

Mollusca, Gastropoda: The Muricidae collected during the KARUBAR Cruise in eastern Indonesia

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ABSTRACT

Sixteen species of Muricidae were collected during the French-Indonesian KARUBAR cruise. Most of them are new records for the region. *Leptotrophon kastoroae* sp. nov. is described and compared to three similar species from New Caledonia.

RÉSUMÉ

Mollusca Gastropoda : Les Muricidae récoltés lors de la campagne KARUBAR en Indonésie orientale.

Seize espèces de Muricidae ont été récoltées lors de la campagne franco-indonésienne KARUBAR. La plupart de celles-ci n'étaient pas connues dans la région. *Leptotrophon kastoroae* sp. nov. est décrite et comparée à trois espèces similaires de Nouvelle-Calédonie.

INTRODUCTION

Rather few species of Muricidae were collected during the French-Indonesian KARUBAR cruise on board of the Indonesian R.V. "*Baruna Jaya I*". Indonesia and Papua New Guinea have a very diverse muricid fauna (DHARMA, 1988; HINTON, 1972, 1979), and it was thus unexpected that as few as 16 species are represented in the expedition material. Furthermore one third (6 species) occurred only as empty shells. Eleven species (69%) are represented by a single sample and none has been collected at more than three stations. Most probably the bottom types surveyed during KARUBAR were not favourable to muricids. Most hauls sampled fauna on bottoms of mud or sandy mud, whereas a majority of muricids favour hard substrates. Only 15 stations (16% of all stations) yielded muricids, and in 10 of these the family Muricidae is represented by a single species. Three stations (stn 15, 22, 50) yielded two species, and two (stn 18, 30) gave three species each. Despite the small size of the collection, as many

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as 11 species (69%) are new records for the Indonesian archipelago. All this points out to a diverse, but still poorly recorded, fauna, at least in the 100-250 m depth range, where most of the findings have been made.

ABBREVIATIONS AND TEXT CONVENTIONS

Repositories

AMS	Australian Museum, Sydney, Australia
MNHN	Muséum national d'Histoire naturelle, Paris, France
NSMT	National Science Museum, Tokyo, Japan
POLIP	Puslitbang Oseanologi-LIPI [Research and Development Centre for Oceanology - Indonesian Institute of Sciences], Jakarta
RH	Author's collection

Other abbreviations

dd	empty shell
lv	collected alive

SYSTEMATIC ACCOUNT

Family MURICIDAE Rafinesque, 1815

Subfamily MURICINAE Rafinesque, 1815

Genus *HAUSTELLUM* Schumacher, 1817

Haustellum multiplicatum (Sowerby, 1895)

Figs 1-2

MATERIAL EXAMINED. — **Indonesia**. KARUBAR, *Tanimbar Islands*: stn CP 65, 09°14'S, 132°27'E, 174-176 m, 1 dd.

REMARKS. — The species is already known from neighbouring localities, on the Australian side of the Arafura Sea (PONDER & VOKES, 1988). Only one dead and damaged specimen was collected during the expedition.

Genus *CHICOREUS* Montfort, 1810

Chicoreus (Triplex) axicornis (Lamarck, 1822)

MATERIAL EXAMINED. — **Indonesia**. KARUBAR, *Kai Islands*: stn DW 30, 05°39'S, 132°56'E, 111-118 m, 1 lv.

Chicoreus (Siratus) cf. pliciferoides Kuroda, 1942

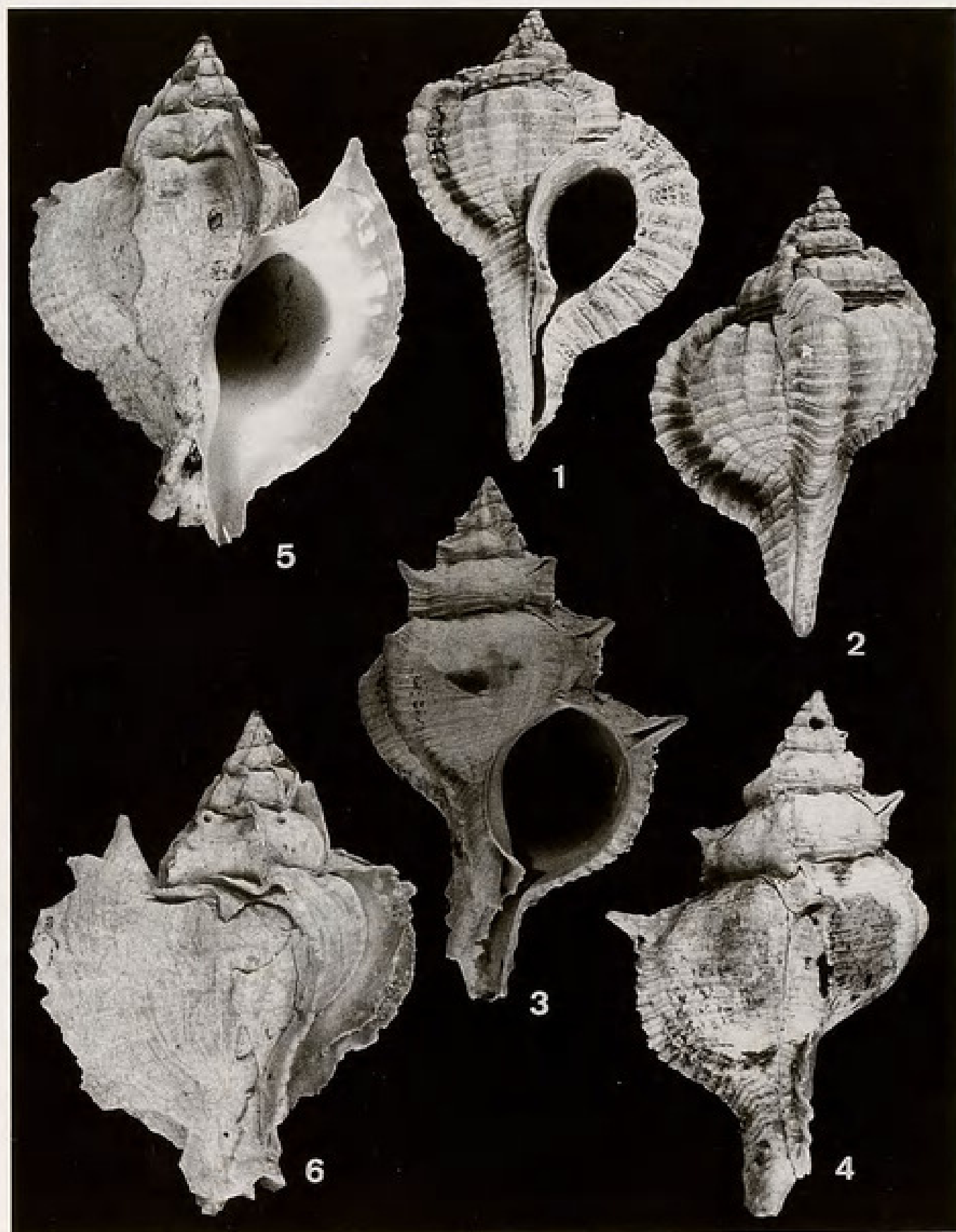
Figs 3-4

MATERIAL EXAMINED. — **Indonesia**. KARUBAR, *Kai Islands*: stn CP 25, 05°30'S, 132°52'E, 336-346 m, 1 dd.

REMARKS. — The identity of the single collected specimen is uncertain. It is probably not *C. pliciferoides*, but this is the most similar species. The present material is lighter, and relatively smaller, with narrower varices. Nevertheless, the shell of *C. pliciferoides* being very variable morphologically, an examination of more numerous specimens from the same region is necessary before a decision can be reached.

Chicoreus (Chicopinnatus) orchidiflorus (Shikama, 1973)

MATERIAL EXAMINED. — **Indonesia**. KARUBAR, *Kai Islands*: stn DW 30, 05°39'S, 132°56'E, 111-118 m, 1 dd.



FIGS 1-2. — *Haustellum multiplicatum* (Sowerby, 1895). Indonesia, Tanimbar Islands, 32.8 mm.

FIGS 3-4. — *Chicoreus (Siratus) cf. pliciferoides* Kuroda, 1942. Indonesia, Kai Islands, 50.1 mm.

FIGS 5-6. — *Poirieria (Flexopteron) poppei* Houart, 1993. Indonesia, Kai Islands, 33.3 mm.

Genus *POIRIERIA* Jousseaume, 1880

Poirieria (Flexopteron) poppei Houart, 1993

Figs 5-6

MATERIAL EXAMINED. — Indonesia. KARUBAR, *Kai Islands*: stn CC 10, 05°21'S, 132°30'E, 229-289 m, 1 lv.

REMARKS. — New record for Indonesia.

Genus *DERMOMUREX* Monterosato, 1890

Dermomurex (Takia) infrons Vokes, 1974

MATERIAL EXAMINED. — Indonesia. KARUBAR, *Tanimbar Islands*: stn DW 49, 08°00'S, 132°59'E, 206-210 m, 1 lv. — Stn DW 50, 07°59'S, 133°02'E, 184-186 m, 1 lv, 1 dd.

REMARKS. — New record for Indonesia. *Dermomurex infrons* was originally described from Japan (as *Murex inermis* Sowerby, 1841, non *M. inermis* Philippi, 1836). The type locality is confirmed by specimens that were recently collected off Tosa Bay and Sagami Bay (NSMT). Specimens are also known from Transkei, South Africa (material in Natal Museum, Pietermaritzburg).

Subfamily MURICOPSINAE Radwin & D'Attilio, 1971

Only three species (3 specimens) were collected during the KARUBAR expedition. All have been originally described from the Philippine Islands and are new records for Indonesia.

Genus *FAVARTIA* JOUSSEAUME, 1880

Favartia jeanae Bertsch & D'Attilio, 1980

MATERIAL EXAMINED. — Indonesia. KARUBAR, *Kai Islands*: stn DW 18, 05°18'S, 133°01'E, 205-212 m, 1 lv.

Genus *MUREXIELLA* Clench & Perez Farfante, 1945

Murexiella judithae (D'Attilio & Bertsch, 1980)

MATERIAL EXAMINED. — Indonesia. KARUBAR, *Kai Islands*: stn DW 30, 05°39'S, 132°56'E, 111-118 m, 1 dd.

Murexiella peregrina Olivera, 1980

MATERIAL EXAMINED. — Indonesia. KARUBAR, *Kai Islands*: stn DW 22, 05°22'S, 133°01'E, 85-124 m, 1 lv.

Subfamily ERGALATAXINAE Kuroda & Habe, 1971

Genus *ERGALATAX* Iredale, 1931

Ergalatax tokugawai Kuroda & Habe, 1971

MATERIAL EXAMINED. — Indonesia. KARUBAR, *Tanimbar Islands*: stn DW 50, 07°59'S, 133°02'E, 184-196 m, 2 lv, 1 dd.

REMARKS. — New record for Indonesia. The species is known from Japan and the Philippine Islands.

Genus *CYTHAROMORULA* Kuroda, 1953*Cytharomorula springsteeni* Houart, 1995

MATERIAL EXAMINED. — **Indonesia**. KARUBAR, *Kai Islands*: stn DW 18, 05°18'S, 133°01'E, 205-212 m, 1 dd. — Stn DW 32, 05°47'S, 132°51'E, 170-206 m, 3 dd.

REMARKS. — New record for Indonesia. The species was only recently described from the Philippine Islands (HOUART, 1995a: 255).

Genus *ORANIA* Pallary, 1900*Orania archaea* Houart, 1995

MATERIAL EXAMINED. — **Indonesia**. KARUBAR, *Kai Islands*: stn DW 22, 05°22'S, 133°01'E, 85-124 m, 1 lv.

REMARKS. — Although only recently described (HOUART, 1995a: 267), it is present in many collections from many localities in the Indo-West Pacific, but was misidentified.

Subfamily TYPHINAE Cossmann, 1903

Genus *SIPHONOCHELUS* Jousseaume, 1880*Siphonochelus japonicus* (A. Adams, 1863)

MATERIAL EXAMINED. — **Indonesia**. KARUBAR, *Kai Islands*: stn DW 13, 05°26'S, 132°38'E, 417-425 m, 2 lv, 1 dd. — Stn DW 15, 05°17'S, 132°41'E, 212-221 m, 1 lv, 5 dd.

Tanimbar Islands: stn DW 49, 08°00'S, 132°59'E, 206-210 m, 1dd.

REMARKS. — New record for Indonesia. Originally described from Japan, its presence there is confirmed by material from Sagami Bay (NSMT 44066). The species is also known from off Queensland, Australia (AMS C169094).

Subfamily TROPHONINAE Cossmann, 1903

Genus *TROPHONOPSIS* Bucquoy & Dautzenberg, 1882*Trophonopsis carduelis* (Watson, 1883)

Figs 7-8

MATERIAL EXAMINED. — **Indonesia**. KARUBAR, *Kai Islands*: stn CP 20, 05°15'S, 132°59'E, 769-809 m, 2 lv, 1 dd. — Stn CC 21, 05°14'S, 133°00'E, 688-694 m, 2 dd.

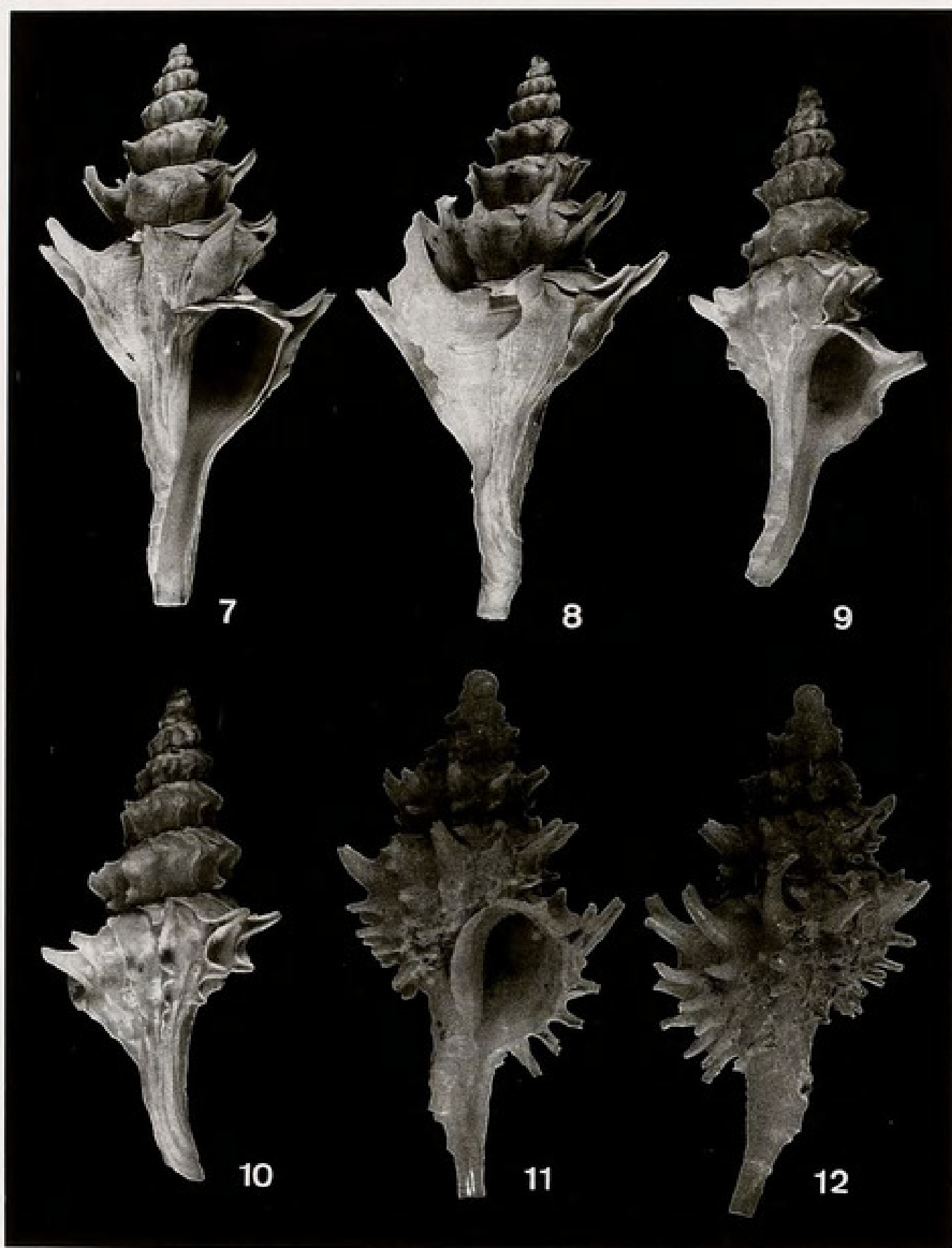
REMARKS. — New record for Indonesia. *Trophonopsis carduelis* was described from off Sydney (Australia). The holotype, although having one teleoconch whorl more, is very similar to the specimen illustrated here.

Trophonopsis plicilaminatus (Verco, 1909)

Figs 9-10

MATERIAL EXAMINED. — **Indonesia**. KARUBAR, *Tanimbar Islands*: stn CP 69, 08°42'S, 131°53'E, 356-368 m, 1 lv, 6 dd.

REMARKS. — New record for Indonesia. The species is known from the type locality, off Beachport, South Australia, and from New Caledonia (HOUART, 1995b).



FIGS 7-8. — *Trophonopsis carduelis* (Watson, 1883). Indonesia, Kai Islands, 22.8 mm.
FIGS 9-10. — *Trophonopsis plicilaminatus* (Verco, 1909). Indonesia, Kai Islands, 13 mm.
FIGS 11-12. — *Leptotrophon kastoroae* sp. nov. Indonesia, Kai Islands, holotype, 11.2 mm.

Genus *LEPTOTROPHON* Houart, 1995*Leptotrophon kastoroae* sp. nov.

Figs 11-12

MATERIAL EXAMINED. — Indonesia. KARUBAR, *Kai Islands*: stn DW 14, 05°18'S, 132°38'E, 245-246 m, 2 lv, 1 dd. — Stn DW 15, 05°17'S, 132°41'E, 212-221 m, 1 lv (holotype), 12 dd (paratypes: 2 MNHN, 2 POLIPI, 1 RH). — Stn DW 18, 05°18'S, 133°01'E, 205-212 m, 1 lv, 4 dd.

TYPE MATERIAL. — Holotype MNHN. Paratypes: 2 MNHN, 2 POLIPI, 1 RH.

TYPE LOCALITY. — Indonesia. Kai Islands, KARUBAR, stn DW 15, 05°17'S, 132°41'E, 212-221 m.

DISTRIBUTION. — Indonesia, Kai Islands, alive in 212-245 m.

DESCRIPTION. — *Shell* up to 11.2 mm (holotype), slender, spinose, lightly built. Spire high, with 1.5 protoconch whorls, and up to 5 weakly convex, spinose teleoconch whorls. Suture impressed. *Protoconch* broad, globose, smooth, glossy. Terminal varix unknown (eroded). Axial sculpture of teleoconch whorls consisting of numerous, weak growth striae and high, rounded varices, each with long, narrow, sharp primary and secondary spines. Shoulder spine longest, weakly adapically bent. First and second whorls with 9 varices, third with 9 or 10, fourth with 10 or 11, last whorl with 10 varices. Spiral sculpture of strong, smooth, primary and secondary cords: first to third whorl with 2 primary cords, fourth with 2 primary and 1 secondary cords, shoulder with 1 secondary cord, last whorl with 5 or 6 primary and secondary cords, shoulder with 1 secondary cord. Occasionally with numerous, narrow spiral striae. Aperture small, rounded. Columellar lip flaring, smooth. Lip erect, adherent adapically. Anal notch indistinct. Outer lip smooth, with 4-6 more or less visible denticles within, very variable in strength. Siphonal canal long, narrow, straight, open, smooth. White.

REMARKS. — The genus *Leptotrophon* Houart, 1995 was described to include numerous small species of Trophoninae with a spinose, delicate, and small shell, all from the New Caledonia region (HOUART, 1995b). The occurrence of another, new species in Indonesia is a very interesting range extension for the genus. *Leptotrophon kastoroae* is similar to three other spinose species of *Leptotrophon*: *L. spinacutus* Houart, 1986; *L. bernadettae* Houart, 1995, and *L. rigidus* Houart, 1995. From *L. spinacutus*, *L. kastoroae* differs in having relatively longer spines, a narrower siphonal canal, and a broader aperture with a narrower apertural varix. From *L. bernadettae*, it differs in its relatively broader and rounded protoconch, narrower columellar lip, and more slender shell. *L. kastoroae* is relatively smaller than *L. rigidus*, with more numerous, longer spines, a twice larger protoconch, and a narrower siphonal canal.

ETYMOLOGY. — Named for Mrs W. KASTORO (Indonesian Institute of Sciences Research and Development Centre for Oceanology, Jakarta), one of the member of the KARUBAR cruise.

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