

## Crabs of the Ogasawara Islands

### III. Some Species Collected by Coral Fishing Boats

By

**Masatsune TAKEDA**

Department of Zoology, National Science Museum, Tokyo

and

**Yôji KURATA**

Ogasawara Fisheries Center, Chichi-jima, Ogasawara

The third report of this series is mainly based on a collection made by Mr. Taku SASAKI between Chichi-jima and Haha-jima Islands and presented by Mr. Takao YOSHIDA. This collection consists of seven specimens which were identified as seven species of four families. Among them, however, two species of the Leucosiidae and Xanthidae are probably the inhabitants of the rocky shore or coral reef. This collection is small in the number of species, but remarkable in the presence of two new species closely related to the congeners from the Japanese mainland and oceanic islands in the Indian Ocean. The additional materials recorded herein are the remains in a small collection from off Chichi-jima and Yome-shima Islands made by Mr. Sugio KIHARA and partly reported by TAKEDA (1973), and also a small collection from off Tori-shima Island collected by Mr. Masazi SUZUKI and presented by Dr. Sadao KOSUGE. Most of the specimens including the type-specimens of the new species are preserved in the National Science Museum, Tokyo. Our cordial thanks are due to the gentlemen who placed the materials at our disposal.

#### Family Dromiidae

Genus *Cryptodromia* STIMPSON, 1858

**134.<sup>1)</sup> *Cryptodromia yoshidai* sp. nov.**

[New Jap. name: Wantone-kamuri]

(Pl. 1, fig. 2; Pl. 2, figs. 3, 4)

*Material examined.* One male, holotype, NSMT-Cr. 4984, Wanto-ne, coral fishing ground between Chichi-jima and Haha-jima, ca. 200 m deep, Aug. 1968. Breadth of carapace including lateral spinules, 22.5 mm; length with frontal lateral

---

1) Registered number for crabs of the Ogasawara Islands. The species new to the fauna in question are indicated by boldface.

tooth, 19.3 mm.

*Description.* Carapace subcircular, strongly convex in both directions, being covered with thick, minute vesicular granules, a mat of very short setae and rather sparse, short fine hairs. Dorsum divided into convex regions; hepatic region isolated by shallow furrows; protogastric region rounded; a small boss at anterior end of mesogastric region, and posterior part of mesogastric more or less subdivided into two convex parts by a longitudinal furrow; metagastric region narrow, transverse and also separated into two; cardiac region separated from metagastric only by a transverse, narrow, but deep furrow; a large region on branchial area just outside of metagastric and cardiac regions; a boss of good size obliquely in front of this large region, and further a small tubercle; cervical groove traceable, running from median part of lateral border of carapace to posterolateral end of cardiac region; posterior dorsal surface behind cardiac region nearly naked to unaided eye, really with microscopical granules, sloping rapidly.

Frontal median tooth very small, but conical and horizontally directed forward, being entirely visible in dorsal view; each of frontal lateral teeth thin, strongly protruded forward and more or less curved dorsally, its anterior angle being considerably acuminate; preorbital angle inconspicuously angulated, and external orbital angle not prominent at all; distance between preorbital and external orbital angles about two-thirds the distance between frontal lateral tooth and preorbital angle. Infraorbital border with a notch below external orbital angle, and its inner angle with a granulated conical tooth. Basal segment of antenna markedly broad and its anterior angles of both sides strongly developed forward.

Lateral border of carapace continued anteriorly downward to a granulated angle near the antero-external angle of buccal cavern, and then through a hepatic conical projection upward to inner infraorbital angle. Anterior part in front of so-called cervical groove cut into two large lacinated teeth, while posterior part nearly as long as anterior part, only minutely spinulated and more or less subdivided into two. Posterolateral border as long as the posterior part of lateral border and rapidly convergent backward.

Chelipeds long and heavy, being covered and bordered with conical granules and tomentose inside with silky hairs. Merus markedly elongated and for its most part exerted beyond the carapace. Carpus bears two conical processes, viz., one at the junction with palm and the other at its antero-external place, its inner angle being marked with aggregation of several conical granules. Palm long and robust, not bulged, with convex outer and flattened inner surfaces. Fingers about two-thirds as long as the palm, strongly directed downward, leaving a wide gape; movable finger not regularly curved, but more or less angulated at its median part.

Ambulatory legs rough with minute granules. Distal ends of upper surfaces of meri, carpi and propodi nodular, and also ischia of last two pairs tuberculated. Last two pairs markedly reduced and subequal in length, but anterior one stouter and the posterior chelate.

*Remarks.* The genus *Cryptodromia* is divided into two groups, one with a granulated and areolated carapace and the other without granules. The former, to which the new species is referred, is related to the typical species of *Petalomera*, but distinguished from them by having no epipod on the cheliped.

The new species is without doubt most closely related to *C. ornata* RATHBUN from the Saya de Malha Bank and the Seychelles. In this Indian species, however, the lateral border of the carapace is winged nearly in its full length and cut into three stronger teeth in front of the cervical groove and has three or four small teeth behind it, the frontal lateral teeth are directed outward and not approximated to each other, and the chelipeds are very short. *C. cristatipes* SAKAI from the Japanese mainland is rather similar to this new species in the shape of the chelipeds, but the dorsal surface of the carapace is less demarcated without distinct areolation, and the formation of the front is peculiar.

#### Family Leucosiidae

#### Genus *Leucosia* WEBER, 1795

#### 135. *Leucosia insularis* sp. nov.

[New Jap. name: Ogasawara-kobushi]

(Figs. 1, 3 A; Pl. 1, fig. 1)

*Material examined.* One male, holotype, NSMT-Cr. 4985, Wanto-ne, coral fishing ground between Chichi-jima and Haha-jima, ca. 200 m deep, Aug. 1968. Breadth of carapace, 11.6 mm; length, ca. 10.8 mm.

*Description.* Carapace a little broader than long, convex and high in the middle, evenly sloping anterolaterally. Front moderately prominent, dorsally concave in its median line and defined dorsolaterally without distinct postorbital constriction; its free margin obscurely four-lobed. Hepatic region rather angulated, but very faintly demarcated dorsally. Anterolateral and posterolateral borders nearly equal in length; lateral angle of carapace expanded laterally to form a lobe overhanging the thoracic sinus; its free edge devoid of granules, only with a fringe of short stiff hairs; just behind this lateral lobe is a faint concavity, and then posterolateral border strongly convergent posteriorly; thickened epimeral edge or true posterolateral border visible in dorsal view throughout its extent and continuous with posterior border, being beaded with depressed granules without hairs.

Thoracic sinus deep, sharply defined anteriorly by smooth overhanging margin of pterygostomian region, containing many spongy hairs, a large, suboval truncated tubercle in front of coxa of cheliped, and a longitudinal line of several pearly granules below the overhanging edge of lateral lobe.

Chelipeds rather short and robust. Merus depressed and widens distally, its anterior upper border being armed with three large and two or three small pearly tubercles; its lower border and proximal part of anterior surface also covered with a

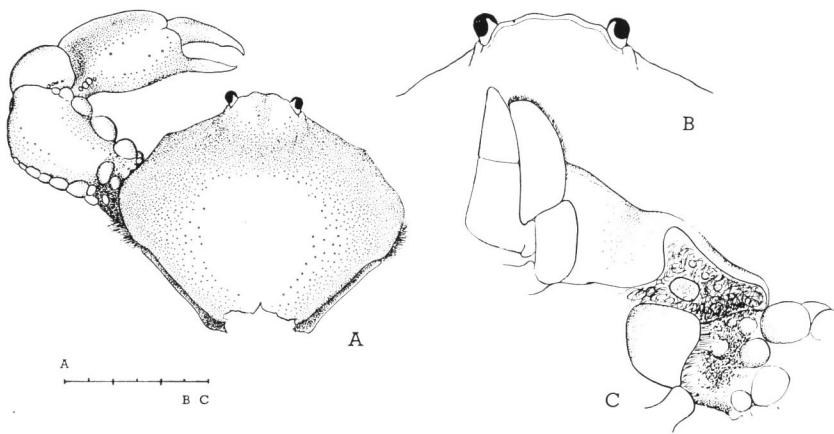


Fig. 1. *Leucosia insularis* sp. nov., male, holotype. A, Carapace with left cheliped. B, Frontal region. C, Third maxilliped and thoracic sinus of left side.

cluster of round tubercles of good size; upper surface with two tubercles and a mat of short setae at its proximal end, and otherwise smooth and shining; posterior border beset with a row of several studded, depressed tubercles. Outer borders of palm and movable finger cristate and entire, while inner border of palm weakly swollen with a row of obscure granules distally; fingers about two-thirds the length of palm and obscurely dentate distally, a narrow hiatus being left proximally.

Ambulatory legs strong. Merus with one anterior and two posterior granulated crests; in first pair, in addition, a longitudinal one on upper surface along anterior crest. Anterior border of carpus and both borders of propodus strongly crested.

Abdomen fairly wide and consists of four pieces; first segment small, and lateral border of second sinuate with a distinct constriction at its subdistal part; third as long as second, with a small transverse plate near its median part, regularly tapering distally.

No distinct ocelli, and dorsum only mottled with brownish stripes which are indistinct, but symmetrically disposed and more or less reticulated. Similar stripes on chelipeds.

*Remarks.* This species is closely related to *L. elata* A. MILNE EDWARDS from Samoa, New Caledonia, Sri Lanka and Persian Gulf, *L. angulata* (RATHBUN) from the Seychelles, and *L. sagamiensis* SAKAI from Japan.

The new species is distinguished from *L. elata* by the broader carapace, the absence of tubercles along the lateral lobe of the carapace, the indistinctly four-lobed front, the presence of a large truncated tubercle in the thoracic sinus, and having much larger round tubercles on the merus of the cheliped. *L. angulata* differs from this new species in the narrower carapace, the four-toothed, strongly protruded front, the angulated hepatic margin, and the conical tubercles on the merus of the cheliped. The new species may be the closest to the Japanese species, *L. sagamiensis*, but the anterolateral and posterolateral borders are subequal in length, so that the contour of the carapace is



distinctly different from it, the front is obscurely four-lobed, and the lateral lobe of the carapace bears a fringe of stiff hairs without granules. The male first pleopod of the new species is also different from it in having a hooked tip. In the Japanese species, unfortunately, the details of the thoracic sinus were not mentioned.

Genus *Nucia* DANA, 1852

136. *Nucia speciosa* DANA, 1852

(Fig. 2; Pl. 2, fig. 5)

*Nucia speciosa* DANA, 1852, p. 397; BOUVIER, 1915, p. 44, pl. 6 (2); SERÈNE, 1955, p. 165, figs. 5 (D-F), 6 (C), pls. 6 (5), 7 (8-10); SAKAI, 1965 b, pp. 38, 43, pl. 5 (3).

*Ebalia pfefferi* DE MAN, 1888, p. 390, pl. 17 (4).

*Nucia pfefferi*: ALCOCK, 1896, p. 191; DE MAN, 1902, p. 684; NOBILI, 1906, p. 162.

*Material examined.* One young female, NSMT-Cr. 4986, in the collection made by Mr. T. YOSHIDA.

*Remarks.* A female specimen at hand is not fully developed only with 8.2 mm in carapace breadth and 6.9 mm in its length. It may differ from the adult specimens in the contour of the carapace, but seems to be rather similar to a young male identified with question by SERÈNE (1955). In the large specimens the longitudinal grooves isolating the median gastric region are distinct, the lateral teeth of the carapace are large and conical, and the subhepatic region is strongly produced to be tuberculated.

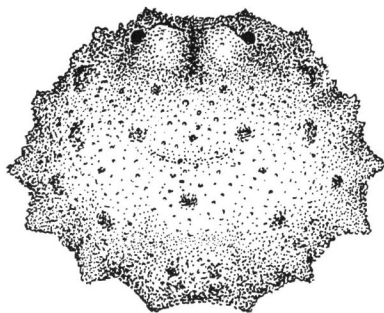


Fig. 2. Carapace of *Nucia speciosa* DANA, young female.

As seen in the text-figure, the carapace is a little broader than long, strongly convex antero-posteriorly, but not so as to be spherical. The dorsal surface is thickly covered with granules of various size and studded with several granulated bosses or obtuse tubercles that are symmetrically disposed. The disposition of these bosses is not always exactly agreeable with the previous figures, but it may be variable with the advanced ages.

The Hawaiian specimens dealt with by RATHBUN (1906) from the considerable depths are much smaller than the type-specimen, the breadth of the ovigerous female

being 5.2 mm. It is highly probable that they represent a species distinct from this widely distributed species found at the coral reefs.

*Distribution.* The geographical range is from the Ryukyu Islands to New Caledonia, and then through India and Mauritius to the Red Sea.

### Family Majidae

#### Genus *Cyrtomaia* MIERS, 1886

#### 137. *Cyrtomaia platypes* YOKOYA, 1933

(Pl. 2, fig. 1)

*Cyrtomaia platypes* YOKOYA, 1933, p. 145, fig. 52; TAKEDA and MIYAKE, 1969, p. 501, fig. 11 (f, g).

*Material examined.* One female, NSMT-Cr. 5001, Wanto-ne, coral fishing ground between Chichi-jima and Haha-jima, ca. 200 m deep, Aug. 1968.

*Remarks.* Although the original figure is rather diagrammatic, and the description is not through, the identification of the female specimen at hand is not difficult on account of having the foliaceous peduncle of the antenna. The arrangement of the spines is rather similar to the case of *C. owstoni* TERAZAKI except for the presence of a spinule behind the main branchial spine. The decided difference is the absence of the intercalated spine in this species, and otherwise the true rostrum is not acuminate at the tip. In the original figure the pseudorostral spines are almost obsolete, but in the female at hand they are distinct and directed forward. The merus of the cheliped is more or less bulged in the middle, and the meri of the anterior two pairs of the ambulatory legs are weakly tapering along the distal one-third. The discrepancy of the shape of the ambulatory meri may be referred to the difference in the sex.

It is unfortunate that without direct comparison this species is not distinctly demarcated from *C. hispida* (BORRADAILE) from New Zealand.

*Distribution.* This species has originally been recorded from several localities from the Kii Peninsula to the Tsushima Islands along the coasts of Shikoku and Kyushu, and is also known from the East China Sea. Its bathymetric range is from 106 to 219 m.

#### Genus *Hyastenus* WHITE, 1847

#### 138. *Hyastenus cornigerus* SAKAI, 1938

(Fig. 3 E, F; Pl. 2, fig. 2)

*Hyastenus cornigerus* SAKAI, 1938, p. 283, fig. 37.

*Material examined.* One male, Wanto-ne, coral fishing ground between Chichi-jima and Haha-jima, ca. 200 m deep, Aug. 1968. One male, NSMT-Cr. 5002, S.S.E. 4 miles off Chichi-jima, 185 m deep, Sept. 23, 1971.

*Remarks.* In the large male the carapace length excluding the pseudorostral horns is 37.0 mm, its breadth including the lateral tubercles 33.8 mm, and the length

of the pseudorostral horn 19.0 mm. The smaller male with 18.8 mm in the carapace length is nearly the same size with the holotype female. They are safely identified with this rare species known only by the original description based on three females from the Pacific coast of Japan. The arrangement of the tubercles are rather constant as described in the original description. In the male specimens at hand the lateral branchial tubercle is so strongly developed that the carapace is much wider than the female holotype. It is otherwise noted that the hepatic tubercle is also strongly developed, the supraocular eave is rather distinctly divided into two parts with the angulated anterior and obtuse posterior angles, and that the inner border of the postocular cup is so incised as to form a conical lobe. In the large male both chelipeds are heavy with the inflated palms, a wide gape being left along the proximal two-thirds of both fingers.

At the first glance this species is very similar to *Naxioides mammillatus* (ORTMANN) in its general appearance having more or less papillate tubercles. In this species, however, the tubercles are fewer and generically distinct from it due to having no accessory spine on the pseudorostral horn.

The male first pleopod of this species figured in this report is also very similar to that of *N. mammillatus*, differing from it only in the details of the apical part. The genus *Hyastenus* is included in the Hyasteniinae which only differs from the Pisinae, to which the genus *Naxioides* is referred, in the absence of the intercalated spine. In the species dealt herewith, however, the postocular cup is more or less incised, and a conical lobe thus formed may represent an imperfect intercalated spine. Although in this species there is no accessory spine on the pseudorostral horn, it seems to be unreasonable to refer it to the genus distinct from *N. mammillatus* due to the great similarity in the general formation of the carapace and first male pleopod.

On the other hand, the male first pleopod of the type-species of *Hyastenus*, *H. sebae* WHITE, was figured by BUITENDIJK (1939) who dealt with many species of the genus in question. In spite of the poor figures there remains little doubt that the male first pleopod of the type-species forms the basic pattern, to which that of this species is referred. Another type of the male first pleopod with a long apical process represented by *H. aries* (LATREILLE), *H. diacanthus* (DE HAAN) and *H. planasius* (ADAMS et WHITE) may suggest the subdivision of the genus in question.

*Distribution.* This species has hitherto been reported from Shimoda in the east coast of the Izu Peninsula and Gobo in the west coast of the Kii Peninsula. It was originally noted that it inhabits the weedy rocky shore from 10 to 20 m.

### Genus *Leptomithrax* MIERS, 1886

#### 139. *Leptomithrax bifidus* (ORTMANN, 1893)

(Fig. 3 B-D)

*Paramithrax* (*Leptomithrax*) *bifidus* ORTMANN, 1893, p. 52, pl. 3 (6); PARISI, 1915, p. 290, pl. 7 (2). *Leptomithrax bifidus*: SAKAI, 1938, p. 303, pl. 3 (1); 1965 a, pp. 86, 36, pl. 39 (1); KIM, 1973, p. 549, fig. 258, pl. 54 (207).

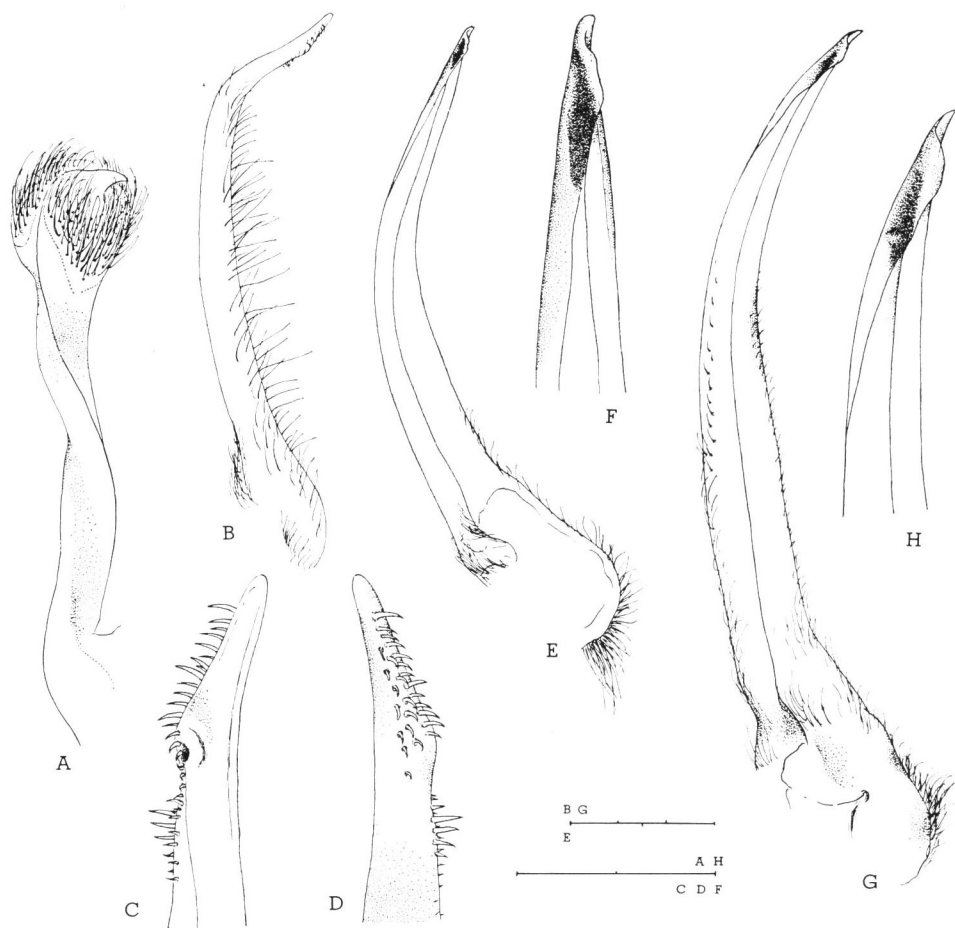


Fig. 3. Male first pleopods. — A, *Leucosia insularis* sp. nov., ventral view. — B-D, *Leptomithrax bifidus* (ORTMANN), ventral, sternal and ventral view, respectively. — E, F, *Hyastenus cornigerus* SAKAI, ventral and sternal view. — G, H, *Naxioides mammillatus* (ORTMANN), ventral and sternal view.

*Material examined.* One male, NSMT-Cr. 5003, S. S. E. 4 miles off Chichijima, 185 m deep, Sept. 23, 1971. One female, NSMT-Cr. 5004, S. S. W. 4 miles off Yome-shima, 180 m deep, Oct. 4, 1971. One male, NSMT-Cr. 5005, S. W. 3 miles off Yome-shima, 210 m deep, Oct. 13, 1971.

*Remarks.* This species, one of the three Japanese representatives of this genus, is readily distinguished from the others by having the bifid postorbital tooth and five slender marginal spines of the carapace. The general formation of the male first pleopod is rather similar to that of *L. edwardsii* (DE HAAN) which was represented by TAKEDA and MIYAKE (1969), differing from it in the details of the apical armature.

*Distribution.* This species is not uncommon in the Japanese waters from Tokyo

Bay to the north of Kyushu along the Pacific coast. Its bathymetric range is from 50 to 192 m.

Genus *Naxioides* A. MILNE EDWARDS, 1865

126. *Naxioides mammillatus* (ORTMANN, 1893)

(Fig. 3 G, H)

*Naxia mammillata* ORTMANN, 1893, p. 56, pl. 3 (7).

*Naxioides mammillata*: RATHBUN, 1911, p. 253; SAKAI, 1938, p. 268, pl. 27 (1); 1965 a, pp. 78, 33, pl. 35 (1).

*Material examined.* One male, NSMT-Cr. 5006, S. S. E. 4 miles off Chichijima, 185 m deep, Sept. 23, 1971. One male and two females, off Tori-shima.

*Remarks.* This large species is readily distinguished from the congeners by the armature of the dorsum having many papillate tubercles. The largest male has 72.5 mm in the carapace length excluding the pseudorostral horns, and the female with 48 mm in the length is not fully developed. As regards the relation to *Hyastenus cornigerus* SAKAI, to which the general appearance is greatly similar, see the remarks for that species. The inclusion in this genus merely based on having an accessory spine on each pseudo-rostral horn may not be natural.

*Distribution.* This species is known from the Sagami Sea to the Tsushima Islands along the Pacific coast of Japan, and also from the Salomon Bank in the Indian Ocean. Its bathymetric range is from 70 to 215 m.

#### Family Parthenopidae

Genus *Dairoides* STEBBING, 1920

140. *Dairoides kusei* (SAKAI, 1938)

*Asterolambrus kusei* SAKAI, 1938, p. 341, pl. 41 (5, 6).

*Dairoides kusei*: SAKAI, 1965 a, pp. 99, 41, pl. 45 (2).

*Material examined.* One female, Wanto-ne, coral fishing ground between Chichijima and Haha-jima, Aug. 1968.

*Remarks.* This distinctive beautiful species is closely related to another representative of the genus, *D. margaritatus* STEBBING, from South Africa, differing from it only in the ornamentation of the carapace. The true systematic position of this genus is now in the Parthenopidae together with the genus *Daira*, as discussed in detail by GUINOT (1967).

*Distribution.* This species is endemic in the Japanese waters, ranging from Sagami Bay to Tosa Bay. Only the recorded depth is 85 m in Sagami Bay.

## Family Xanthidae

Genus *Hypothalassia* GISTEL, 1848141. *Hypothalassia armata* (DE HAAN, 1835)

*Cancer (Acanthodes) armatus* DE HAAN, 1835, p. 52, pl. 4.

*Acanthodes armatus*: DOFLEIN, 1902, p. 661, pl. 2; RATHBUN, 1923, p. 128, fig. 3, pls. 31, 32 (1); SAKAI, 1939, p. 516, pl. 63.

*Hypothalassia armata*: MCNEILL, 1953, p. 94; GORDON, 1954, West. Austral. Nat., 4, p. 97, figs. 1, 2; SAKAI, 1965 a, pp. 156, 67, pl. 77; KIM, 1973, p. 390, fig. 152, pl. 29 (115).

*Material examined.* One female, off Tori-shima.

*Remarks.* This large species, the monotypic representative of the genus, is characterized by having numerous strong, curved spines on the carapace, chelipeds and ambulatory legs. It is well known that in the full-grown male the spines on the carpus and palm of the larger cheliped are often worn out, and that in the juvenile specimens the hairs are long and numerous, not concealing the surface.

*Distribution.* This species is rather rare in the Japanese waters, geographically ranging from Tokyo Bay to Kyushu and bathymetrically from 30 to 120 m. It is otherwise known from the southern coast of Korea, and from New South Wales, Western Australia and the Great Australian Bight.

Genus *Lydia* GISTEL, 184863. *Lydia annulipes* (H. MILNE EDWARDS, 1834)

*Ruppellia annulipes* H. MILNE EDWARDS, 1834, p. 422.

*Euruppellia annulipes*: MIERS, 1884, p. 523; DE MAN, 1888, p. 293, pl. 11 (4).

*Ozius (Euruppellia) annulipes*: ALCOCK, 1898, p. 188.

*Lydia annulipes*: RATHBUN, 1906, p. 862; SAKAI, 1939, p. 521, pl. 64 (3); FOREST and GUINOT, 1961, p. 122, figs. 109, 110; EDMONDSON, 1962, p. 288, fig. 25 (e).

*Lydia danae* WARD, 1939, p. 7, figs. 11, 12.

*Material examined.* One female, in the collection made by Mr. T. YOSHIDA.

*Remarks.* The authors are of the opinion that the species erected by WARD (1939) as a central Pacific representative is in all probability conspecific with this, since the differences enumerated on the carapace and chelipeds are not specific at all.

*Distribution.* This species is widely distributed in the Indo-West Pacific waters from the Ryukyu Islands through the tropical islands to Hawaii and Tahiti, and further to the east coast of Africa. It is an inhabitant of the coral flat reef, being usually found in the crevice near the high tidal mark.

## Discussion

Altogether ten species of five families, two of which are new to science, were recorded in this paper. Five families are the Dromiidae, Leucosiidae, Majidae, Partheno-

pidae and Xanthidae represented by one, two, four, one and two species, respectively. The eight species with the registered number 134 to 141 including two new species are new to the fauna in question. The fact that seven of the eight offshore species were newly recorded is remarkable, but not surprising, since the deep-water bed off the Ogasawara Islands has been unexploited due to the difficulty in collecting the material without the aid of coral fishing boats at the oceanic islands far from the Japanese mainland. The present material based on three small collections are highly valuable, contributing to the crab fauna of the Ogasawara Islands as the interesting additions in considering the constituents of the offshore crabs.

As already mentioned elsewhere, *Nucia speciosa* of the Leucosiidae and *Lydia annulipes* of the Xanthidae are the inhabitants of the rocky shore or coral reefs, being widely distributed in the tropical and subtropical Indo-West Pacific waters, but unknown from the Japanese mainland. Contrary to these shore crabs, the distributions of six offshore species other than the two new species are largely restricted or peculiar in their patterns. It must be firstly mentioned that all the four species, viz., *Cyrtomaia platypes*, *Leptomithrax bifidus* and *Hyastenus cornigerus* of the Majidae and *Dairoides kusei* of the Parthenopidae, have hitherto been known only from the waters not far from the Japanese mainland, belonging to the so-called endemic element. On the other hand, the distribution patterns of the remaining two species, *Naxioides mammillatus* of the Majidae and *Hypothalassia armata* of the Xanthidae, are remarkable, the former being recorded from the Salomon Bank in the Indian Ocean and the latter from Australia without any intervening localities. There remains little doubt about the identification of this large xanthid crab, while the occurrence of this majid crab in the Indian Ocean needs confirmation because of the record only by RATHBUN (1911).

Although the two new species bear the Japanese congeners, it is interesting to note that their close relatives are also known from the offshore bank and oceanic islands in the Indian Ocean. The species dealt with here are not sufficient for discussing on the characteristics of the offshore crabs around the Ogasawara Islands, but it appears suggestive that the offshore crabs as a whole form a marginal part of the fauna of the Japanese mainland, and that some species became differentiated at the oceanic islands due to certain oceanographic conditions.

### References

- ALOCK, A., 1896, '98. Materials for a carcinological fauna of India. No. 2. The Brachyura Oxytomata. No. 3. The Brachyura Cyclometopa. Part 1. The family Xanthidae. *J. Asiat. Soc. Bengal*, **65**: 134-296, pls. 6-8 (1896), **67**: 67-233 (1898).
- BORRADAILE, L. A., 1916. Crustacea. Part 1. Decapoda. *British Antarctic ("Terra Nova") Exp., 1910. Nat. Hist. Rep.*, (Zool.), **3**: 75-110.
- BOUVIER, E. L., 1915. Décapodes marcheurs (Reptantia) et stomatopodes recueillis à l'île Maurice par M. Paul CARIÉ. *Bull. Biol. Fr. Belg.*, (7), **48**: 178-318, pls. 4-7.
- BUITENDIJK, A. M., 1939. Biological results of the Snellius Expedition. V. The Dromiacea, Oxytomata and Oxyrhyncha of the Snellius Expedition. *Temminckia*, **4**: 223-275, pls. 7-11.

- DANA, J. D., 1852. Crustacea. *United States Exploring Expedition during the years 1838, 1839, 1840, 1841, 1842, under the command of Charles WILKES, U.S.N.*, **13**: 1-1393.
- DOFLEIN, F., 1902. Ostasiatische Dekapoden. *Abh. K. B. Wiss.*, II Cl., **21**: 611-670, pls. 1-6.
- EDMONDSON, C. H., 1962. Xanthidae of Hawaii. *Occ. Pap. Bernice P. Bishop Mus.*, **22**: 215-309.
- FOREST, J., and D. GUINOT, 1961. Crustacés décapodes brachyours de Tahiti et des Tuamotu. *Expédition française sur les récifs coralliens de Nouvelle-Calédonie*, vol. prélim.: i-xi, 1-195, pls. 1-18.
- GUINOT, D., 1967. Recherches préliminaires sur les groupements naturels chez les crustacés décapodes brachyours. III. A propos des affinités des genres *Dairoides* STEBBING et *Daira* DE HAAN. *Bull. Mus. Hist. nat., Paris*, (2), **39**: 540-563.
- HAAN, W. DE, 1833-1849. Crustacea. *Fauna Japonica sive descriptio animalim, quae in itinere per Japoniam, jussu et auspiciis superiorum, qui summum in India Batava Imperium tenent, suscepto, annis 1823-1830 collegit, notis observationibus et abumbrationibus illustravit.* xvii+xxxii+244 pp., pls. 55+A-Q+2.
- KIM, H. S., 1973. Anomura-Brachyura. *Illustrated encyclopedia of fauna & flora of Korea*, **14**: 1-694. (In Korean.)
- MAN, J. G. DE, 1888. Bericht über die von Herrn Dr. J. BROCK in indischen Archipel gesammelten Decapoden und Stomatopoden. *Arch. Naturg.*, **53**: 215-600, pls. 7-22a.
- 1902. Die von Herrn Professor KÜKENTHAL im indischen Archipel gesammelten Dekapoden und Stomatopoden. *Abh. Senckenb. nat. Ges.*, **25**: 467-929, pls. 19-27.
- MCNEILL, F., 1953. Carcinological notes. No. 2. *Rec. Austral. Mus.*, **23**: 89-96, pl. 7.
- MIERS, J. E., 1884. Crustacea. *Report on the Zoological Collections made in the Indo-Pacific Ocean during the Voyage of H.M.S. "Alert" 1881-2*, pp. 178-322, 513-575, pls. 17-34, 46-52.
- MILNE EDWARDS, A., 1874. Recherches sur la faune carcinologique de la Nouvelle-Calédonie. Part 3. *Nouv. Arch. Mus. Hist. nat., Paris*, **10**: 39-58, pls. 2-3.
- MILNE EDWARDS, H., 1834. *Histoire naturelle des Crustacés, comprenant l'anatomie, la physiologie et la classification de des animaux.* 1: i-xxxv+ 1-468.
- NOBILI, G., 1906. Faune carcinologique de la Mer Rouge. Décapodes et stomatopodes. *Ann. Sci. nat. Zool.*, (9), **4**: 1-347, pls. 1-11.
- ORTMANN, A., 1893. Die Decapoden-Krebse des Strassburger Museums, mit besonderer Berücksichtigung der von Herrn Dr. DÖDERLEIN bei Japan und bei Liu-Kiu-Inseln gesammelten und zur Zeit im Strassburger Museum aufbewahrten Formen. VI. Brachyura. I. Majoidea und Cancroidea. *Zool. Jahrb., Syst.*, **7**: 23-88, pls. 3.
- PARISI, B., 1915. I decapodi giapponesi del Museo di Milano. III. Oxyrhyncha. *Atti. Soc. Ital. Sci. nat. Milano*, **54**: 281-296, pl. 7.
- RATHBUN, M. J., 1906. The Brachyura and Macrura of the Hawaiian Islands. *U. S. Fish Comm. Bull.*, **23**: 827-930, pls. 1-24.
- 1911. Marine Brachyura. The Percy Sladen Trust Expedition to the Indian Ocean in 1905. *Trans. Linn. Soc. Lond.*, (Zool.), **14**: 191-261, pls. 1-20.
- 1923. Report on the crabs obtained by F.I.S. "Endeavour" on the coasts of Queensland, New South Wales, Victoria, South Australia and Tasmania. Report on the Brachyrhyncha, Oxystomata and Dromiacea. *Biol. Res. Fish. Exp. Endeavour*, **5**: 95-156, pls. 16-42.
- SAKAI, T., 1938, '39. *Studies on the crabs of Japan. III. Brachygnatha, Oxyrhyncha. IV. Brachygnatha, Brachyrhyncha.* Pp. 193-364, pls. 20-41 (1938), pp. 365-741, pls. 42-111 (1939). Tokyo, Yokendo Co., Ltd.
- 1961. New species of Japanese crabs from the collection of His Majesty the Emperor of Japan. *Crustaceana*, **3**: 131-150, pls. 3-4.
- 1965 a. *The crabs of Sagami Bay.* xvi+206+92+32 pp., pls. 100. Tokyo, Maruzen Co., Ltd.
- 1965 b. Notes from the carcinological fauna of Japan (II). *Res. Crust.*, **2**: 41-46, pls. 5-6.



- SAKAI, T., 1969. Two new genera and twenty-two new species of crabs from Japan. *Proc. biol. Soc. Wash.*, **82**: 243–280.
- SERÈNE, R., 1955. Sur quelques espèces rares de brachyures (Leucosidae) de l'Indo-Pacifique. Part 2. *Treubia*, **23**: 137–218, pls. 6–11.
- STEBBING, T. R. R., 1920. South African Crustacea (Part X of S. A. Crustacea for the marine investigations in South Africa). *Ann. S. Afr. Mus.*, **17**: 231–272, pls. 18–27.
- TAKEDA, M., 1973. A new genus and a new species of the Parthenopidae from the sea off the Ogasawara Islands (Crustacea, Brachyura). *Bull. Natn. Sci. Mus., Tokyo*, **16**: 31–36.
- and S. MIYAKE, 1969. Crabs from the East China Sea. III. Brachygnatha Oxyrhyncha. *J. Fac. Agr., Kyushu Univ.*, **15**: 469–521, pls. 17–18.
- TERAZAKI, T., 1903. [A general view of Japanese crabs.] No. 15. *Zool. Mag., Tokyo*, **15**: 234–241. (In Japanese.)
- WARD, M., 1939. The Brachyura of the Second Templeton Crocker-American Museum Expedition to the Pacific Ocean. *Amer. Mus. Novit.*, (1049): 1–15.
- YOKOYA, Y., 1933. On the distribution of decapod crustaceans inhabiting the continental shelf around Japan, chiefly based on the materials collected by S. S. Sôyô-Marû, during the year 1923–1930. *J. Coll. Agr., Tokyo Imp. Univ.*, **12**: 1–226.

**Explanation of Plates 1–2****Plate 1**

- Fig. 1. *Leucosia insularis* sp. nov., male, holotype. Breadth, 11.6 mm; length, ca. 10.8 mm.
- Fig. 2. *Cryptodromia yoshidai* sp. nov., male, holotype. Breadth with lateral spinules, 22.5 mm; length with frontal lateral tooth, 19.3 mm.

**Plate 2**

- Fig. 1. *Cyrtomaia platypes* YOKOYA, female. Breadth without branchial spines, 12.5 mm; length with true rostral spine, 12.5 mm.
- Fig. 2. *Hyastenus cornigerus* SAKAI, male. Breadth with lateral tubercles, 33.8 mm; length without pseudorostral horn, 37.0 mm.
- Figs. 3, 4. *Cryptodromia yoshidai* sp. nov., male, holotype. Breadth with lateral spinules, 22.5 mm; length with frontal lateral tooth, 19.3 mm.
- Fig. 5. *Nucia speciosa* DANA, young female. Breadth, 8.2 mm; length, 6.9 mm.

