

中国近海玉蟹科两新种*

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本文报道采自我国近海的玉蟹科 *Leucosiidae* 两新种: 尖齿拳蟹(新种) *Philyra acutidens* sp. nov. 及假珍珠玉蟹(新种) *Leucosia pseudomargaritata* sp. nov.。新种的模式标本保存于中国科学院海洋研究所(青岛)。拳蟹属 *Philyra* 及玉蟹属 *Leucosia* 系玉蟹科中种类较多的两个属, 我们收藏上述两新种的标本数量较多, 前一新种产于渤海、黄海及东海北部, 后一新种产于南海, 尤以北部湾数量较多; 它们与亲缘种十分相似, 甚至容易造成误定。本文除详细描述新种特征外, 还与近似种作了详细比较。

1. 尖齿拳蟹 *Philyra acutidens* sp. nov. (图1)

正模标本 ♂ (4B-15), 1959年4月3日采自东海 (32°30'N, 124°00'E), 水深46m, 底质软泥。

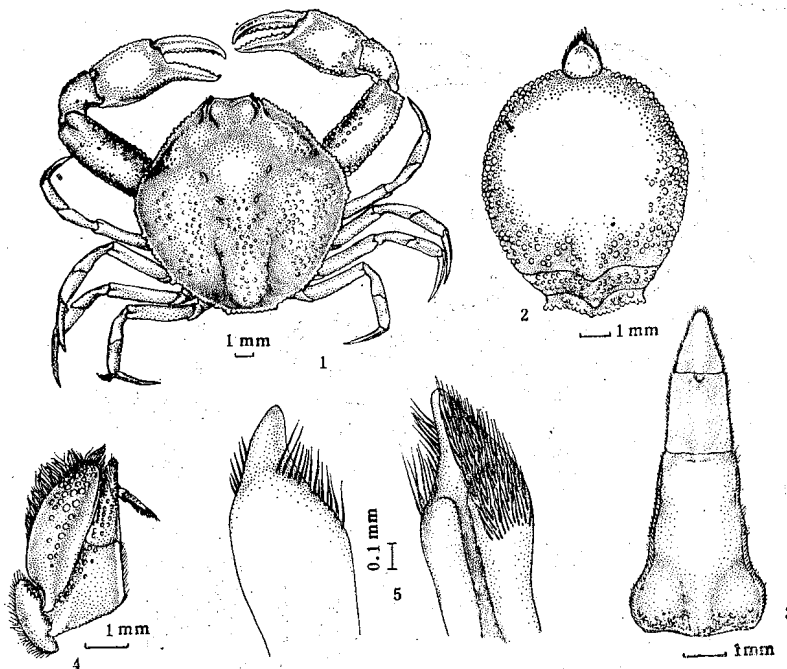


图1 尖齿拳蟹(新种) *Philyra acutidens* sp. nov.

1. 全形; 2. 雌性腹部; 3. 雄性腹部; 4. 第3颚足; 5. 雄性第1腹肢

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配模标本 ♀ (C63B-10), 1959年10月23日采自东海 (33°00'N, 123°00'E), 水深33m, 底质泥质砂。

副模标本 2♂, 2♀ (V531 B-42), 1976年9月18日采自东海 (31°30'N, 124°30'E), 水深39m, 底质砂质泥、泥质砂或软泥。

其他标本 84♂, 98♀, 1959年4—10月采自渤海、黄海及东海北部, 水深7—47m, 底质砂质泥、泥质砂或软泥。

头胸甲略呈圆形, 长稍大于宽, 背面隆起, 尤以中线各区(胃、心及肠区)、肝区及鳃区为明显, 各区之间有浅的宽沟隔开, 隆起部分密具细颗粒, 有时颗粒很少, 沟里光滑。额宽而短(背面可见口前板), 前缘截形, 中央低洼, 周围有短绒毛。侧缘有粗颗粒, 其中数枚颗粒较大, 后缘平直, 两端稍钝。

第3颚足末半部表面有短绒毛及粗颗粒, 座节仅在内缘附近有颗粒。雌者座节-长节近内缘处具一纵列短绒毛。

螯足粗短, 雄性较长, 其长约为头胸甲的1.4倍, 而雌性螯足较短。其长节圆柱形, 内缘在中部稍扩大, 基部较末端为窄, 表面有细颗粒。腕节小, 边缘及基部背面有细颗粒。掌部略呈长方形, 末部较基部为宽, 内缘及近内缘的背面各有1纵列细颗粒。指扁而薄, 长于掌, 两指内缘有小齿。

步足扁平, 表面较光滑。长节边缘有细颗粒, 以后缘为明显。腕、掌节前缘薄脊状, 指薄而锐, 呈披针状。

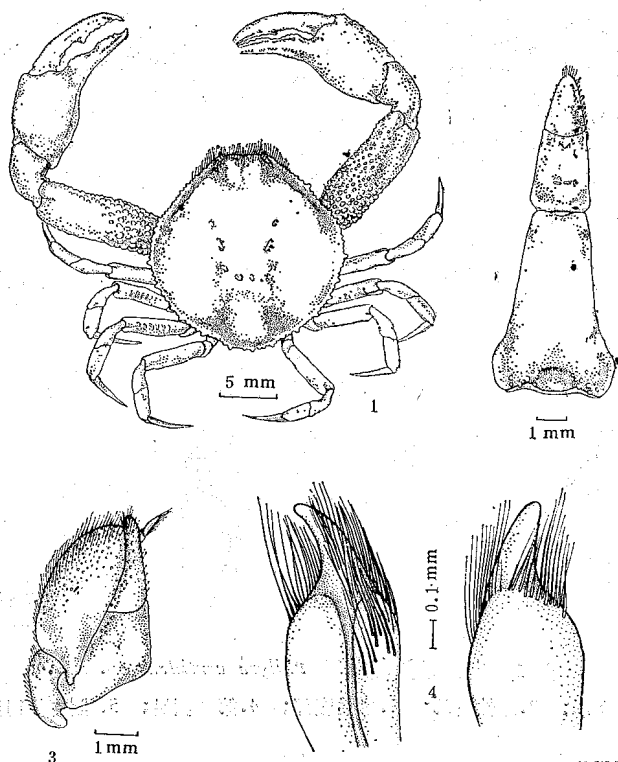


图2 杂粒拳蟹 *Philyra heterograna* Ortmann, 1892

1. 全形; 2. 雄性腹部; 3. 第3颚足; 4. 雄性第1腹肢

雄性腹部分为4节(第3—6节愈合)：第1节宽而短；第2节很小；第3节(愈合节)整个表面微凹，尤以基部中央为甚，两侧隆起，并有扁圆形颗粒，其余光滑，末端离节线很近处具一尖齿，尾节窄三角形。雌性腹部长卵圆形，也分为4节：第1, 2节宽而短，中部隆起，密具粗颗粒；第3节大，基部及边缘有粗颗粒，其余光滑，尾节呈舌状。雄性第1腹肢呈棒状，末端有一钩状突起及短毛。

新种与杂粒拳蟹 *Philyra heterograna* Ortmann, 1892 (图2) 近似，但有显著的不同，下表示其区别：

	<i>P. heterograna</i> Ortmann, 1892	<i>P. acutidens</i> sp. nov.
1. 个体	较大(最大标本头胸甲长 18.5mm)	较小(最大标本头胸甲长 16.5mm)
2. 头胸甲	长宽相等	长稍大于宽
颗粒	较稀少	较密集
3. 第3颚足外肢及颗粒	较宽，颗粒较细	较窄，颗粒较粗
4. 雄性螯足长度	较长(约为头胸甲长的2倍或2倍多)	较短(约为头胸甲长度的1.5倍)
两指内缘	各有一齿突	无
5. 雄性腹部末2节	有一枚颗粒齿或不明显颗粒	具一尖齿
雌性腹部尾节末端	钝圆	较尖
6. 分布	渤海、黄海、东海及南海	渤海、黄海及东海北部

标本测量 (mm)

	头胸甲长度	头胸甲宽度	螯足长度
正模 ♂	16.0	15.0	24.9
配模 ♀	12.0	11.9	15.6

生活于砂泥或软泥底，水深7—47m，繁殖季节为7—8月。

2. 假珍珠玉蟹(新种) *Leucosia pseudomargaritata* sp. nov. (图3)

Leucosia margaritata Alcock, 1896, p. 230. Nobili, 1906c, p. 99. Inle, 1918, p. 284. Rathbun, 1910, p. 310 (non *L. margaritata* A. Milne-Edwards, 1874)

正模标本 ♂ (K232B-4), 1960年7月10日采自北部湾 (18°30'N, 107°00'E), 水深66m, 底质为泥砂。

配模标本 ♀ (N212B-17), 1960年5月14日采自南海 (21°00'N, 112°30'E), 水深75m, 底质为软泥。

副模标本 4♂, 1♀ (Q275-B-6), 1960年11月6日采自北部湾 (18°30'N, 106°15'E), 水深30m, 底质为泥质砂或贝壳; 2♂, 4♀ (X98B-1), 1960年4月18日采自北部湾 (19°45'N, 108°00'E), 水深64m, 底质砂质泥。

其他标本 1♂, 1959年1月25日采自南海 (22°15'N, 116°00'E), 水深64m, 底质灰砂; 2♂, 1959年4月12—24日采自南海 (21°15'N—20°00'N, 111°30'E—113°30'E), 水深58—76m, 底质泥质砂或砂质泥; 1♀, 1959年7月10日采自南海 (21°00'N, 114°00'E), 水深80m, 底质砂质泥; 2♂, 2♀, 1959年12月10日—11月19日采自南海 (21°00'N—18°00'N, 108°30'E—114°00'E), 水深54—90m, 底质为泥质砂或软泥; 3♂, 5♀, 1960年1月9日—3月12日采自南海 (21°30'N—17°30'N, 108°30'E—115°00'E), 水深35—87m, 底质为砂质泥, 泥质砂及砂; 2♂, 5♀, 1960年4月7日—5月15日采自南海 (21°00'N—17°45'N, 108°30'E—112°30'E), 水深36—75m, 底质为泥质砂, 砂质

泥及灰砂贝壳; 4♂, 7♀, 1959年12月4日—12日采自北部湾 (20°15'N—17°30'N, 106°15'E—107°30'E), 水深30—65m, 底质为泥质砂, 中砂及软泥; 5♂, 7♀, 1960年2月7—11日采自北部湾 (20°30'N—17°30'N, 106°30'E—108°00'E), 水深31—71m, 底质为泥质砂及软泥; 8♂, 14♀ (4个抱卵), 1960年4月5日—5月25日采自北部湾 (20°45'N—17°30'N, 106°30'—108°30'E), 水深31—72m, 底质为泥质砂或沙质泥; 2♂, 8♀ (5个抱卵), 1960年7月6日—15日采自北部湾 (20°45'N—18°30'N, 106°15'E—108°30'E), 水深31—63m, 底质为泥质砂; 5♂, 9♀ (5个抱卵), 1960年10月23日—11月10日采自北部湾 (20°45'N—18°00'N, 106°00'E—108°30'E), 水深30—81m, 底质为泥质砂; 3♂, 2♀, 1962年1月6日—21日采自北部湾 (20°30'N—18°00'N, 106°45'E—108°15'E), 水深29—82m, 底质为粉砂质软泥; 1♂, 3♀, 1962年8月17日—21日采自北部湾 (20°00'N—17°30'N, 106°30'E—108°00'E), 水深35—60m, 底质粉砂质软泥或粗沙贝壳; 2♂, 1♀, 1962年10月10日—13日采自北部湾 (20°00'N—17°30'N, 106°30'E—108°00'E), 水深33—63m, 底质粉砂质软泥及粗粉砂; 6♂, 3♀, 1962年4月10日—20日采自北部湾 (19°45'N—17°30'N, 106°00'E—17°30'E), 水深32—71m, 底质为粉砂质软泥及砂砾。

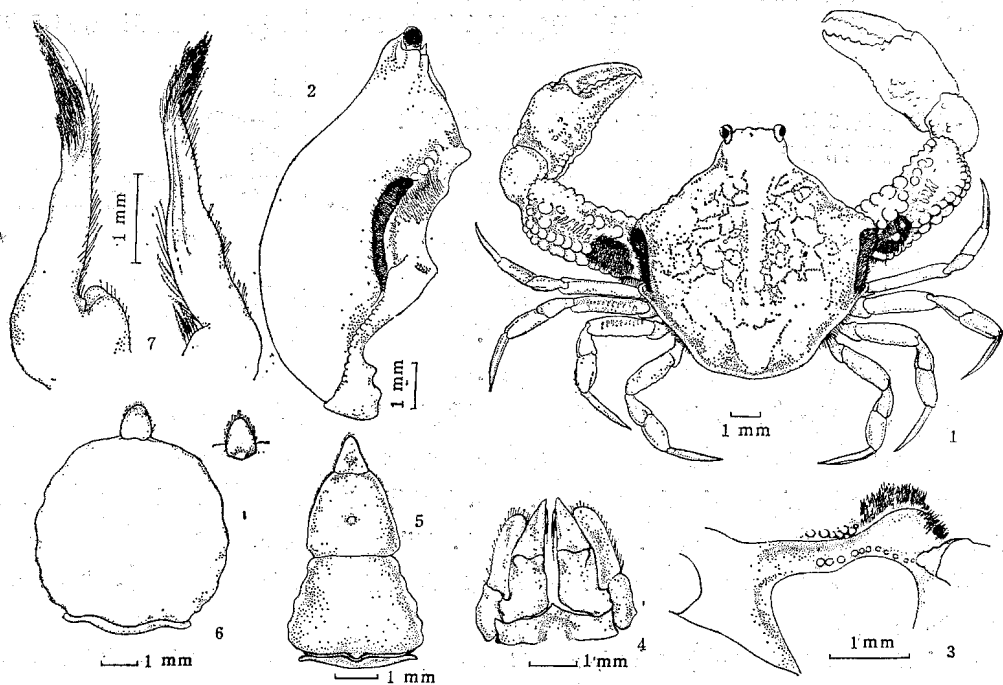


图3 假珍珠玉蟹(新种) *Leucosia pseudomargaritata* sp. nov.

1. 全形; 2. 头胸甲侧面观; 3. 胸窝; 4. 第3颚足; 5. 雄性腹部; 6. 雌性腹部; 7. 雄性第1腹肢

个体甚小。头胸甲呈瓮形, 长略等于宽。酒精标本保存20多年, 头胸甲背面的褐色网纹仍清晰可见。额稍隆起, 前缘分为4齿(叶), 中央2齿小于侧齿。前侧缘短于后侧缘, 末端1/2较斜直, 基部有一小缺刻, 其后面有几枚颗粒, 后侧缘末1/2向内收敛, 具稍长而稀的带状, 黑色绒毛, 基部1/2斜直, 具一系列珠状颗粒。肢上板发达, 也具同样绒毛, 后缘钝圆形。

雌性第3颚足座节的外侧面具一枚光滑齿, 雄者无齿, 但此处稍隆起。雄性胸部腹甲位于座节内侧面, 有一钝齿, 而雌性的这枚齿更为尖锐。

胸窝窄长,窝底具绒毛,并自中部至后部有一列小颗粒。

螯足粗壮,长节前缘(背、腹面)各有一列珠状突起,基部和末端的突起较小。后缘也具一系列同样的突起,背面基部 1/3 处有珠状突起,但外侧有些突起被短绒毛覆盖,背面近前缘有一短列珠状颗粒(1枚大,3枚小),近后缘有一长列中等大小的珠粒,并与末角的小珠粒相连接。腹面中部有些大小不等的突起,近基部有黑色绒毛。腕节小,呈卵圆形,表面光滑,背面近基部有3枚小颗粒,内缘也有3枚。掌部长大于宽,背面中部有一些细颗粒,内缘背、腹面各有一列细颗粒,并延伸至不动指的基部,但以中部的颗粒较大。两指末端交叉,内缘均有小齿。

步足纤细,表面光滑,各节边缘较薄,长节边缘有细颗粒,指节呈披针状。

雄性腹部呈三角形,其公式为 $1 + 2 + R + 6 + T$, 即第3—5节愈合。第6节末端宽为基部的 1/3, 腹面中央有一齿。尾节呈钝三角形。雌性腹部呈长卵圆形,共分3节(第2—6愈合)。

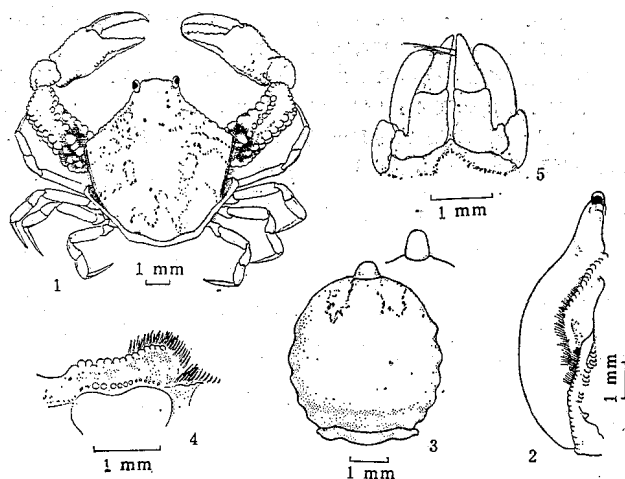


图4 珍珠玉蟹 *Leucosia margaritata* A. Milne-Edwards

1. 全形; 2. 头胸甲侧面观; 3. 雌性腹部; 4. 胸窝; 5. 第3颚足

本新种与珍珠玉蟹 *Leucosia margaritata* A. Milne-Edwards (图4)(模式标本产地为新喀里多尼亚)十分相似,易误定,作者认为 Alcock (1896, p. 230), Nobili (1906, p. 99) Ihle (1918, p. 284) 及 Rathbun (1910, p. 310) 报道的并非 A. Milne-Edwards 鉴定

	珍珠玉蟹 <i>L. margaritata</i> A. Milne-Edwards, 1874	假珍珠玉蟹(新种) <i>L. pseudomargaritata</i> sp. nov.
1. 额	3 齿	4 齿
2. 头胸甲后侧缘的末 1/2 及螯足基部;前侧缘基部	具短而密的黑色绒毛;有一小缺刻	有长而密的黑色绒毛;无一小缺刻
3. 胸窝	较宽而短	较窄而长
颗粒着生位置	近前面至后部有一列小颗粒	近中部至后部有一列小颗粒
4. 螯足掌部	长大于宽	长等于宽
5. 雌性第3 颚足座节	没有突起	具一枚突起
6. 雌性腹部尾节	长约为宽的 1.08 倍	长约为宽的 1.5 倍

的珍珠玉蟹 *Leucosia margaritata*, 而是本新种。两种区别如上页表。

标本测量 (mm) 头胸甲长度 头胸甲宽度

正模♂ 8.4 8.2

配模♀ 8.5 8.5

栖息于泥质砂、粉砂质软泥、砂质泥及中、粗砂碎壳海底, 水深 29—90m。

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ON TWO NEW SPECIES OF LEUCOSIIDAE (CRUSTACEA: BRACHYURA) FROM THE CHINESE WATERS*

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ABSTRACT

1. *Philyra acutidens* sp. nov. (fig. 1)

Holotype ♂ (4B-15), 32°30'N, 125°00'E, depth 46m, bottom soft mud, 1959, IV. 3.

Allotype ♀ (C63B-10), 33°00'N, 123°00'E, depth 33 m, bottom muddy sand, 1959, X. 23.

Paratype 2 ♂, 2 ♀ (V531B-42), 31°30'N, 124°30'E, depth 39m, bottom sandy mud, muddy sand or soft mud, 1976, IX. 18.

Carapace slightly longer than broad, dorsal surface convex, regions of the median line more convex. Hepatic and branchial region relatively more distinct. Regions separated by broad smooth grooves, convex portions covered with dense and fine granules. Front broad and short, its anterior border truncate (emarginate). Epistome produced, visible from dorsal view, median line depressed, its surface having short tomentum, lateral border with coarse and large granules. Posterior border straight, lateral border angular bluntly rounded.

Distal 1/2 of third maxilliped with short tomentum and coarse granules, surface of ischium with granules near the inner border. Merus and ischium of female with longitudinal arranged short hair.

Male cheliped stout and short about 1.4 times as long as carapace. Female cheliped 1.2—1.36 times as long as carapace. Merus cylindrical, basal part narrower than distal part, its surface with granules. Carpus small, distal part broader than basal part, with two rows of fine granules, one row at inner border and another one on the inner margin of the dorsal surface. Fingers depressed and thin, longer than palm, with denticles.

Ambulatory legs compressed, slightly smooth. Borders of merus armed with fine granules which are more distinct at the posterior border. Anterior borders of carpus and propodus thin and ridged, dactylus acute and lanceolate.

Abdomen of both sexes consists of four segments (third to sixth fused). First segment of male broad and short, second small, ventral surface of R segment slightly depressed, especially so in the middle of basal part. Both lateral sides convex, with flatly rounded granules, the rest smooth, there is an acute denticle close for suture of segment. Telson narrowly triangular. Female abdomen elongate ovate, anterior two segments broad and short, the median part convex and with dense coarse granules. Basal part and borders of R segment with coarse granules. Telson tongue-shaped. First male pleopod club-shaped, the distal end with a hooked tubercle and with short hairs.

This new species is closely related to *Philyra heterograna* Ortmann, 1892 from Tokyo Bay but differs from it in the following features:

* Contribution No. 1292 from the Institute of Oceanology, Academia Sinica.

Species Feature	<i>P. heterograna</i>	<i>P. acutidens</i> sp. nov.
1. Size of adult individual	relatively large (the length of the carapace in the largest specimen is 18,5 mm)	relatively smaller (the length of the carapace in the largest specimen is 16, 5 mm)
2. Carapace	as long as broad, with relatively less granules	slightly longer than broad with more granules
3. Exopod maxilliped	relatively broader and with fine granules	relatively narrower with coarse granules
4. Length of male cheliped The cutting edge of the both fingers	long, about two or more times as long as carapace with small teeth and a toothed tubercle	short, about 1.5 times as long as carapace with small teeth only
5. R segment of male abdomen Telson of female abdomen	with a granular tooth or an indistinct granule as long as broad	with an acute tooth longer than broad
6. Distribution	Bohai Sea, Yellow Sea, East China Sea and South China Sea	Bohai Sea, Yellow Sea and Northern East China Sea

2. *Leucosia pseudomargaritata* sp. nov. (fig. 3)

Holotype ♂ (K232B-4), 18°30'N, 107°00'E, depth 66m, bottom muddy sand, 1960, VII. 10.

Allotype ♀ (N212B-17), 21°00'N, 112°30'E, depth 75m, bottom soft mud, 1960, V. 14.

Paratype 4♂, 1♀(Q275B-6), 18°30'N, 106°15'E, depth 30m, bottom muddy sand or shell, 1960, XI, 6; 2♂ 4♀, (X98B-1), 19°45'N, 108°00'E, depth 64m, bottom sandy mud, 1960, IV, 18.

Body of small size. Carapace urn-shaped, as long as broad. Front slightly elevated, its anterior border is divided into four teeth (lobes): median two teeth smaller than lateral ones. Anterolateral border shorter than postero-lateral border, distal 1/2 slightly and obliquely straight, basic part with a notch, and posterior part having some granules. Basal 1/2 of postero-lateral border inwardly curved, covered with a band of long, scarce and black tomenta; distal 1/2 obliquely straight and with a row of small granules. Epimeral edge with also same black tomenta. Posterior border obtusely rounded.

Third maxilliped in female with smooth tooth on outer lateral face of ischium; in the male, without tooth but slightly elevated. Thoracic sternum in male located in inner lateral face of ischium with a blunt tooth; in the female, the tooth is sharp.

Thoracic sinus narrow and long. The floor of the sinus with tomenta and a row of small granules at about the median part to the posterior part.

Cheliped stout. Anterior border of merus in dorsal and ventral surface with a row of pearl-like tubercles which are smaller at the base and distal end. Posterior border also with some tubercles. Basal 1/3 of dorsal surface covered with a patch of short tomenta beneath which are pearl-like granules. There are two rows of pearl-like granules on the dorsal surface: a short row having 4 (one big and 3 small) near anterior border; a long row of median sized granules near the posterior border. On the ventral side, median part of merus with some low

and of unequal sizes; with black tomenta near the base. Carpus small and subglobose, surface smooth. Base of dorsal surface and its inner border, with three small granules. Palm longer than broad, with some small granules; inner border on dorsal and ventral surface with two rows of same granules, extending to basal half of immovable finger; granules of the middle part slightly bigger. Distal ends of both fingers crossed, the cutting edges with small teeth.

Ambulatory legs slender, surface smooth, borders of each segment slightly thinner and borders of merus with small granules. Dactylus lanceolated.

The male abdomen consists of five segments (3th to 5th segments fused). The 6th segment with a blunt tooth. Telson triangular. Female abdomen longitudinally ovate, 2nd to 6th segments fused. Telson 1.5 times as long as broad. Basal 2/3 of male first pleopod stout, the distal 1/3 slender, and slightly and outwardly bent, plumose.

This new species closely resembles *Leucosia margaritata* A. Milne-Edwards, 1874, but they may be distinguished from each other in the following aspects:

Feature \ Species	<i>Leucosia margaritata</i> A. Milne-Edwards	<i>Leucosia pseudomargaritata</i> sp. nov.
1. Front	three teeth	four teeth
2. Postero-lateral border of carapace and basal part of cheliped	with short dense and black tomenta	with long scarce and black tomenta
Basal part of antero-lateral border of carapace	with a small notch	without a small notch
3. Thoracic sinus	relatively broader and shorter	relatively narrower and longer
Location of granules	with a row of small granules at about the middle part to the posterior part	with a row of small granules near the median part to posterior part.
4. Palm of cheliped	longer than broad	as long as broad
5. Ischium of female third maxilliped	without tubercle	with a tubercle
6. Telson of female abdomen	1.08 times as long as broad	1.5 times as long as broad