

# A new genus of Galatheidae (Crustacea, Anomura) from the Western Pacific Ocean

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## ABSTRACT

A new genus, *Crosnierita*, is established for three species of galatheid crustaceans: *C. dicata* n.sp., *Munida urizae* Macpherson, 1994 and *M. yante* Macpherson, 1994, the latter two having been transferred to the genus *Agononida*. The new genus is characterized by the absence of male pleopods on the first abdominal segment, the frontal margin deeply concave, the lateral margin of the basal antennular segment bearing two spines in addition to the distal spines, the third and fourth segments of the antennal peduncle reduced in size and the merus of the third maxilliped very short. All these characters suggest that the new genus approaches *Bathymunida* Balss, 1914 and its relatives.

## KEY WORDS

Crustacea,  
Decapoda,  
Galatheidae,  
*Crosnierita*,  
new genus,  
new species,  
Pacific Ocean.

## RÉSUMÉ

Un nouveau genre de Galatheidae (Crustacea, Anomura) de l'océan Pacifique occidental. Le nouveau genre *Crosnierita* est établi pour trois espèces de crustacés galathéides : *C. dicata* n.sp., *Munida urizae* Macpherson, 1994 et *M. yante* Macpherson, 1994, ces deux dernières espèces ayant été précédemment placées dans le genre *Agononida*. Le nouveau genre est caractérisé par : l'absence de pléopodes sur le premier segment abdominal des mâles ; le bord rostral profondément concave ; le bord latéral du segment basal des antennes portant deux épines en plus des épines distales ; les troisième et quatrième segments du pédoncule antennaire de taille réduite et avec le mérus du troisième maxillipède très réduit. Cet ensemble de caractères suggère que ce nouveau genre est proche de *Bathymunida* Balss, 1914.

## MOTS CLÉS

Crustacea,  
Decapoda,  
Galatheidae,  
*Crosnierita*,  
nouveau genre  
nouvelle espèce,  
océan Pacifique.

## INTRODUCTION

In a recent paper, Baba & de Saint Laurent (1996) established the genus *Agononida* for the species of *Munida* Leach, 1820 that are characterized by the lack of male gonopods on the first abdominal segment. A more thorough study showed that the two previously described species [*Agononida urizae* (Macpherson, 1994) from New Caledonia, Matthew and Hunter Islands and Chesterfield Islands and *A. yante* (Macpherson, 1994) from New Caledonia] and a new species from Loyalty Islands and Vanuatu (see below) here described can be placed in a genus rather different than *Agononida* and more or less close to *Bathymunida* Balss, 1914.

The terminology used in this paper follows previous papers (e.g. Macpherson & de Saint Laurent 1991; Macpherson 1994; Baba & de Saint Laurent 1996). Measurements given are of carapace length excluding rostrum. Colour notes are taken from slides by P. Laboute. The types of the new species have been deposited in the collections of the Muséum national d'Histoire naturelle, Paris (MNHN) and the National Museum of Natural History, Washington (NMNH).

Genus *Crosnierita* n.g.

TYPE SPECIES. — *Crosnierita dicata* n.sp. by present designation.

ETYMOLOGY. — The generic name is dedicated to Alain Crosnier, in acknowledgement to his enormous generosity, friendship and his effort in the improvement of the crustacean collections.

Gender: feminine.

## DIAGNOSIS

Carapace with transverse ridges, usually granulated. Rostral spine spiniform, clearly overreaching supraocular spines; supraocular spines spiniform, well-developed, but not overreaching end of corneae. Pair of epigastric spines situated directly behind supraocular spines. Median gastric and cardiac spines sometimes present. Pair of postcervical spines present, not followed by additional spines. Frontal margins deeply concave. Anterolateral spines strong. Branchial margins

with four spines. Second to fourth abdominal tergites with two moderately elevated transversal ridges, each anterior ridge bearing four to six spines; a median spine on posterior ridge of fourth tergite. Telsonal subdivision incomplete. Fourth thoracic sternite with anterior margin wide, moderately concave; sixth and seventh sternites without granules or keels. Eyes large, corneae strongly dilated, maximum corneal width equal to or more than one third distance between anterolateral spines. Antennular basal segment with two distal spines; two additional well-developed spines on lateral margin, subdistal spine longer than proximal spine. Antennal basal segment with distomesial spine short, usually not reaching end of second segment; second segment not reduced, with well-developed distal spines, distomesial spine clearly overreaching antennal peduncle; third and fourth segments reduced. Antennal flagellum longer than chelipeds. Merus of third maxilliped clearly shorter than ischium, subrhomboidal in lateral view, with distal spine on extensor margin and with strong marginal spine near midlength of flexor border. Chelipeds slender, elongated, usually longer and stouter in male than in female. Walking legs long and slender; dactyli slender, curving, without lateral keel, flexor margin with spine-like setae. Chelae of fifth pereopods more setose in male than in female and fingers shorter than hand. Flexor face of fifth pereopods with long and sparse simple setae. In male, movable finger with a dense set of setae on proximal part. Male gonopods absent from first abdominal segment.

## REMARKS

The strongly excavated frontal margin and the extremely short merus of the third maxilliped link this new genus to *Bathymunida* Balss, but their relationships are rather distant. *Crosnierita* may be easily differentiated from *Bathymunida* by the following characters: (1) rostral and supraocular spines spiniform and well-developed; (2) absence of strong gastric and cardiac processes; (3) presence of a median spine on posterior ridge of fourth abdominal segment; (4) presence of well-developed spines on lateral margin of basal antennular peduncle; and

(5) absence of toothbrush-like setae on the flexor face of fifth pereopods.

The new genus also resembles *Agononida* Baba et de Saint Laurent in the ornamentation of the

rostrum, carapace and abdomen. However, *Crosnierita* is easily separated from that genus by the shape of the front margin, the size of the third and fourth segments of the antennal peduncle and the shape of the third maxilliped.

#### KEY TO SPECIES OF *Crosnierita*

1. Longitudinal row of spines on cardiac region ..... *C. dicata*
- Spines absent on cardiac region ..... 2
2. Median spine on metagastric region. Posterior border of carapace with a median spine ..... *C. urizae*
- No median spine on metagastric region. Posterior border of carapace unarmed ..... *C. yante*

#### *Crosnierita dicata* n.sp. (Fig. 1)

TYPE MATERIAL. — The male of 8.9 mm from MUSORSTOM 6, stn 419 (MNHN-Ga 4241) has been selected as holotype; the other specimens are paratypes (see below).

MATERIAL EXAMINED. — **Loyalty Islands.** MUSORSTOM 6, stn 419, 20°41.65'S - 167°03.70'E, 283 m, 16.II.1989: 7 ♂♂, 7.2 to 9.3 mm; 9 ovig. ♀♀, 7.4 to 8.6 mm; 4 ♀♀, 7.2 to 8.7 mm (MNHN-Ga 4242, NMNH).

**Vanuatu.** MUSORSTOM 8, stn 963, 20°20'S - 168°49'E, 400-440 m, 21.IX.1994: 1 ovig. ♀, 8.2 mm (MNHN-Ga 4243). — Stn 1017, 17°53'S - 168°26'E, 294-295 m, 27.IX.1994: 2 ♂♂, 7.9 and 8.4 mm (MNHN-Ga 4244). — Stn 1018, 17°53'S - 168°25'E, 300-301 m, 27.IX.1994: 1 ♀, 6.2 mm (MNHN-Ga 4245).

ETYMOLOGY. — From the Latin *dico*, dedicate.

DISTRIBUTION. — Loyalty Islands, Vanuatu, between 283 and 440 m.

#### DESCRIPTION

Carapace with few secondary striae. Strong median spine in anterior part of metagastric region. Cardiac region with a row of four median spines decreasing in size posteriorly, posterior-most spine small, sometimes absent. Two post-cervical spines, each sometimes bearing

accompanying small spine behind. Posterior margin of carapace unarmed. One small marginal spine behind and lateral to anterolateral orbital spine. Thoracic sternites with numerous short arcuate striae. Second abdominal segment with six spines on anterior ridge, two median spines larger than lateral spines; third and fourth segments with four spines, two median spines larger than lateral spines; posterior ridge of fourth segment with median spine. Basal antennular segment (distal spines excluded) terminating in anterior end of cornea, distolateral spine longer than distomesial. Basal antennal segment with distomesial spine short, ending in midlength of second segment; distomesial spine on second segment clearly exceeding peduncle, distolateral spine half length of distomesial spine; third segment spineless. Extensor border of merus of third maxilliped with distal spine. Chelipeds slender, opposable margins of fingers denticulated; some small spines on proximal half of movable finger. Dactylus of walking legs more than half that of propodus, proximal half of flexor border with some spinules.

#### COLORATION

Ground colour of carapace pinkish; numerous yellow and reddish spots on carapace and abdominal segments; two purple spots on posterior

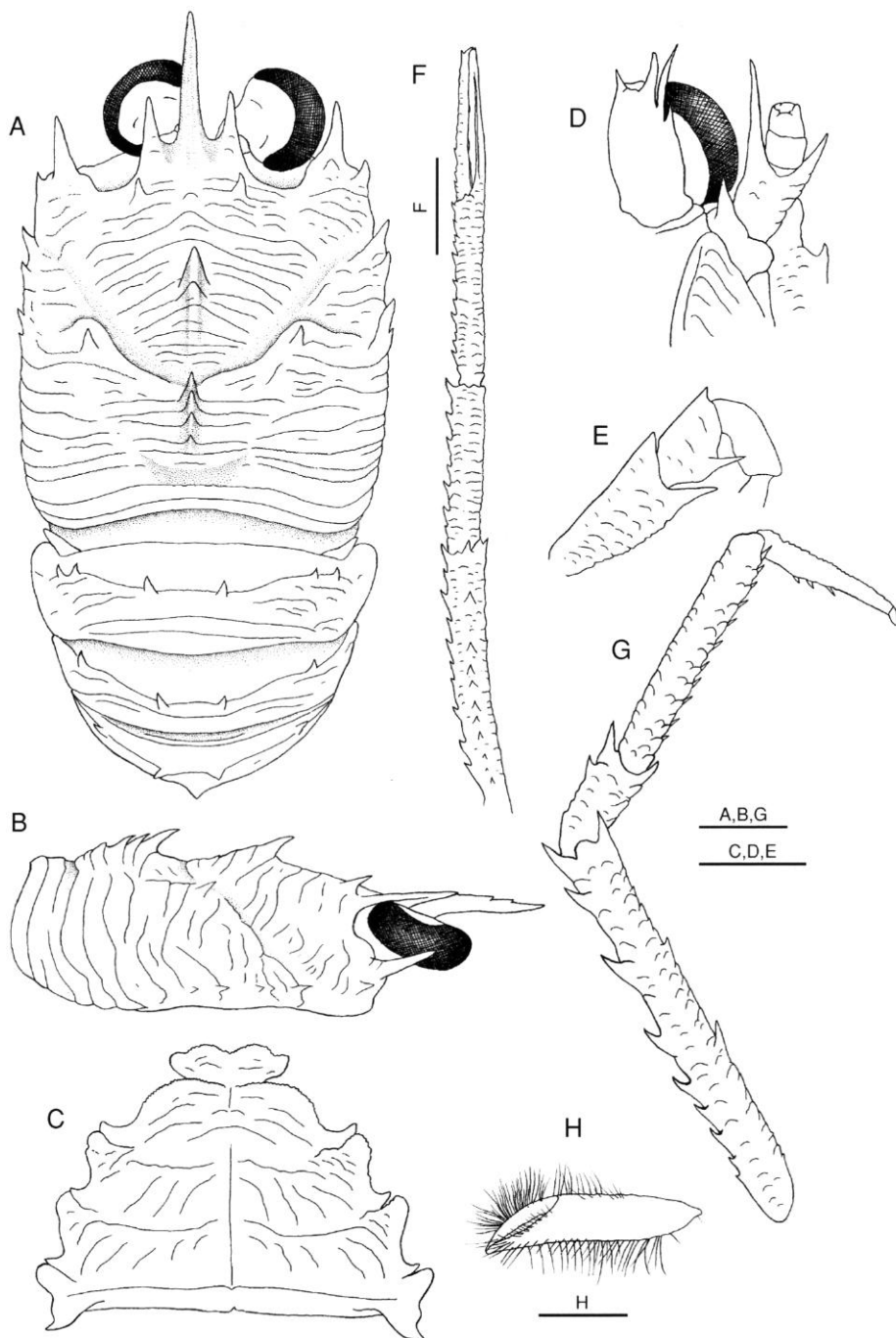


FIG. 1. — *Crosnierita dicata* n.sp., holotype ♂, 8.9 mm; **A**, carapace and abdomen, dorsal view; **B**, carapace, lateral view; **C**, sternal plastron; **D**, ventral view of cephalic region, showing antennular and antennal peduncles; **E**, right third maxilliped, lateral view; **F**, right cheliped, dorsal view; **G**, right first walking leg, lateral view; **H**, right fifth pereopod, distal segments, lateral view. Scale bars: A-E, G, 2 mm; F, 5 mm; H, 1 mm.

part of gastric region; red spots on lateral parts of abdominal segments. Rostrum, supraocular and anterolateral spines pinkish. Chelipeds and walking legs with red and pinkish bands; cheliped palm with distal third red; fingers with proximal two thirds reddish, distal third whitish; distal part of dactylus of walking legs reddish.

#### REMARKS

*C. dicata* is closely related to *C. urizae* (Macpherson, 1994) from New Caledonia, Matthew and Hunter Islands and Chesterfield Islands and *C. yante* (Macpherson, 1994) from New Caledonia. However, the new species differs easily from the other species of the genus by the presence of a strong median spine in the anterior part of the metagastric region and a longitudinal row of median spines in the cardiac region.

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