinia* LEACH, 1815

Libinia spinosa H. MILNE EDWARDS, 1834

Specimens examined. FSFL EL871, EL874 (2 ♂♂ – 40°06'S, 56°15'W, 155 m deep; June 8, 1978; R/V *Shinkai-Maru*). Breadth of carapace, 5.5 cm.

Remarks. The fine photographs of this large spider crab were printed by RATHBUN (1925), being distinguished from the closest congener, *L. emarginata* LEACH from the Atlantic North America, most readily by having 7 median tubercles (4 behind the cervical groove) on the dorsal surface instead of 9 (5 behind the cervical groove).

This species is distributed from Rio de Janeiro, Brazil, southward to San Matias Bay, Argentina. GARTH (1958) indicated that this species had been included in the Chilean fauna on the erroneous old records. According to the list of the material examined by RATHBUN (1925), the bathymetric records are 7 and 10.5 fm, and thus the present record extended the range down to 155 m.

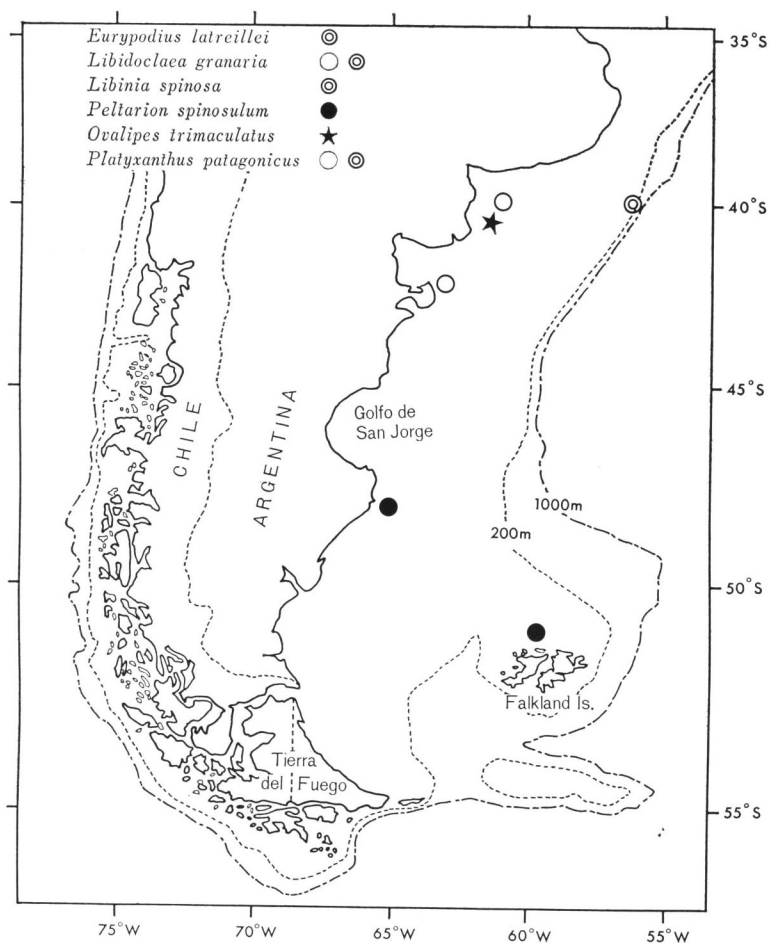


Fig. 6. Localities of the brachyuran species recorded in the present paper.

Family Atelecyliidae

Genus *Peltarion* JACQUINOT, 1852

Peltarion spinosulum (WHITE, 1843)

Specimens examined. FSFL B2247 (1 ♂, 1 ♀ - 48°0.58'S, 65°07.5'W, 104 m deep; Dec. 27, 1969; R/V *Kaiyo-Maru*); B3058 (2 ♂♂, 1 ♀ - 51°01'S, 59°40.2'W, 116 m deep; Dec. 23, 1969; R/V *Kaiyo-Maru*). Breadth of carapace, ca. 4-4.5 cm.

Remarks. This well-established species was said to be common at the Chilean coast by GARTH (1957). The figures were represented by JACQUINOT & LUCAS (1853) under the name of *O. magellanicus* JACQUINOT which is without doubt synonymous

with the present species, and also by RATHBUN (1930) under the misspelling as “*spinulosum*”.

Another representative of the genus, *P. dextrum* (RATHBUN) from off the Yucatan Peninsula, 425 m deep, has the carapace distinctly longer than wide, and the indistinct marginal spinules of the carapace.

This species is restricted to southern South America from off the Cape Santa María, Uruguay through the Falkland Islands and the Strait of Magellan to northern Chile, 5–300 m deep.

Family Portunidae

Genus *Ovalipes* RATHBUN, 1898

Ovalipes trimaculatus (DE HAAN, 1833)

Specimen examined. FSFL EM103 (1 ♂ – 40°29'S, 61°35'W, 35 m deep; July 21, 1978; R/V *Shinkai-Maru*). Breadth of carapace, 9.5 cm.

Remarks. The genus *Ovalipes* was extensively revised by STEPHENSON & REES (1968), and then the present species was resurrected. The *punctatus* group defined by them as having the stridulating striae on the lower border of the palm is represented by the following five species: *O. punctatus* (DE HAAN) from Japan and China, *O. trimaculatus* (DE HAAN) dealt herewith, *O. catharus* (WHITE) from New Zealand and southeastern Australia, *O. australiensis* STEPHENSON et REES from southern half of Australia, and *O. elongatus* STEPHENSON et REES from Lord Howe Island and the Kermadec Islands.

This species is a shallow-water inhabitant, being known from South Africa, the East Pacific from southern Peru to about 50°S at the Chilean coast, and the West Atlantic from Uruguay to about 43°S at the Argentine coast.

Family Platyxanthidae

Genus *Platyxanthus* A. MILNE EDWARDS, 1863

Platyxanthus patagonicus A. MILNE EDWARDS, 1879

Specimens examined. FSFL EM412 (1 ♂ – 42°01'S, 63°58'W, 106 m deep; June 2, 1978; R/V *Shinkai-Maru*); EM516 (1 ♀ infested by a sacculinid parasite – 40°01'S, 61°01'W, 40 m deep; R/V *Shinkai-Maru*); EL872 (2 ♀♀ – 40°06'S, 56°15'W, 155 m deep; June 8, 1978; R/V *Shinkai-Maru*). Breadth of carapace, 7.5–12 cm.

Remarks. This large species, which was represented on the excellent photographs by RATHBUN (1930), is readily distinguished from two other species of the genus, *P. orbignyi* (H. MILNE EDWARDS et LUCAS) from Peru and Chile and *P. crenulatus* A. MILNE EDWARDS from Uruguay and Argentina, by having the sharp anterolateral teeth. According to GUINOT (1968), *P. cokeri* RATHBUN from Peru may be synonymous with *Pelaeus armatus* EYDOUX et SOULEYET probably from South Sandwich Island,

and also *P. balboae* GARTH from the Panamanian Pacific may also be transferred to *Pelaeus*.

The geographical range is from Uruguay to the vicinity of San Jorge Bay, southern Argentina, the bathymetric range being from 40 to 115 m.

Discussion

Among 18 species recorded at present *Paralomis shinkaimaruuae* sp. nov. (Lithodidae) may be reasonably excluded from the Argentine carcinological fauna, since its locality is the oceanic plateau far off southern Brazil. It is otherwise remarked that *Lithodes murrayi* (Lithodidae) was newly added to the Argentine fauna.

The remaining 16 species were already discussed about their distributional pattern by BOSCHI (1966, 1976), who mentioned that the Patagonian coast is affected by the Falkland Cold Current branched from the Cape Horn Current and by the Brazil Warm Current. According to his works, therefore, the Argentine continental shelf is biogeographically divided into the warm-temperate and cold-temperate regions. The warm-temperate region extending from the coastal waters of Buenos Aires Province to the vicinity of 41°S, northern Patagonia, is mainly inhabited by the littoral and shallow-water species. Among the species recorded in the present paper, *Libinia spinosa* (Majidae), *Ovalipes trimaculatus* (Portunidae) and *Platyxanthus patagonicus* (Platyxanthidae) belong to the element of warm-temperate region. It must be noted that the portunid crab, one of the five close congeners in the genus *Ovalipes* as mentioned in the text, is peculiar in its discontinuous distribution, being known from South Africa and both coasts of southern South America.

The cold-temperate region was subdivided into (1) the deep-water off Buenos Aires Province (36–41°S), (2) southern Patagonia (41–52°S), and (3) the water adjacent to Tierra del Fuego, the Strait of Magellan and the Falkland Islands (51–56°S). Among the remaining 13 species recorded in the present paper, *Acanthephyra pelagica* (Oplophoridae), *Campylonotus vagans* (Campylonotidae), *Pandalopsis ampla* (Pandalidae), *Thymops birsteini* (Nephropidae), *Lithodes antarcticus* and *Paralomis granulosa* (Lithodidae), *Eurypodius latreillei* and *Libidoclaea granaria* (Majidae), *Peltarion spinosulum* (Atelecyclidae) are distributed throughout the whole range of the cold-temperate region, representing the first subregion of the cold-temperate region. A total of 7 species except for *A. pelagica* and *P. ampla* are extending their ranges further to the Chilean coast through the Magellanic region (HOLTHUIS, 1952; HAIG, 1955; GARTH, 1957; GARTH *et al.*, 1967; RETAMAL, 1981). These two exceptional species are noted to be characteristic in their distributional pattern probably due to the insufficient state of their systematic knowledge. *A. pelagica* is known from the eastern and southwestern Atlantic and the southern Indo-Pacific, while *P. ampla* is known also from the northeastern Pacific in addition to the southwestern Atlantic, with doubtful identity of the two isolated populations. *Munida spinosa* (Galatheidae) may be fallen in the second subregion of the cold-temperate region and one of the

few offshore endemic species ranging from off Buenos Aires to the Falkland Islands. *Pasiphaea acutifrons* (Pasiphaeidae), *Campylonotus semistriatus* (Campylonotidae), and *Munida gregaria* (Galatheidae) are included in the third subregion of the cold-temperate region, extending their ranges from the vicinity of the Falkland Islands to the Chilean coast. The galatheid is also known from New Zealand. *Lithodes murrayi*, which is new to Argentine waters as mentioned before, also belongs to this subregion, being widely distributed in Subantarctic waters.

As a result, the geographical distributions of the species dealt herewith are summarised as follows. Of 17 species from Argentine waters, 14 except for 3 brachyuran warm-temperate species are the inhabitants of the cold-temperate region. In addition, it is remarkable but reasonable that altogether 12 of 17 species are also known from the Chilean coast, even though the continental shelf is narrow and steep along the Chilean coast and has a wide gentle slope along the Argentine coast. Among the species recorded in the present paper, the true deep-water inhabitants are *Acanthephyra pelagica*, *Pasiphaea acutifrons*, *Campylonotus semistriatus*, *Pandalopsis ampla*, *Thymops birsteini*, *Munida spinosa* and *Lithodes murrayi*, and the remaining 9 species are the inhabitants of the continental shelf.

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