

南海北部海域糠虾目新种与稀有种类^{*}

王 绍 武

(中国科学院海洋研究所)

关于南海海域的糠虾类,作者前已报道过 65 种。其中北部海域 46 种,现又深入研究了全国海洋综合调查 1958—1960 年中在 17°00'—23°30'N, 108°00'—117°30'E 所采的新、稀种类标本,共记述 12 种,分隶于 2 科 9 属,共发现 2 新属、10 新种、2 新记录。本文分别对上述种类作了详细描述,并与近似种进行了比较,名录如下:

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|-----------|---|
| 1. 刘氏瓣眼糠虾 | <i>Petalophthalmus liui</i> sp. nov. ** |
| 2. 全刺盲糠虾 | <i>Pseudomma spinosum</i> sp. nov. |
| 3. 半刺盲糠虾 | <i>P. semispinosum</i> sp. nov. |
| 4. 细假红糠虾 | <i>Pseuderythrops gracilis</i> Coifmann *** |
| 5. 日本丸川糠虾 | <i>Nakazawaia japonica</i> Murano *** |
| 6. 长尾刘糠虾 | <i>Liimysis longicauda</i> gen. nov. et sp. nov. ** |
| 7. 心形沈糠虾 | <i>Shenimysis cordata</i> gen. nov. et sp. nov. ** |
| 8. 半刺超红糠虾 | <i>Hypererythrops semispinosa</i> sp. nov. |
| 9. 胖尾异糠虾 | <i>Heteromysis inflaticauda</i> sp. nov. |
| 10. 窄尾小糠虾 | <i>Mesidella tenuicauda</i> sp. nov. |
| 11. 圆凹小糠虾 | <i>M. rotundincisa</i> sp. nov. |
| 12. 尖凹小糠虾 | <i>M. incisa</i> sp. nov. |

** 以我国著名甲壳动物学家沈嘉瑞和海洋生物学家刘瑞玉命名的新属、种,以示他们在糠虾类研究中所作的贡献。

*** 为南海北部海域首次记录。

上述 12 种的多数标本采自海南岛以东 200m 左右陆架边缘近底层、底质主要是砂的高盐度温暖海域,仅少数种采自近岸 100m 以内浅海,以泥砂底质为主。

种 类 记 述

瓣眼糠虾科 Family Petalophthalmidae W.-Subm, 1875

第 1 小颚无触须;第 1 胸肢无外肢;第 2 胸肢内肢长节向内扩展,极度延长前伸呈长叶片

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状;第3—8胸肢掌节不分节;雌性具7对育卵板。雄性腹肢双枝型,雌性为单枝或双枝。雄性原肢粗壮,呈长方形,具发达的内肢和外肢,有游泳功能;尾肢内肢无平衡囊。

本科迄今共包括4属:Geuns *Ceratomyxis* Faxon, 1893; Genus *Hansenomysis* Stebbing, 1893; Genus *Petalophthalmus* W.-Suhm, 1875; Genus *Scolophthalmus* Faxon, 1893。我国近岸海域仅发现瓣眼糠虾属(Genus *Petalophthalmus* W.-Suhm, 1875)一属。

瓣眼糠虾属 Genus *Petalophthalmus* W.-Suhm, 1875

Petalophthalmus Tattersall, W. M. et O. S. Tattersall, 1951: 120. —— Pillai, 1967: 1684.

额角短而尖;头胸甲短,后缘背面末2胸节裸露;第2触角鳞片呈披针形或外缘光滑,末部具刺;大颚活动片退化或缺,无排刺,触须特别长而发达。第1胸肢较粗壮,内肢长节向内前方突出,无外肢;第2胸肢长节内缘极度扩展向前突出,具长方形的叶。雌性腹肢单枝或双枝,雄性腹肢双枝;尾节窄长,略呈长方形,侧缘具刺,末端平截,具刺和羽状刚毛。

本属迄今共发现6种:*Petalophthalmus armiger* W.-Suhm, 1875 广分布于太平洋、印度洋和大西洋深水区;*P. oculatus* Illig, 1906 则产于印度洋、太平洋和大西洋之间的加勒比海;*P. caribbeanus* O. S. Tattersall, 1968 仅发现于加勒比海水域;*P. australis* Panampunnayil, 1982 出现在澳大利亚南部海域;*P. macrops* Tchindonova et Vereshchaka, 1992 报道于印度洋北部。

在南海北部海南岛东南附近海域仅采到 *Petalophthalmus liui* sp. nov. 一种。

种的检索表

1. 眼发育不全,无视觉功能……………刺瓣眼糠虾 *Petalophthalmus armiger* W. - Suhm, 1875
- 1'. 眼发达,具良好的视觉功能
2. 第2触角鳞片外缘光裸,顶端具突出的叶……………澳洲瓣眼糠虾 *P. australis* Panampunnayil, 1982
- 2'. 第2触角鳞片内外缘都具刚毛
3. 雌性腹肢呈双枝型……………加勒比瓣眼糠虾 *P. caribbeanus* O. S. Tattersall, 1968
- 3'. 雌性腹肢呈单枝型
4. 眼细长,具乳突,第2触角柄长于鳞片……………瓣眼糠虾 *P. oculatus* Illig, 1906
- 4'. 眼粗短,不具乳突,第2触角柄短于鳞片
5. 角膜宽,呈球形;眼柄较短……………大瓣眼糠虾 *P. macrops* Tchindonova et Vereshchaka, 1991
- 5'. 角膜窄,呈肾形;眼柄较长……………刘氏瓣眼糠虾 *P. liui* sp. nov.

1. 刘氏瓣眼糠虾(新种) *Petalophthalmus liui* sp. nov. (图1)

正模标本 成体雄性,体长 9.1mm, L10P-2a。1959年1月26日采自南海北部海南岛东南海域 19°30'N, 111°30'E, 水深 219m, 底质中砂。

副模标本 成本雄性,体长 10.5mm, L10P-2b。成体雌性,体长 10mm, L10-2c。采集时间、地点、水深和底质与正模标本相同。

其他材料 一个年幼雌性标本,体长 6.5mm, L59P-1a; 1个年幼雄性标本,体长 4.5mm, L59P-1b。1959年4月21日采自 112°00'N, 19°00'E, 水深 194m, 底质中砂。13个年幼的标本,体长 4.5—7mm, K121P-3。1960年2月6日采自 112°00'N, 19°00'E, 水深 195m, 底质砂。

体纤细,甲壳表面较光滑,酒精固定后呈淡黄褐色。

额角短而窄,略呈刺状,顶端钝,仅伸至眼柄的基部,眼柄基部后方各具1显著的小齿。

眼发达,宽短,平扁,角膜呈肾形,显著宽短于眼柄;眼柄窄长,基部较窄,末部较宽。

雄性第1触角柄适度粗壮,第1节显著长,明显大于末2节之和;第2节短,约为基节的 $\frac{1}{2}$;第3节最短,仅为第2节的1半。外鞭基部较粗而弯曲,形成细长的雄性突,内缘具乳白色密毛。第2触角鳞片呈披针形,两缘具羽状刚毛,长约为宽的 $6\frac{1}{2}$ 倍,末节长显著大于宽;第2触角柄短而纤细,仅为鳞片长度的 $\frac{2}{3}$ 。

上唇略呈六角形,前缘宽,稍突,左右两侧角较尖,宽显著大于长,但不足长的 $1\frac{1}{2}$ 。

大颚小,发育正常;触须十分发达,具有捕捉功能;第1节短而纤细,第2节显著长而粗壮,第3节短而细于第1节,具粗壮的刺状刚毛。第1小颚很小,基叶末部具3根粗短刚毛,外肢具9根带小刺粗刺状刚毛。第2小颚细长,内肢末节呈椭圆形,边缘具长而粗壮的羽状刚毛;外肢呈长椭圆形,边缘具19根羽状刚毛。

第1胸肢内肢粗壮,长节稍突出,指节末端具粗壮的刺;无外肢。第2胸肢内肢长节向内扩展极度延长前伸,呈长方形的叶片,边缘具长短不同的刺。第3—4胸肢内肢短而纤细,略呈柱状。第5胸肢内肢细长,指节很短。第6—8胸肢内肢指节细长,呈长刺状。第2—8胸肢外肢基板呈长方形,外末角直,鞭部由9—11节构成。雄性交接器大小适度。雌性具7对育卵板。

雄性第1腹肢内肢不分节,外肢由13节构成;第2腹肢内、外肢皆由12节构成,外肢第2节内末角具2根粗壮的变形刚毛,第3—5腹肢内、外肢皆由12—14节构成。雌性腹肢简单不分节,第5腹肢显著大。

尾节长,略呈长方形,基部稍凹,长约为基部宽的 $2\frac{1}{2}$,侧缘近基部 $\frac{1}{4}$ 光裸,末部 $\frac{3}{4}$ 由16—19个长短不规则的刺组成,末端具1个中央刺,其两侧各具3个短刺和3个长刺,在中央刺和2个邻近的小刺间具4根羽状刚毛。

尾肢内肢纤细,基部不具平衡囊,末部显著超过尾节。尾肢外肢由两节构成,基节很长,内缘具毛,外缘光滑,约为末节长的 $2\frac{1}{2}$,外末角具2刺,前刺较小,后刺较大;末节很短,宽大于长,末端圆,周围具羽状刚毛。

本新种外形与 *Petalophthalmus oculatus* Illig, 1906 十分近似,但额板较宽,呈窄三角形,顶端钝;眼粗短,角膜肾形;第2触角柄显著短于鳞片,与后者明显不同。本新种与 *P. macrops* Tchindonova et Vereshchaka, 1992 也较为近似,但额板、眼和尾节形状显著不同。本新种与近似种主要区别如表1:

表1 *P. liui* sp. nov 与近似种的主要区别

	<i>Petalophthalmus oculatus</i>	<i>P. macrops</i>	<i>P. liui</i> sp. nov.
额板顶端	很尖	稍尖	钝
角膜	球形	球形	肾形
第2触角柄	长于鳞片	短于鳞片	短于鳞片

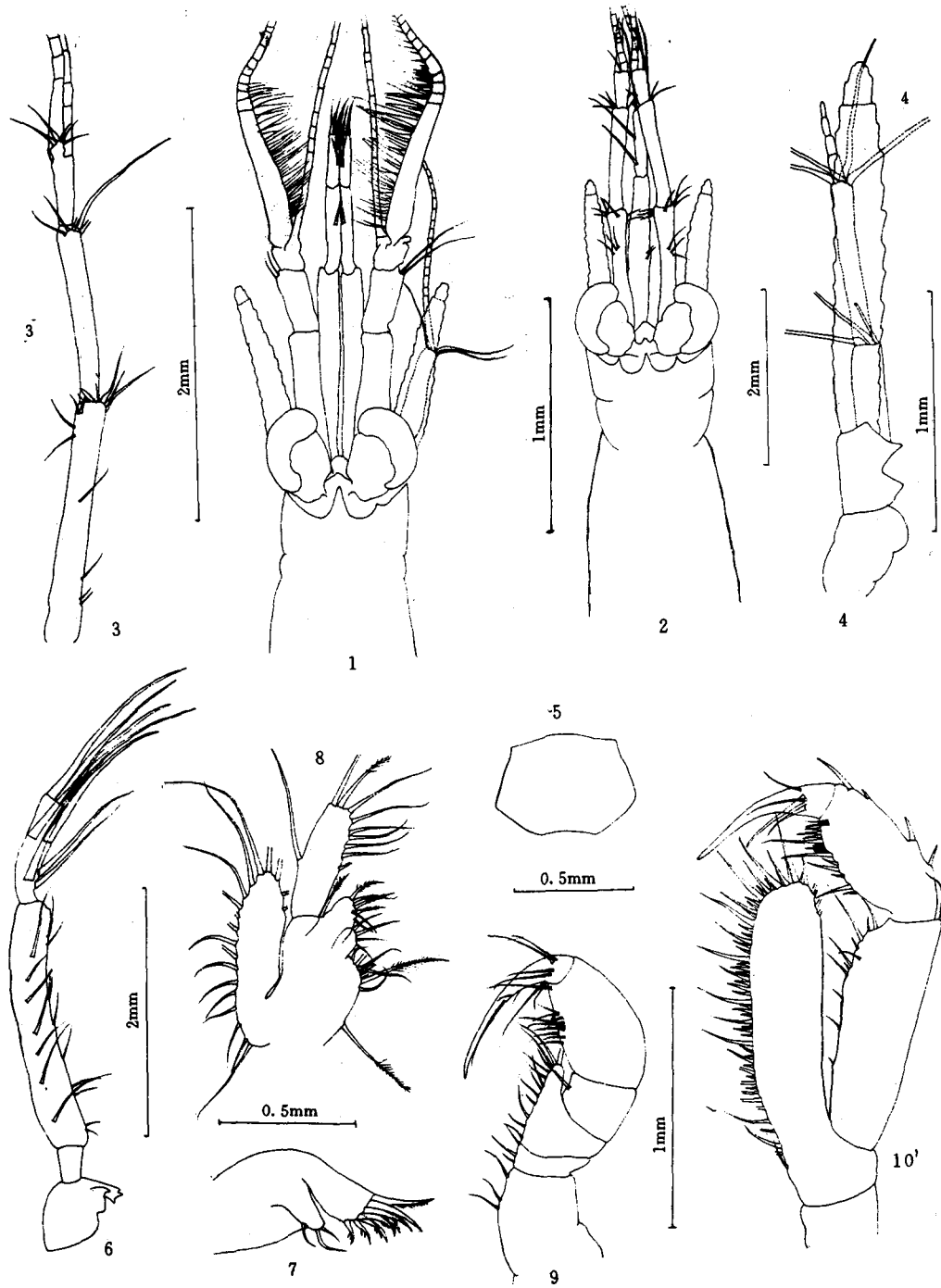
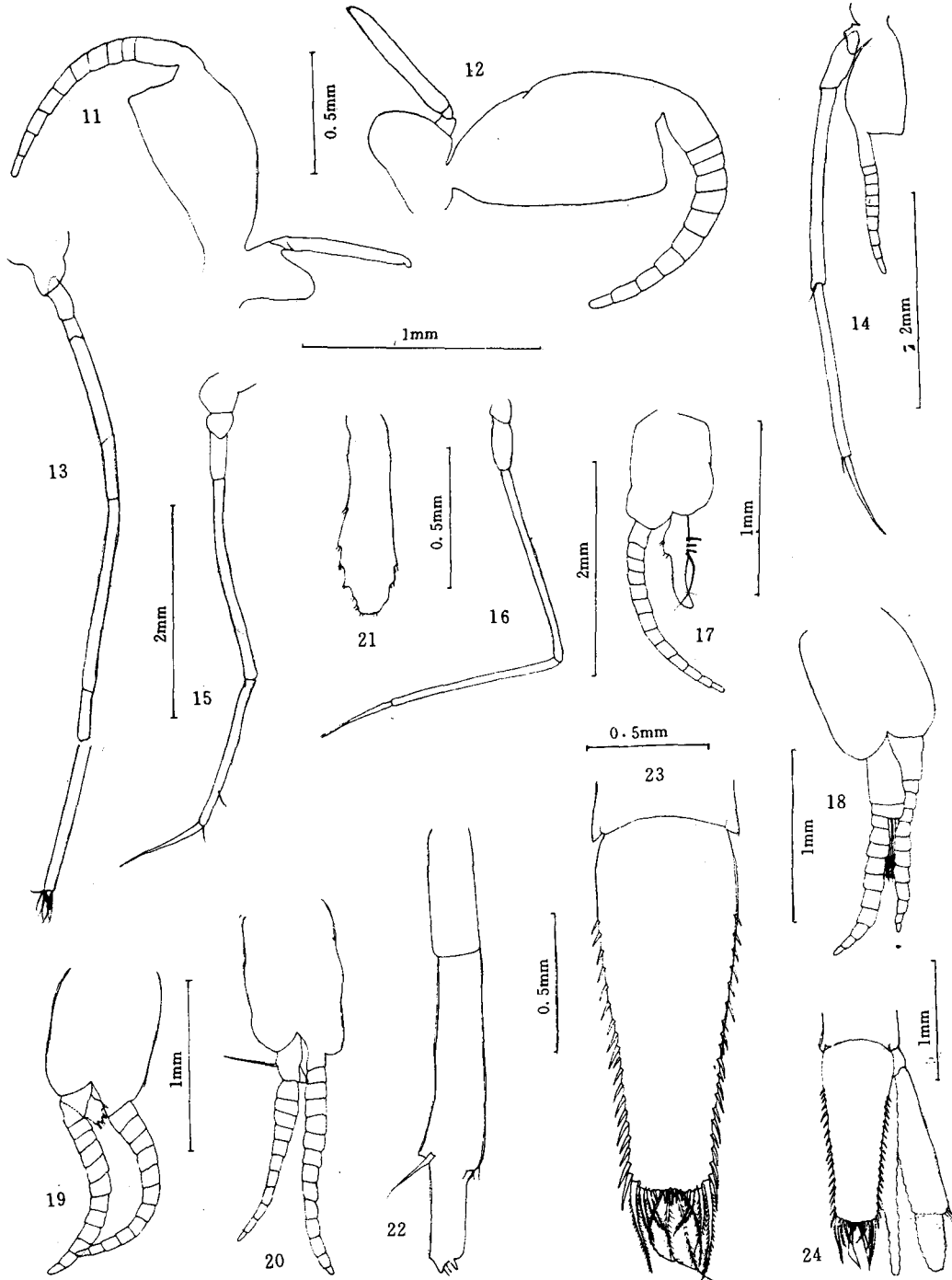


图 1 刘氏瓣眼糠虾(新种)

1. 雄性头胸部背面; 2. 雄性头胸部背面; 3. 雌性第 1 触角; 4. 第 2 触角; 5. 上唇; 6. 大颚; 7. 第 1 小颚; 肢; 14. 第 6 胸肢; 15. 第 7 胸肢内肢; 16. 第 8 胸肢内肢; 17. 雄性第 1 腹肢; 18. 雄性第 2 腹肢; 19. 雄性



Petalophthalmus liui sp. nov.

8. 第2小颚; 9. 第1胸肢内肢; 10. 第2胸肢内肢; 11. 第3胸肢; 12. 第4胸肢; 13. 第5胸肢内
第3腹肢; 20. 雄性第4腹肢; 21. 雌性第1腹肢; 22. 雌性第5腹肢; 23. 尾节; 24. 尾肢

糠虾科 Family Mysidae

糠虾亚科 Subfamily Mysinae

红糠虾族 Tribe Erythropini

盲糠虾属 Genus *Pseudomma* G. O. Sars, 18702. 全刺盲糠虾(新种) *Pseudomma spinosum* sp. nov. (图 2)

正模标本 成体雄性, 体长 5mm, K53P-6a。1959 年 7 月 3 日采自南海北部海南岛东部海域 19°00'N, 112°00'E, 水深 195m, 底质泥质砂。

副模标本 成体雌性, 体长 5mm, K53P-6b。采集时间、地点、水深和底质与正模标本相同。

其他材料 1♂, 3♀♀, 体长 4.5—5.0mm, K53P-6b—e。采集时间、地点与正、副模标本相同; 1♀, 体长 5mm, K31P-6, 1959 年 4 月 19 日采自 19°30'N, 112°30'E, 水深 260m, 底质粗砂; 1♀, 体长 4.8mm, K121P-1a, 1960 年 2 月 6 日采, 地点、水深、底质与正模标本相同。

体较小, 甲壳表面较光滑。腹部第 2 腹节背甲显著突出。

额板平而圆, 略呈弧形。眼板前侧角显著突出, 呈刺状, 内缘具小刺, 外缘光滑, 中央缺刻较大, 略呈“V”形。头胸甲背面后缘不覆盖末胸节。

雄性第 1 触角柄粗壮, 第 1 节长于第 2 节, 外末角显著突出; 第 2 节短; 第 3 节很长, 约等于两个基节的和。雄性突蹄形, 具稠密的刚毛。第 2 触角鳞片显著长于第 1 触角柄, 长约为宽的 $4-4\frac{1}{2}$, 不分节; 第 2 触角柄粗大, 长超过鳞片的 $\frac{2}{3}$ 。

表 2 *P. spinosum* sp. nov 与 *P. semispinosum* sp. nov. 的主要区别

	<i>Pseudomma semispinosum</i> sp. nov.	<i>P. spinosum</i> sp. nov.
体 表	具微细小刺	光滑
眼板前侧角	钝, 呈乳突状	尖, 呈刺状
尾 节	侧缘仅末半具 4—5 刺, 末端侧大刺间无小刺	侧缘末部 2/3 具 12—15 刺, 末端侧大刺间具小刺

第 1 胸肢内肢粗短, 指节末端具 1 光滑的粗刺; 第 2 胸肢内肢长而粗壮; 第 3—8 胸肢内肢纤细, 掌节由 3 节构成。胸肢外肢基板宽大, 外缘末角仅具 1 齿突。鞭部由 8—9 节构成, 两缘具发达的羽状刚毛。雌性具 3 对育卵板。

腹部 1—5 节较宽短, 第 6 腹节显著细长。雄性腹肢发达, 第 1 腹肢内肢不分节, 呈叶片状; 外肢由 8 节构成; 第 2—5 腹肢内外肢皆由 8—9 节构成, 不具变形刚毛。雌性腹肢不分节, 片状。

尾节略呈舌状, 长稍大于基部宽的 $1\frac{1}{2}$, 侧缘基部具 3 个短粗刺, 向后 1 小段光滑, 末部 $\frac{2}{3}$ 具 12—15 个短粗刺, 末端具中央小刺 1 对和侧大刺 3 对, 2 侧大刺间又各具 1 小刺, 中央刺仅为内侧刺长的 $\frac{1}{3}$ 。

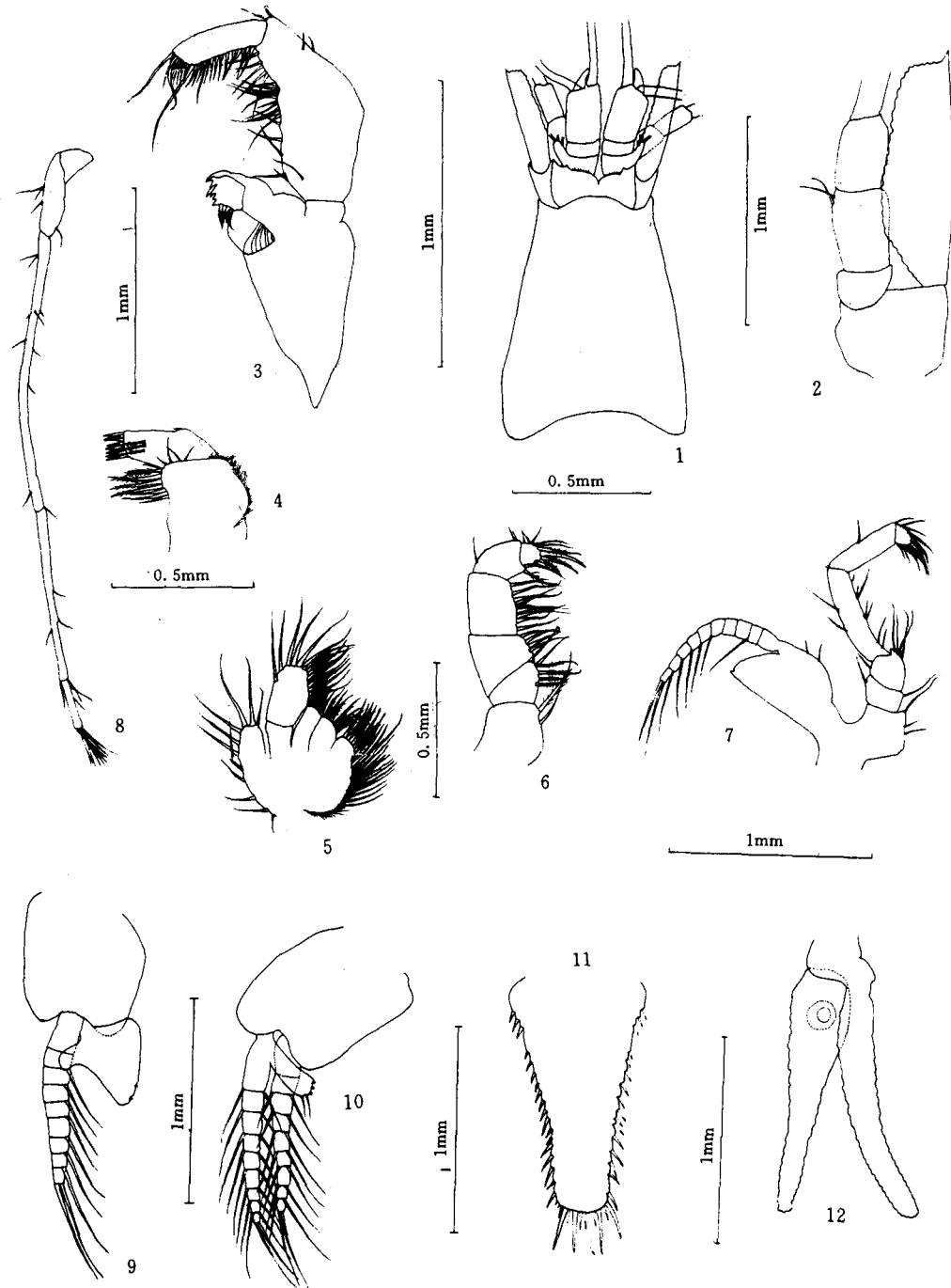


图2 全刺盲糠虾(新种)*Pseudomma spinosum* sp. nov.

1. 雄性头胸部背面; 2. 第2触角; 3. 大颚; 4. 第1小颚; 5. 第2小颚; 6. 第1胸肢内肢;

7. 第2胸肢内肢; 8. 第3胸肢内肢; 9. 雄性第1腹肢; 10. 雄性第4腹肢; 11. 尾节; 12. 尾肢

尾肢内肢较尾节显著长而纤细, 平衡囊显著, 附近光滑无刺。外肢稍长或略等于内肢。本新种外形与 *Pseudomma semispinosum* sp. nov. 近似, 但体光滑, 眼板前侧角呈刺

状,尾节末端侧大刺间具小刺,与后者区别显著,比较如表2。

本新种的眼板形状和尾节末端侧大刺间具小刺显著区别于属内其他种。

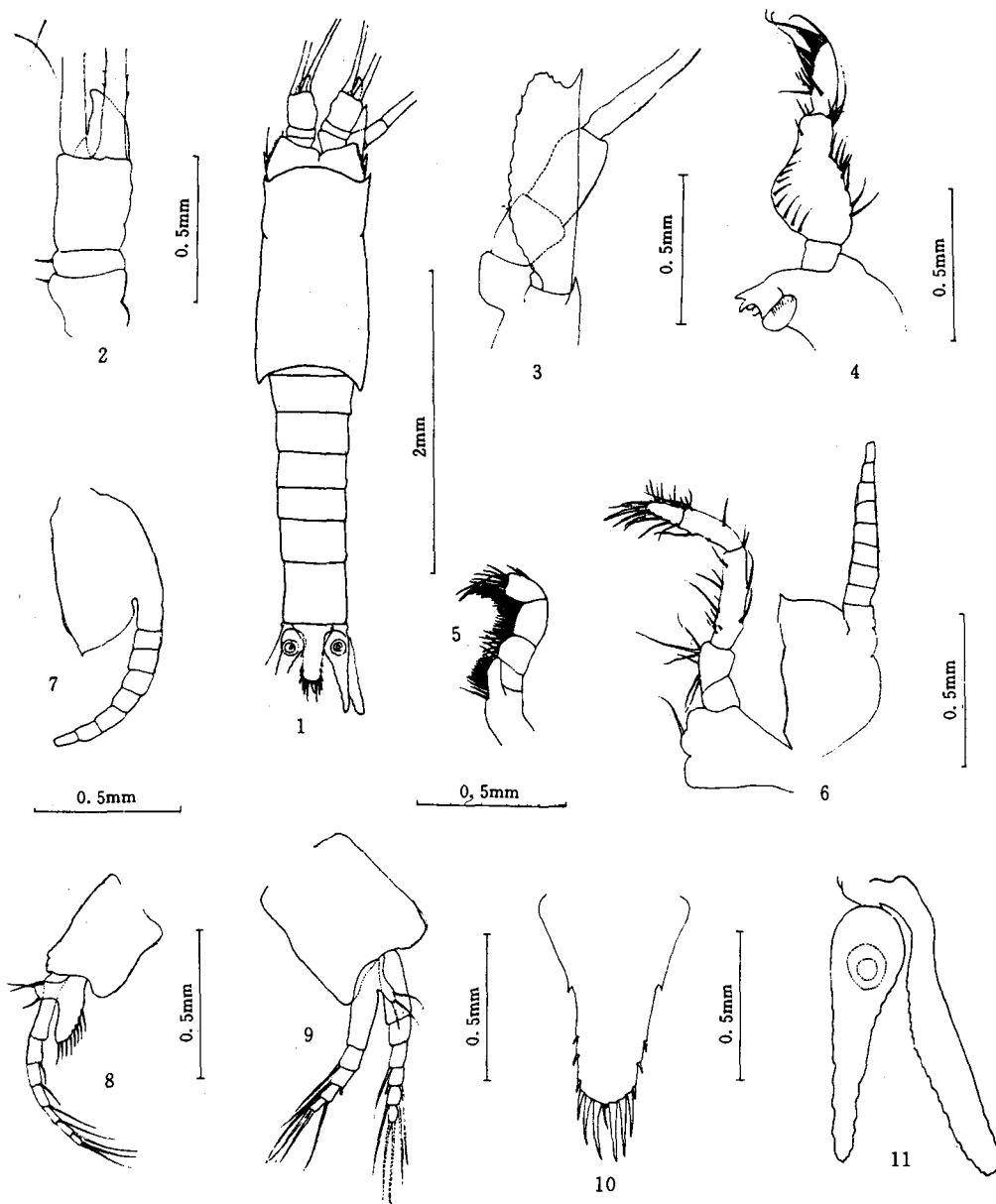


图3 半刺盲糠虾(新种)*Pseudomma semispinosum* sp. nov.

1. 雄性背面; 2. 雄性第1触角柄; 3. 第2触角; 4. 大颚; 5. 第1胸肢内肢; 6. 第2胸肢;
7. 第6胸肢外肢; 8. 雄性第1腹肢; 9. 雄性第4腹肢; 10. 尾节; 11. 尾肢

3. 半刺盲糠虾(新种)*Pseudomma semispinosum* sp. nov. (图 3)

正模标本 成体雄性,体长 3.6mm。K121P-1,1960 年 2 月 6 日采自南海北部海南岛以东海域 19°00'N,112°00'E,水深 195m,砂底。

副模标本 成体雌性(怀 6 粒卵),体长 4mm,K67P-5。1959 年 7 月 11 日采自南海北部海域 19°30'N,113°00'E,水深 220m,底质细砂。

体小而纤细,甲壳表面具微细小刺,特别是第 6 腹节背面尤为显著。

额板平圆,略呈弧形。眼板宽短,具小的中央缺刻,略呈“V”形。

雄性第 1 触角柄粗壮,第 1 节较长,约为第 2 节的 2 倍;第 3 节显著长,稍长于两个基节的和。雄性突显著粗大,呈蹄形,具稠密的刚毛。第 2 触角鳞片外缘末角齿细长,鳞片末部不突出,明显短于齿,不分节;第 2 触角柄显著大而粗壮,第 1 节最短;第 2 节稍长于第 1 节,约为第 1 节的 $1\frac{1}{4}$;第 3 节显著长,略短于两个基节的和。

大颚具显著的切齿突和白齿突;触须第 1 节短而窄,第 2 节基部 $\frac{2}{3}$ 很宽,末部 $\frac{1}{3}$ 很窄,两缘具粗壮的羽状刚毛;第 3 节略呈长椭圆形,内缘具 1 列粗短羽状刚毛和 3 根细长刚毛。第 1,2 小颚与属内其他种相似。

第 1,2 胸肢内肢都比较纤细,外肢基板宽大,外缘末角仅具 1 齿,鞭部由 9 节构成。雌性第 3,4 胸肢内肢纤细,其他胸肢内肢全部遗失;第 3—8 胸肢外肢与前肢相似,仅第 8 胸肢外肢基板外缘末角圆,不具齿,鞭部皆由 8—9 节构成。雌性具 3 对育卵板。

腹部第 1—5 腹节较短,第 6 腹节显著细长,约为第 5 腹节长的 $1\frac{1}{2}$ 。

雄性第 1 腹肢内肢叶片状,外肢显著长,约为内肢的 $2\frac{1}{2}$,由 7 节构成。第 2—5 腹肢内外肢皆由 5—6 节构成。雌性腹肢呈片状,不分节,前面腹肢宽短,向后依次较细长。

尾节呈舌状,基部宽,向末部趋窄,长不足宽的 $1\frac{1}{2}$,端宽仅为基部宽的 $\frac{1}{3}$,侧缘基半光裸,末半具 4—5 个粗短的刺;末端具 3 对粗壮的大刺,内对显著粗大,中央具 1 对羽状刚毛。

尾肢内肢基部宽,平衡囊大,附近光裸无刺,向末部趋窄。尾肢外肢稍长于内肢,末端圆,周围具发达的羽状刚毛。

本新种的外形与 *Pseudomma brevisuamosum* Murano,1974 近似,但身体长度、眼板外缘、第 2 触角鳞片末部及尾肢内肢都显著不同,主要区别如下:

表 3 *P. semispinosum* sp. nov 与 *Pseudomma. brevisuamosum* 的主要区别

	<i>Pseudomma brevisuamosum</i>	<i>P. semispinosum</i> sp. nov.
体长	8.6—8.9mm	3.6—4.0mm
眼板外缘	光滑	具刺
鳞片末部	突出,长于外缘齿	不突出,短于外缘齿
尾肢内肢	具 1 刺	无刺

假红糠虾属 Genus *Pseuderythrop* Coifmann, 1936

Pseuderythrop Nouvel, 1959: 233. — Pillai, 1967: 1707.

头胸甲前缘无额板。眼大呈球形。第1触角柄细长。第2触角鳞片弯曲,外缘具三角形末齿,不超过鳞片顶端。大颚触须向内弯曲,尾节完全,侧缘末半具刺。尾肢内肢具很大的平衡囊。

4. 细假红糠虾 *Pseuderythrop gracilis* Coifmann, 1936 (图 4)

Pseuderythrop gracilis Nouvel, 1959: 234 — Pillai, 1964: 25; 1967: 1707; 1972: 91.

1♂, 1♀, K33P-4, 1959年4月21日采自南海北部 19°30'N, 113°00'E, 水深 180m, 底质泥质砂; 1个年幼标本, K67P—3, 1959年7月11日采, 采集地点同上, 水深 220m, 底质细砂。

雄性体长 5mm, 雌性体长 7.3mm。

体光滑, 固定后的标本呈乳白色。

头胸甲前缘不突出, 略呈弧形, 前缘不覆盖第1触角柄和眼柄的基部。头胸甲较短, 后缘背面不覆盖最后胸节, 侧缘覆盖第1腹节侧甲。

眼大, 角膜球形, 呈紫色; 眼柄窄长。

雄性第1触角柄较粗壮, 第1节细长, 第2节很短, 宽与基节不相上下, 第3节显著粗壮且长于两个基节。雌性者显著纤细。第2触角鳞片外缘光滑而弯曲, 末齿粗壮, 鳞片末部显著突出, 明显超过外末齿; 第2触角柄短而纤细, 第1, 2节长略等, 第3节分别稍长于两个基节。

大颚发育正常。触须第1节短而窄; 第2节长, 稍向内弯, 基部宽, 向末部趋窄, 上具稀疏的羽状刚毛; 第3节窄长, 呈长椭圆形。

上唇呈梨形, 长宽略等, 前缘窄圆, 后缘宽圆, 具显著的末部缺刻。

第1, 2胸肢内肢较粗壮, 外肢基板窄长, 外缘末角圆, 鞭部由10节构成, 两缘具发达的羽状刚毛。第3—8胸肢内肢掌节由3节构成, 关节垂直; 胸肢外肢与1, 2胸肢相似。雌性具3对育卵板。

雄性第1腹肢内肢不分节, 外肢9节。第3腹肢内肢和外肢皆由9节构成, 不具变形刚毛。

尾节长三角形, 长不足基部宽的3倍, 向末部趋窄, 侧缘基部 $\frac{2}{5}$ 光裸, 末部 $\frac{3}{5}$ 具22—23个排列稠密、大小相似的刺, 末端窄而平截, 具1对末刺。

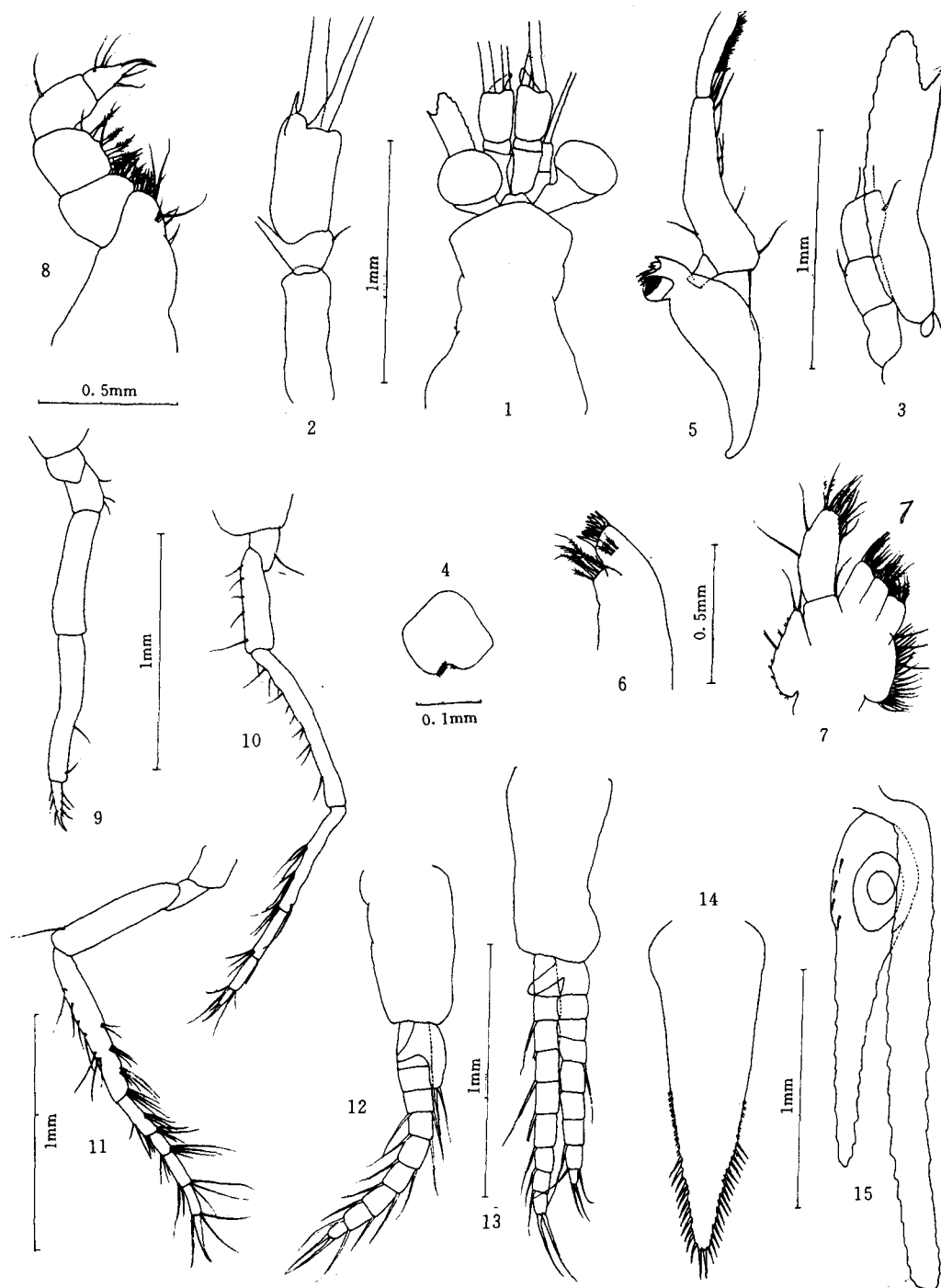
尾肢内肢基部很膨大, 向末部趋窄, 平衡囊显著大, 其附近内缘具4个排列稀疏的小刺。尾肢外肢显著长于内肢, 约为内肢的 $1\frac{1}{3}$, 末半稍向外弯曲, 两缘具发达的羽状刚毛。

标本的头胸甲前缘、眼、大颚触须及第2触角鳞片与 Nouvel (1959) 的描述和图十分相似, 但尾节长短、侧刺数目和尾肢内肢刺存在差异, 作者赞成 Nouvel (1951) 和 Pillai (1972) 的看法, 认为他们的标本都是 Coifmann (1936) 发表的 *Pseuderythrop gracilis*。

地理分布 红海、阿拉伯海、南海(北部)。

丸川糠虾属 Genus *Nakazawaia* Murano, 1981

Nakazawaia Murano, 1981: 293.

图4 细假红糠虾 *Pseuderythropus gracilis* Coifmann

1. 雄性头胸部背面; 2. 雌性第1触角柄; 3. 第2触角; 4. 上唇; 5. 大颚; 6. 第1小颚;
7. 第2小颚; 8. 第1胸肢内肢; 9. 第2胸肢内肢; 10. 第3胸肢内肢;
11. 第8胸肢内肢; 12. 雄性第1腹肢; 13. 雄性第3腹肢; 14. 尾节; 15. 尾肢

眼发育正常,背腹不平扁。第2触角柄第3节与第2节不同。雄性腹肢发达,第4腹肢内肢末第2节具变形刚毛。第2—4腹肢假鳃突上具附属叶。尾节三角形,侧缘全长具刺,末端窄而平截,具3个中央小刺和1对侧大刺。

本属雄性第4腹肢内肢具变形刚毛,第2—5腹肢内肢假鳃突具附属叶,显著区别于红糠虾族的其他属。

5. 日本丸川糠虾 *Nakazawaia japonica* Murano, 1981 (图 5)

Nakazawaia japonica Murano, 1981: 294.

1♂, N105P-5, 1959年11月20日采自海南岛的东南附近海域 18°30'N, 111°00'E, 水深 173m, 底质软泥; 2♀♀, K121P-10, 1960年2月6日采自 19°00'N, 112°00'E, 水深 195m, 底质砂; 1幼, K38P-1, 1959年4月18日采自 20°00'N, 112°30'E, 水深 78m 底质细砂; 2♂♂, 3♀♀, K31P-2, 1959年4月19日采自 19°30'N, 112°30'E, 水深 260m, 泥质粗砂; 1♂, 1♀, K53P-5, 1959年7月3日采自 19°00'N, 112°00'E, 水深 195m, 粗砂; 1♀, K65P-2, 1959年7月11日采自 20°30'N, 113°00'E, 水深 87m, 砂质泥。

雌、雄两性最大体长 4.5mm。

体较粗壮,头胸部宽阔,腹部狭窄,表面光滑,无刺,沟或褶。

额板前缘突出,宽圆呈弧形,稍覆盖眼柄和第1触角柄的基部,头胸甲后缘背面稍凹,仅最后胸节裸露。

眼粗大,长、宽略等,角膜略呈肾形,雄性略宽于雌性,呈桔红或桔黄色。

雄性第1触角柄显著粗壮,第1节明显长,不足第2节的3倍;第2节很短,约为末节的 $\frac{1}{3}$;第3节略长于第1节。雄性突粗短,呈蹄形,具稠密的刚毛,触角内鞭较纤细。

第2触角鳞片长,约为宽的 $4\frac{1}{3}$,外缘光滑,末齿细长,具小的末节,宽为长的2倍,末端显著超过第1触角柄;第2触角柄短,长超过鳞片的 $\frac{1}{2}$,约伸至第1触角柄第3节的中部,第2、3两节之间由1斜关节连接,末节很长,略短于两个基节的和。

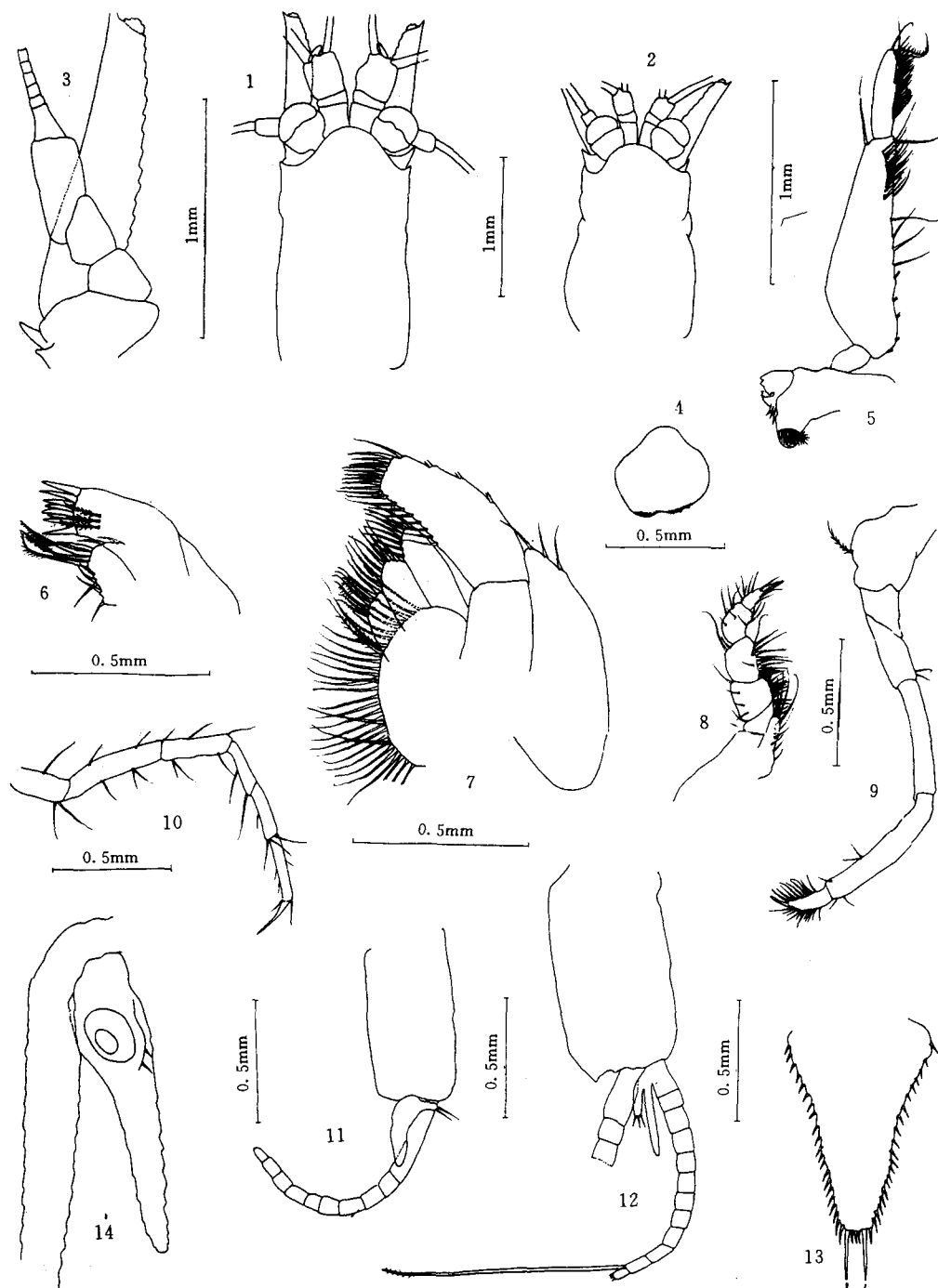
大颚发育正常;触须基节短,第2节长而适度粗壮,其内缘末部 $\frac{1}{3}$ 具1列刚毛,第3节不足基节的3倍。第1小颚基叶宽,末叶略窄,末端具7根光滑粗刺。第2小颚外肢基部圆,向末部趋窄而尖,具3根短粗刚毛。

上唇略呈梨形,宽略大于长,前缘较窄,后缘很宽,末部缺刻浅。

第1胸肢内肢短小,颚基叶窄长,呈长椭圆形,指节末部具带小刺的粗刺。第2胸肢内肢纤细,掌节略长于腕节,指节末部具刺。第4—5胸肢内肢掌节由3节构成,其基关节斜,末关节垂直,指节爪状。胸肢外肢基板宽,外缘末角齿状,鞭部由9节构成。雌性具2对育卵板。

雄性腹肢双枝,第1腹肢内肢短,简单不分节,其长不超过外肢第1节;外肢9节,基节显著长,约为第2—5节的和。第2—4腹肢内肢10节,假鳃突具附属叶;外肢9节,第4腹肢内肢末第2节外末角具1根十分粗大的变形刚毛。

尾节呈三角形,长约为基部宽的 $1\frac{1}{2}$,侧缘全长约具16—21个大小相似的刺,末端窄面平截,具2—3个中央小刺和2个长而粗壮的大侧刺。尾肢内肢显著长于尾节,约为尾节的 $1\frac{1}{3}$,内缘腹面平衡囊附近具2—4刺。尾肢外肢窄长,稍短于尾节的2倍,末端圆,周围

图5 日本丸川糠虾 *Nakazawaia japonica* Murano

1. 雄性头胸部背面; 2. 雌性头胸部背面; 3. 第2触角; 4. 上唇; 5. 大颚; 6. 第1小颚;
7. 第2小颚; 8. 第1胸肢内肢; 9. 第2胸肢内肢; 10. 第4胸肢内肢; 11. 雄性第1腹肢;
12. 雄性第4腹肢; 13. 尾节; 14. 尾肢

具毛。

标本与 Murano(1981)的原始描述和图相似,特别是额板形状、第2触角柄和第2—4雄性腹肢内肢假鳃突上具叶,但南海标本眼的角膜较短,雄性腹肢节数较少,仅9—10节,尾节侧缘刺的数目也较少。

地理分布 东海,日本东岸,南海北部首次发现。

刘糠虾属(新属)Genus *Liuimysis* gen. nov.

体细长,额部稍突出,额板短而宽圆。眼大,略呈球形。第2触角鳞片外缘光裸,末节短,宽显著大于长,关节斜。大颚触须第2节很宽,向末部趋窄。第1小颚末叶外缘具大的钝突。第2小颚内肢窄长,外肢很小。第3—8胸肢内肢腕掌节由3节构成,基关节很斜,末关节垂直,指节刺状。尾节窄而长,基部宽,向后急剧变窄,后两侧缘平行,边缘光裸无刺,再向后逐渐趋窄,呈长三角形;基部 $\frac{1}{3}$ 光裸,末部 $\frac{2}{3}$ 大小刺相间排列,两大刺间具1—5个小刺。尾节末端圆,中央小刺和外大刺各1对。

本新属与 Genus *Thalassomysis* W. Tattersall, 1939 的外形相似,但眼的形状、尾节侧刺的排列和大小显著不同;本新属也与 Genus *Meterthrops* 外形相似,但第2触角鳞片形状和尾节显著区别于红糠虾族的其他成员。

6. 长尾刘糠虾(新种)*Liuimysis longicauda* sp. nov. (图6)

正模标本 成体雌性,体长7.0mm, K121P-8a。1960年2月6日采自南海北部19°00'N, 112°00'E,水深195m,砂底。

副模标本 年幼雄性,体长4.5mm, K121P-8b。采集时间、地点、水深和底质与正模相同。

其他材料 3♀, 3幼雌, K121P-8c—h。采集时间、地点、水深和底质与正、副模式标本相同。

体适度粗壮,甲壳表面光滑,头胸甲背面拱圆,后缘较前缘宽大,背凹浅,不覆盖最后胸节,颈沟显著深。

整个额缘突出,形成短而宽圆的额板,前缘覆盖眼柄的基半和第1触角柄第1节的大部。

眼宽短而粗,长略大于宽,角膜显著短于眼柄,宽与眼柄略等或稍窄,呈半球形;眼柄长。

雌性第1触角柄纤细,显著短于第2触角鳞片,第1节显著长于第3节,外末角突出,具3—4根羽状刚毛,约为第2节的3倍;第2节很短;第3节约为第2节的 $2\frac{1}{3}$ 。第2触角鳞片长约为宽的3倍,末部具斜缝,末节短小,宽大于长;第2触角柄短而纤细,长仅为鳞片的 $\frac{2}{5}$,第1节显著长,约为末2节的和;第2节很短;第3节长于第2节。

上唇短,梨形,前端窄,后部宽,具深缺刻。大颚触须第1节很短;第2节长而宽,呈阔叶形;第3节窄长。第1小颚原肢共2小叶,基叶小,末端具3根带刺的长刚毛,末叶较长,末端具短粗刚毛8根,外缘具显著的钝突。第2小颚内肢窄长,外肢很小,仅末缘 $\frac{2}{5}$ 具3根羽状刚毛。

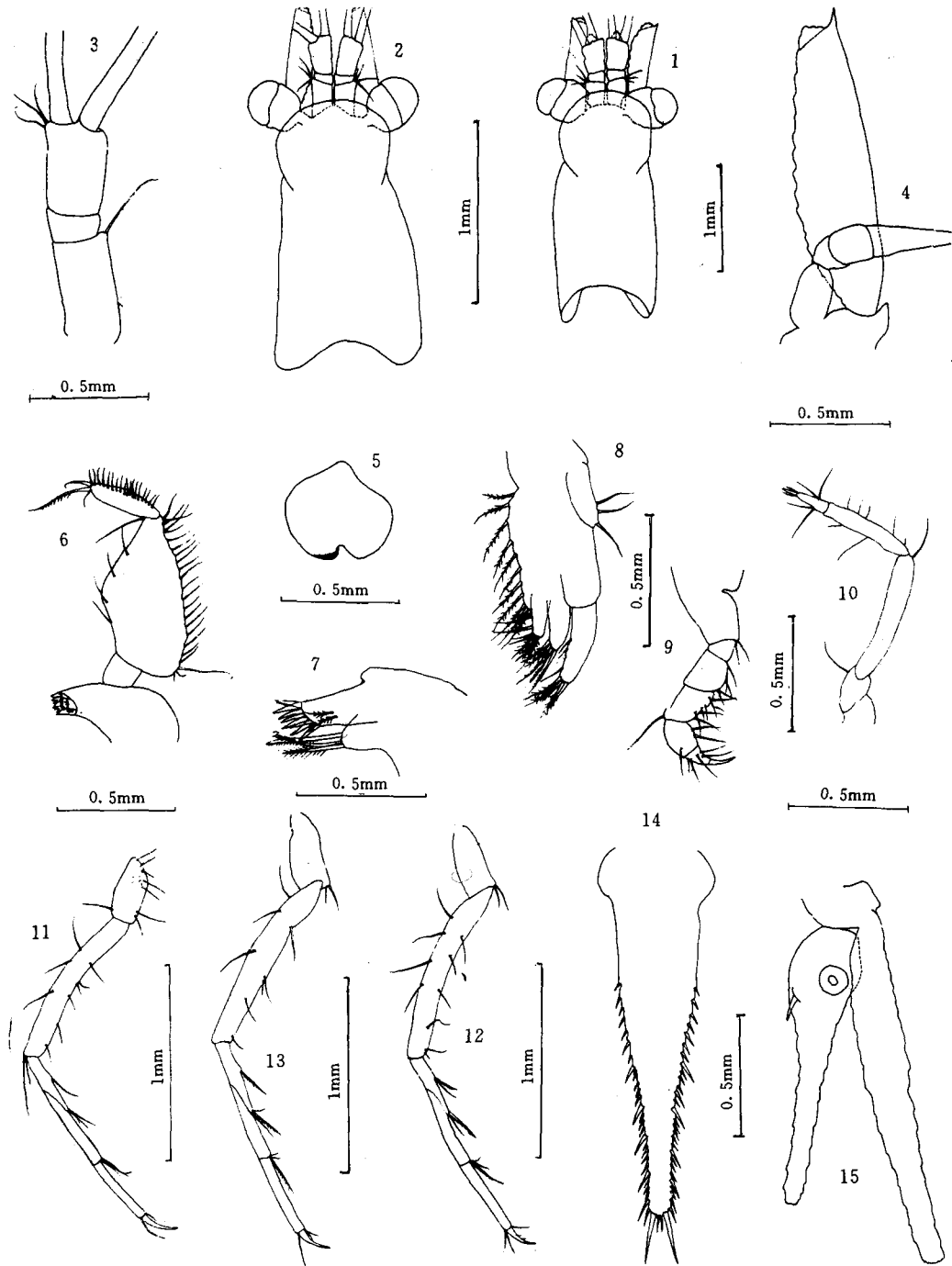


图6 长尾刘糠虾(新种) *Liuimysis longicauda* sp. nov.

1. 雄性头胸部背面; 2. 雌性头胸部背面; 3. 雌性第1触角柄; 4. 第2触角; 5. 上唇; 6. 大颚;
7. 第1小颚; 8. 第2小颚; 9. 第1胸肢内肢; 10. 第2胸肢内肢; 11. 第3胸肢内肢;
12. 第5胸肢内肢; 13. 第6胸肢内肢; 14. 尾节; 15. 尾肢

第1胸肢内肢短宽,无颚基叶,指节刺状;外肢基板外缘末角圆形,鞭部8节。第2胸肢内肢适度粗壮,指节呈粗刺状;外肢基板与前肢相似,鞭部9节。第3—6胸肢内肢纤细,掌节由3节构成,基关节斜,内缘突出,末关节垂直,指节爪状;胸肢外肢与第2胸肢相似。雌性具2对育卵板。

+腹部1—5节较粗短,其长、短略等,第6腹节显著细长,约为第5腹节的 $1\frac{1}{2}$ 。

雌性腹肢纤细,简单不分节,第1腹肢较粗短,向后依次逐渐细长。年幼雄性个体第1腹肢内肢不分节,外肢6节;第2—5腹肢内肢和外肢由6—8节构成。

尾节窄,特别延长,基部宽,向后突然变窄,侧缘平行,再向后继续趋窄,呈长三角形,侧缘近基部 $\frac{1}{3}$ 光滑,末部 $\frac{2}{3}$ 大小刺排列成组,两大刺间各具1—5个较小的刺,末端具1对中央小刺和1对侧大刺,中央刺约为侧刺长的 $\frac{1}{3}$ 。尾肢内肢显著短于尾节,平衡囊很大,腹面内缘附近具1个显著的粗刺。尾肢外肢长于尾节。

本新种的尾节与 *Thalassomysis sewelli* W. M. Tattersall, 1939. 十分相似,但本新种的大颚触须第2节基部宽,末部窄;第1小颚基叶末端具显著粗大的带刺刚毛,末叶外缘具钝突;第2小颚内肢细长,外肢很小,仅末部具3根短刚毛;第3—7胸肢内肢腕掌节由3节构成,基关节显著斜。上述特征明显区别于红糠虾族的其他属所包括的种。

沈糠虾属(新属) Genus *Shenimysis* gen. nov.

额板窄圆,额缘两侧具眼上刺。第2触角鳞片外缘具齿,末部有显著的横缝。

上唇略呈球形,前缘宽圆,后缘窄,具显著的缺刻。第1小颚末叶外缘凹。第2小颚内肢略呈长方形。雄性第3腹肢内肢具变形的长刚毛。尾节宽短,略呈心形,侧缘光裸,末端具2对小刺,内对显著长于外对。

本新属与红糠虾属 *Geuns Erythropis* G. O. Sars, 1869 和双眼糠虾属 Genus *Euchaetomera* G. O. Sars, 1883 外形相近似,但眼不平扁,尾节呈心形,显著不同于前一属;眼的构造不分前眼和后眼,也明显地区别于后一属。

本新属的第2触角鳞片外缘具显著的齿;雄性后4对腹肢发达,分枝;尾节完全,属于红糠虾族 Tribe Erythropini 的成员。

7. 心形沈糠虾(新种) *Shenimysis cordata* sp. nov. (图7)

正模标本 成体雄性,体长4.0mm, K67P-2a。1959年7月11日采自南海北部 $19^{\circ}30'N, 113^{\circ}00'E$, 水深220m, 底质细砂。

副模标本 成体雌性,体长4.5mm, L59P-5。1959年4月2日采自南海北部 $19^{\circ}00'N, 112^{\circ}00'E$, 水深194m, 底质中砂(解剖绘图)。

其他材料 2♂♂, 2♀♀, 体长4.0—4.5mm。1959年2月17日至7月14日采自南海北部, 标本不同程度毁坏, 但主要鉴别特征显著。

体较短而适度粗壮, 甲壳表面光裸, 呈淡褐色。

额板窄圆, 呈半圆形, 顶端稍覆盖第1触角柄第1节的基部, 其两侧各具1齿状眼上刺, 伸出于眼柄的上方。

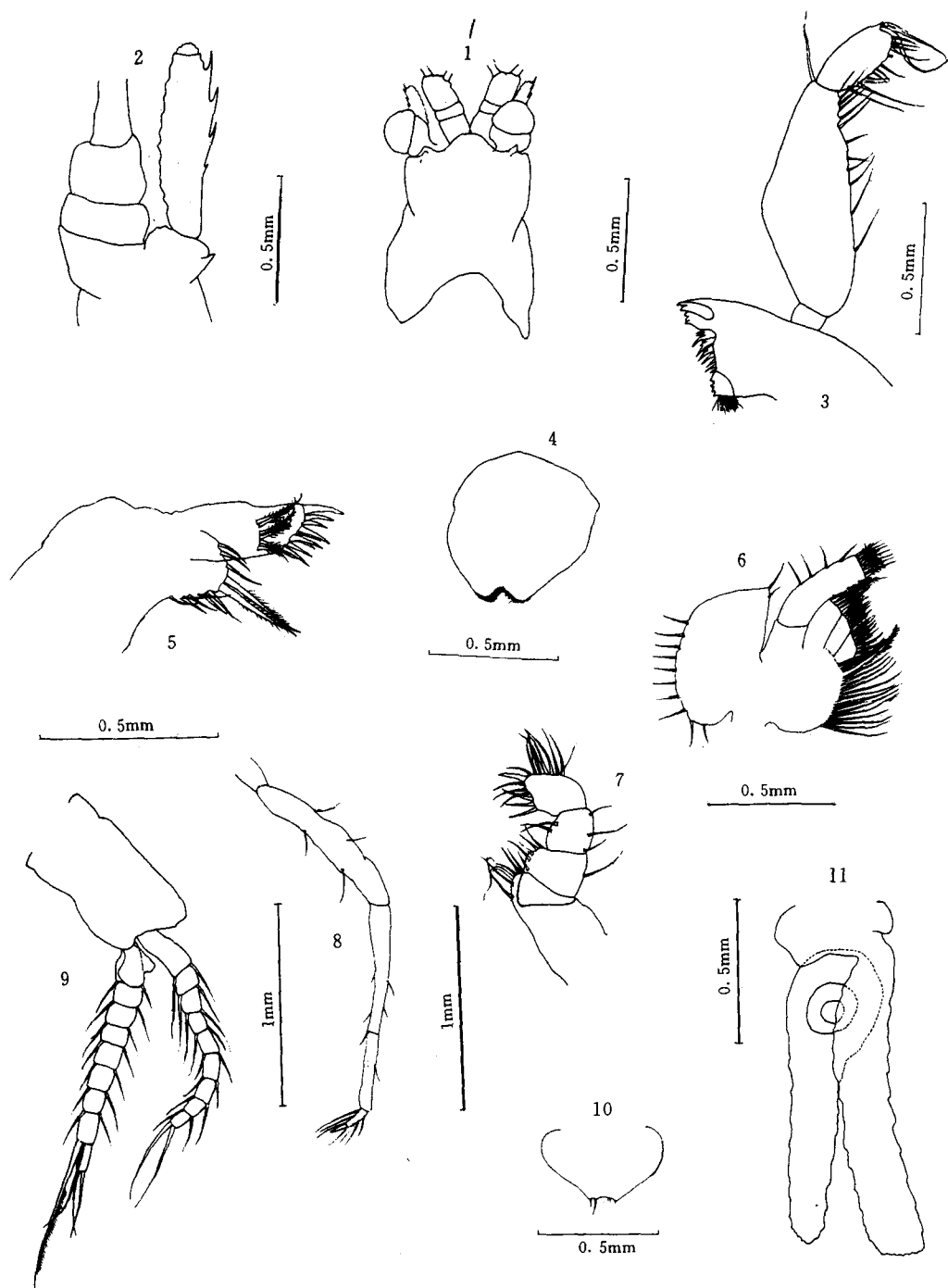


图7 心形沈糠虾(新种)*Shenimysis cordata* sp. nov.

1. 雌性头胸部背面; 2. 第2触角; 3. 上唇; 4. 大颚; 5. 第1小颚; 6. 第2小颚; 7. 第1胸肢;
8. 第2胸肢内肢; 9. 雄性第3腹肢; 10. 尾节; 11. 尾肢

眼粗短,长宽略等,呈球形,角膜长于眼柄,呈紫红色。

两性第1触角柄都较粗壮,第1节显著长,稍大于第2节的2倍;第2节很短;第3节略长于基节,触角内、外两鞭都比较发达,粗、细略等,雄性突不显著。第2触角鳞片长约为宽的4倍,外缘具4个大小不等的齿,末节显著,宽大于长,末部超过外缘齿。第2触角柄短而粗壮,基节分别长于两个末节,第2节最短,第3节长于第2节。

上唇近圆形,前缘较宽,后缘略窄,长宽略等。

大颚发育正常;触须第1节短而窄,第2节很发达,内缘具稀疏的刚毛,第3节宽短,略呈椭圆形。第1小颚基叶宽圆,中央具2根粗壮的长刚毛,两侧具粗短刚毛;末叶较长,侧缘具6根刚毛,末部具粗、细不等的光裸刺突。第2小颚内肢末节窄长,呈长方形,外肢宽大呈叶片形。

第1胸肢内肢粗短,颚基叶不显著,腕掌节宽短,指节宽大,末刺适度粗壮;上肢呈叶片形。第2胸肢内肢细长,约为第1胸肢的2倍。第3—8胸肢内肢全部遗失;外肢基板呈长方形,外缘末角具1齿,鞭部由9节构成。雌性具2对育卵板。

腹部第1—5腹节粗短,其长、短相近,唯第6腹节显著细长,约为第5腹节长的2倍。

雄性腹肢双枝,第1腹肢内肢叶片形,不分节;外肢9节。第3腹肢内肢9节,末第2节内末角具粗壮的变形刚毛;外肢9节。雌性腹肢皆为片状,简单不分节。

尾节宽短,长仅为基部宽的 $\frac{3}{5}$,呈心形,基部宽,向末部显著趋窄,端宽约为基部宽的 $\frac{1}{4}$,侧缘光裸无刺,末端稍凹,具两对小刺,内对长于外对。尾肢内肢显著粗壮,内缘腹面光裸无刺。尾肢外肢稍长于内肢。末端平截,周围具发达的羽状刚毛。

本新种的外形与红糠虾属的小红糠虾 *Erythrops minuta* Hansen, 1910 相似,但新种具眼上刺,眼不平扁,呈柱状;第2触角鳞片外缘具显著的齿;尾节小,基部很宽,向末部急剧变窄,末端具2对小刺。侧缘光裸。本新种的尾节形状与双眼糠虾 *Euchaetomera oculata* Hansen, 1910 也较相似,但眼的构造显著不同于后者,不分前眼和后眼,仅具1个发达的角膜。

超红糠虾属 Genus *Hypererythrops* Holt et Tattersall, 1905

Hypererythrops Holt et Tattersall, 1905: 119. —— Zimmer, 1909: 122. —— Illig, 1930: 570 (in key). —— Tattersall, W. M. et O. S. Tattersall, 1951: 217. —— Li, 1964: 326. —— Pillai, 1967: 1705.

8. 半刺超红糠虾(新种) *Hypererythrops semispinosa* sp. nov. (图 8)

正模标本 成体雄性,体长 5.0mm, K121P-9a。1960年2月6日采自南海北部 19°00'N, 112°00'E, 水深 195m, 泥质砂。

副模标本 成体雌性,体长 4.2mm, K121P-9b。采集时间、地点、水深、底质与正模相同。

其他材料 8♂♂, 1♀, 采自 1959年7月3日至 1960年2月6日, 采集地点、水深和底质与正模相同。

成体雄性最大体长 5.5mm, 雌性为 4.8mm。

体适度粗壮, 雄性头胸部较细长, 雌性较宽短。

额板呈三角形, 雄性较宽, 雌性稍窄, 顶端钝圆, 不覆盖第1触角柄第1节和眼柄的基



图 8 半刺超红糠虾(新种) *Hypererythrops semispinosa* sp. nov.

1. 雄性头胸部背面; 2. 雌性头胸部背面; 3. 雄性第1触角柄; 4. 第2触角; 5. 大颚;
6. 第1小颚; 7. 第2小颚; 8. 第1胸肢内肢; 9. 第2胸肢内肢; 10. 第3胸肢内肢;
11. 雄性第1腹肢; 12. 雄性第4腹肢; 13. 尾节; 14. 尾肢

部。

眼稍平扁,长宽略等,角膜肾形,短宽于眼柄;眼柄窄长。雄性第1触角柄适度粗壮,第1节显著长,约为第2节的3倍,外末角突出,具3根短而粗壮的刚毛;第2节很短;第3节略长于第1节,雄性突蹄形,具稠密的刚毛。第2触角鳞片窄长,长约为宽的 $5\frac{1}{3}$,内缘具毛,外缘光裸,末缘具齿,末部显著突出于外齿,不具横缝;第2触角柄较长,第1节很短,末2节显著长于基节,长度略等,约为基节的 $1\frac{3}{5}$ 。

上唇前缘窄,后缘宽。大颚发育正常;触须第1节短而窄;第2节适度长而粗壮,外缘末部 $\frac{1}{3}$ 具稠密、细长的带刺刚毛。第1小颚基叶较宽,中央具3—4根长而粗壮的带刺刚毛,两侧具粗壮的羽状刚毛;末叶外缘基部边缘具稠密的细毛,侧缘具3根带刺刚毛,末端具光裸的粗刺。第2小颚内肢末节卵圆形,两缘具带刺刚毛,内缘稠密,外缘稀疏;外肢为叶片形,边缘具16根短而粗壮的羽状刚毛。

雄性第1腹肢内肢叶片形,边缘光裸,仅末缘具1根小刺;外肢由10节构成。第2—5腹肢内肢和外肢皆由8—10节构成,内肢假鳃叶呈叶片状。第4腹肢内肢末节末部具变形刚毛。雌性腹肢简单不分节。

尾节略呈三角形,基部宽,向末部趋窄,长约为基部宽的 $1\frac{1}{2}$,侧缘基部 $\frac{3}{4}$ 光裸无刺,仅末部 $\frac{1}{4}$ 具2—3个短而粗壮的刺,中央两刺显著长于侧刺。尾肢内肢略长于尾节,内缘腹面光裸无刺。尾肢外肢窄长,长约为宽的 $8\frac{3}{4}$ —10倍。

本新种与产于印度西太平洋的 *Hypererythrops spinifera* (Hansen, 1910) 和 *H. zimmeri* Ii, 1937 外形相似,但后者尾节的侧缘全缘具刺,显著不同。本新种的尾节形状和侧刺数也近似太平洋沿岸的 *H. caribbaea* W. M. Tattersall, 1937 和 *H. serrirenter* Holt & Tattersall, 1905,但眼和第2触角鳞片的形状两者之间区别显著。

异糠虾属 Genus *Heteromysis* S. I. Smith, 1874

Heteromysis Sars, 1885: 216 —— Zimmer, 1909: 140. —— Tattersall, 1922: 445; 1951: 235. —— Illig, 1930: 599 (in key). —— Tattersall, W. M. et O. S. Tattersall, 1951: 414. —— Tattersall, O. S. 1962: 234. —— Ii, 1964: 568. —— Pillai, 1967: 568.

第2触角鳞片短,呈卵圆形,周围具刚毛。第3胸肢内肢显著长而粗壮,适于捕捉,掌节粗壮不分节,具粗壮的刺。指节具长而粗壮的爪。第4—8胸肢内肢掌节纤细不分节。雄性腹肢与雌性相似,皆为锥形。尾节三角形,末端具缺刻。

9. 胖尾异糠虾(新种) *Heteromysis inflaticauda* sp. nov. (图9)

模式标本 成体雌性,体长4mm, K59P-1。1959年7月6日采自南海北部海域21°15'N, 112°30'E,水深47m,底质沙质泥。

体小而纤细,甲壳表面粗糙,呈淡褐色。头胸甲较宽短,颈沟显著,前侧角圆形,后缘背面内凹,仅末1胸节裸露。腹部显著长于头胸部。

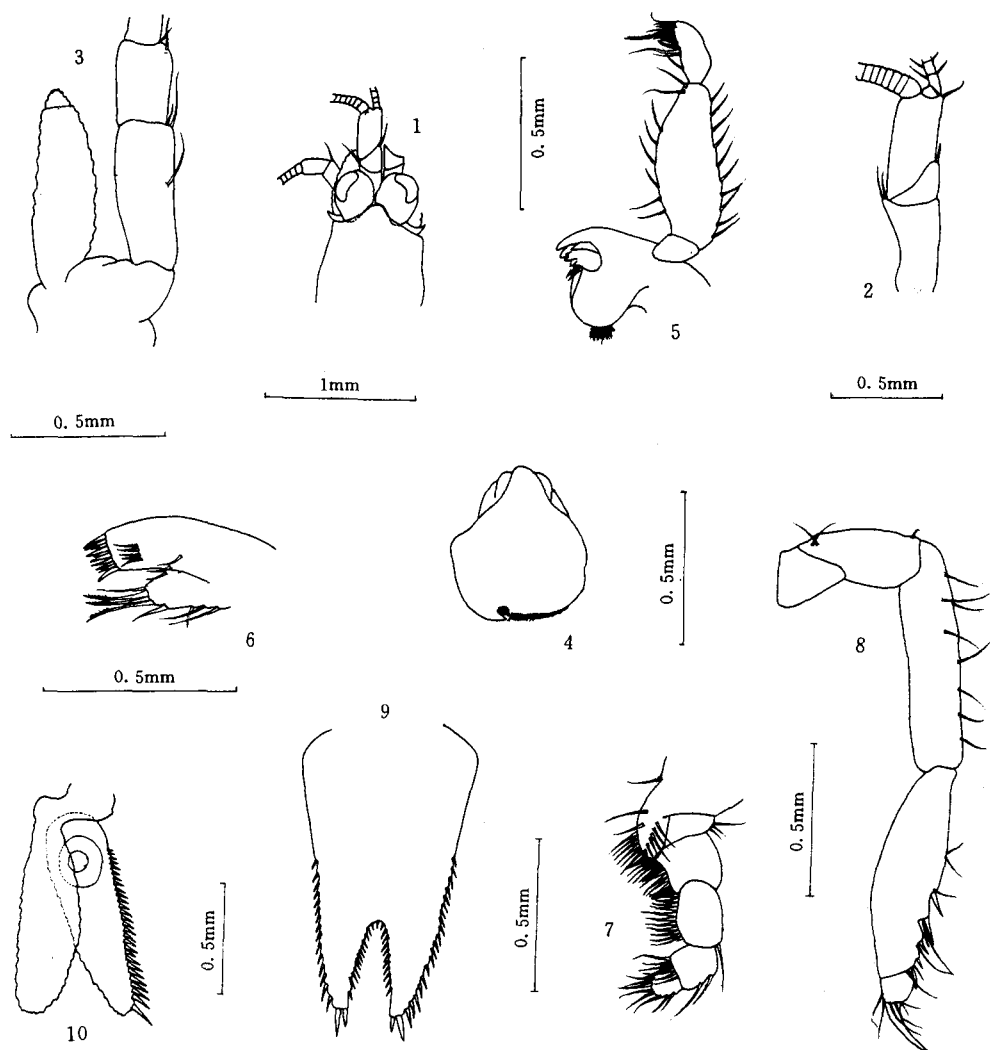


图9 胖尾异糠虾(新种) *Heteromysis inflaticauda* sp. nov.

1. 雌性头胸部背面; 2. 雌性第1触角柄; 3. 第2触角; 4. 上唇; 5. 大颚; 6. 第1小颚;

7. 第1胸肢内肢; 8. 第3胸肢内肢; 9. 尾节; 10. 尾肢

额板为宽三角形,顶端钝圆,不覆盖第1触角柄第1节的基部,其侧缘稍覆盖眼柄的基部。

眼粗短,长稍大于宽,角膜小,显著短于眼柄;眼柄长而宽,约占全眼的 $\frac{2}{3}$ 。

雌性第1触角柄长而纤细,第1节显著长于第2节,外末角突出,具2—3根羽状刚毛;第2节短,内缘长,外缘短,略呈三角形;第3节与第1节略等。触角内鞭纤细,外鞭粗壮,在两鞭之间的背面具1圆叶。第2触角鳞片呈披针形,长约为宽的3倍,末节短,宽显著大于长;第2触角柄长而粗壮,显著超过鳞片,基节短,长约为第2节的 $\frac{2}{5}$;第2节很长,稍大于基末两节的和;第3节略长于第1节。

上唇呈梨形,前缘窄,为钝突状,后缘宽,不具深的缺刻。

大颚不发达,切齿突与臼齿突不显著;触须第1节短而窄,第2节长而粗壮,末节呈长椭圆形。第1小颚基叶宽,末叶窄。第2小颚形状正常。

第1胸肢内肢短宽,颚基叶不突出,指节末部仅具羽状刚毛。第3胸肢内肢显著粗,腕节内缘具6刺,指节爪状。第2,4—8胸肢内肢全部遗失;胸肢外肢基板窄长,外缘末角直,鞭部由8—9节构成。雌性具2对育卵板,前对小,后对大而显著。

第1—5腹节粗短,第6腹节显著细长,约为第5腹节的 $1\frac{2}{5}$ 。两性腹肢皆为单肢,1—5对逐渐增大,第4腹肢约为第5腹肢长的2倍。

尾节宽短,长不足基部宽的2倍,侧缘基半光裸,末半具15—19刺,末端缺刻深,约为尾节长的 $\frac{1}{3}$ 。尾肢内肢基部宽,向末部趋窄,内缘约具28个由前向后依次增大的刺。尾肢外肢宽短于内肢,两缘具毛,末端圆。

本新种与产于日本海域的 *Heteromysis xanthops* Li, 1964 外形近似,但额板显著突出,呈宽三角形,末端钝圆;尾肢内肢内缘全长具刺,而后种的额板不突出,顶端略呈弧形,两侧稍凹,尾肢内肢内缘仅基部 $\frac{2}{3}$ 具刺,末部 $\frac{1}{3}$ 光裸,显著不同。

小糠虾属 Genus *Mysidella* G. O. Sars, 1872

Mysidella G. O. Sars, 1879: 84 —— Zimmer, 1909: 169. —— Illig, 1930: 600 (key). —— Banner, 1948: 108. —— Tattersall, W. M. et O. S. Tattersall, 1951: 427. —— Li, 1964: 574.

眼发育完全或雏形。雄性第1触角柄末两鞭之间背突叶片形。第2触角鳞片小,周围具羽状刚毛,具小的末节。上唇前缘圆,后端分为2个不等大的叶。大颚切齿宽展成叶,无任何齿或刺。第3—8胸肢内肢掌节由2或3节构成。尾节末部具缺刻。

本属已报告6种,作者在南海北部海域发现3个新种,即 *Mesidella tenuicauda* sp. nov., *M. rotundincisa* sp. nov. 和 *M. incisa* sp. nov.。

10. 窄尾小糠虾(新种) *Mesidella tenuicauda* sp. nov. (图10)

模式标本 成体雄性,体长3mm, K38P-6。1959年4月18日采自南海北部海域 20°00'N, 112°30'E, 水深78m, 底质细砂。

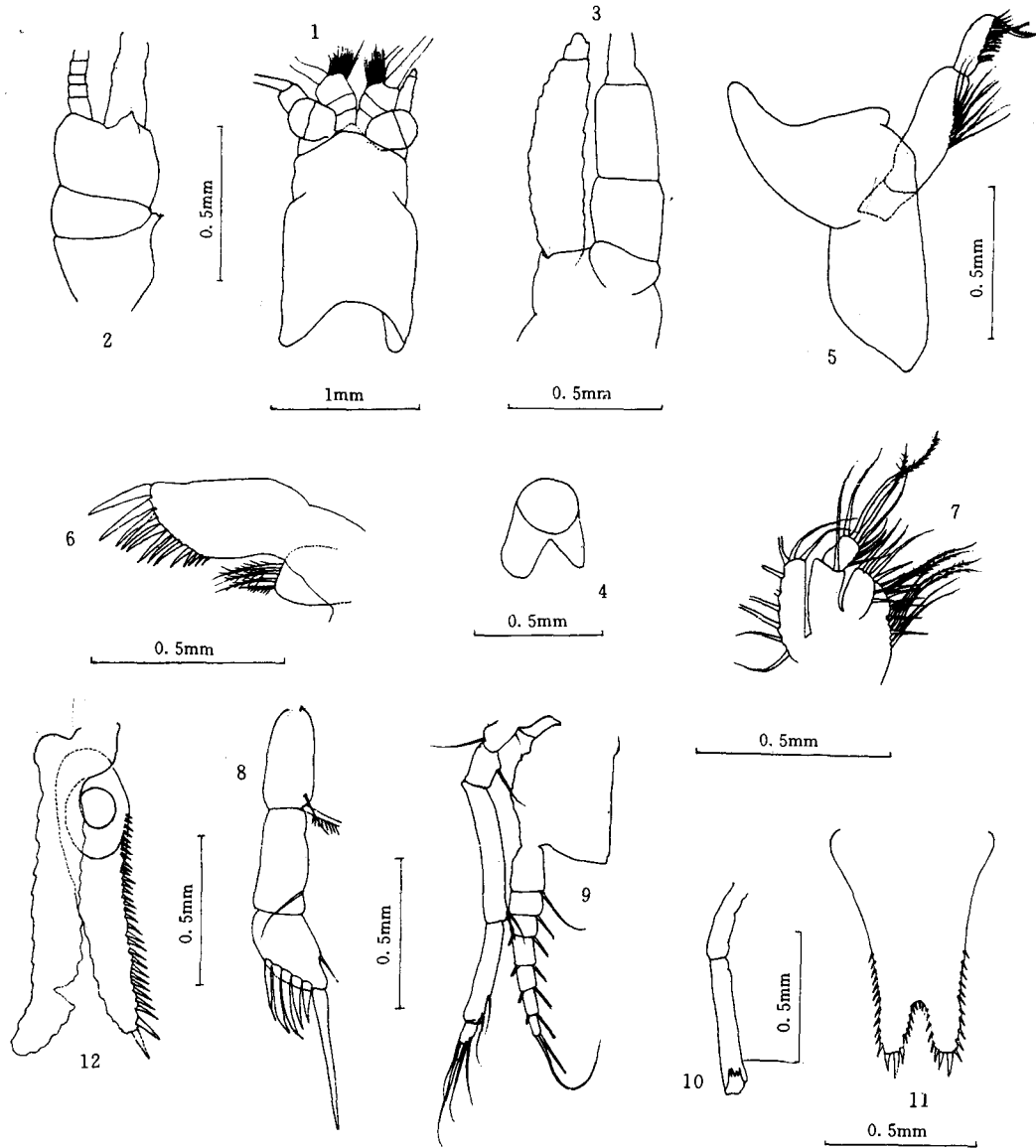
体小,适度粗壮,甲壳表面光裸,头胸甲较长,颈沟显著,背面后缘凹深,末2胸节裸露。

额板不突出,前缘宽圆,不覆盖第1触角柄,侧缘稍覆盖眼柄的基部。

眼长稍大于宽,角膜呈半球形,略短于眼柄,其宽与眼柄略等,呈紫色。

雄性第1触角柄显著粗短,第1节外末角突出,长与第3节略等;第2节短,内缘长,外缘短,约为第1节和第3节的 $\frac{2}{3}$;第3节背面两鞭之间具1末端尖的宽齿突,内鞭较纤细,雄性突不显著,具稠密的刚毛。第2触角鳞片长披针形,长约为宽的4倍,末部明显向内弯曲,末节小,长、宽略等。第2触角柄长而粗,第1节很短,第2节显著长,约为第1节的2倍;第3节长于第2节,约为第2节的 $1\frac{1}{6}$ 。

上唇前缘圆,呈弧形,后部宽展,分为2个不等大的叶,后缘左叶大,末端宽圆,右叶

图 10 窄尾小糠虾(新种) *Mesidella tenuicauda* sp. nov.

1. 雄性头胸部背面; 2. 雄性第1胸肢内肢; 3. 第2触角; 4. 上唇; 5. 大颚; 6. 第1小颚;
7. 第2小颚; 8. 第1胸肢内肢; 9. 第2胸肢; 10. 雄性交接器; 11. 尾节; 12. 尾肢

小,末端窄。

大颚光裸,切齿部宽展呈叶片状,不具任何齿突或刺突;触须第1节很短,长不足第2节的 $\frac{1}{3}$,第2节显著长,内缘末半具10根细长刚毛,末节稍窄长于基节,末端刚毛长而粗壮。第1小颚基叶小,末叶显著宽而长,末端具13—15个光裸粗刺。第2小颚内肢小,具粗长带刺刚毛;外肢窄长,边缘具7—9根粗壮刚毛。

第1胸肢内肢较粗壮,掌节内缘仅具1根细小刚毛,外缘并列5个粗壮大刺,指节很

长,呈长刺状,约为掌节刺长的2倍。第2胸肢内肢纤细,末节末部具4根长而粗壮的带刺刚毛。

第3—8胸肢内肢全部遗失;胸肢外肢基板宽,外缘末角直,鞭部由7—8节构成。雄性交接器呈细棒状,长约为宽的 $6\frac{1}{2}$ 。

第1腹节略长于第2—5腹节,第6腹节细长于第5腹节。雄性腹肢简单不分节,与雌性相似。

尾节基部宽,向末部趋窄,长不足基部宽的 $1\frac{1}{2}$,侧缘基半光裸,末半具11—12个大小相似的刺,末端缺刻的两侧叶各具3根较粗壮的末刺。末端缺刻较宽,底部圆,侧缘具6个小刺。尾肢内肢适度粗壮,显著长于尾节,内缘由平衡囊至末端具29个大小相同的刺。尾肢外肢细长,长约为宽的6倍,周围具羽状刚毛。

本新种与 *Mysidella nana* Murano, 1970 的外形十分相似,但身体长短、尾节侧刺数目多少和大小,从及缺刻内刺数都显著不同。

表4 *M. tenuicauda* 与 *Mysidella nana* 的主要区别

	<i>Mysidella nana</i> Murano	<i>M. tenuicauda</i> sp. nov.
体长(mm)	5.3	3.0
尾节侧刺和端刺大小	具侧刺18—19个,端刺小而纤细	具侧刺11—12个,端刺大而粗壮
尾节末端缺刻	窄,具8个侧刺	宽,具6个侧刺
尾肢内肢内缘	具35个大小相似的刺	具31个刺,末2刺显著粗大

11. 圆凹小糠虾(新种) *Mysidella rotundincisa* sp. nov. (图11)

正模标本 成体雄性,体长4.0mm, K31P-6。1959年4月19日采自南海北部19°30'N, 112°30'E, 水深260m, 底质泥质粗砂。

副模标本 成体雌性,体长3.5mm, K38P-2。1959年4月22日采自南海北部21°30'N, 113°00'E, 水深25.5m, 底质软泥。

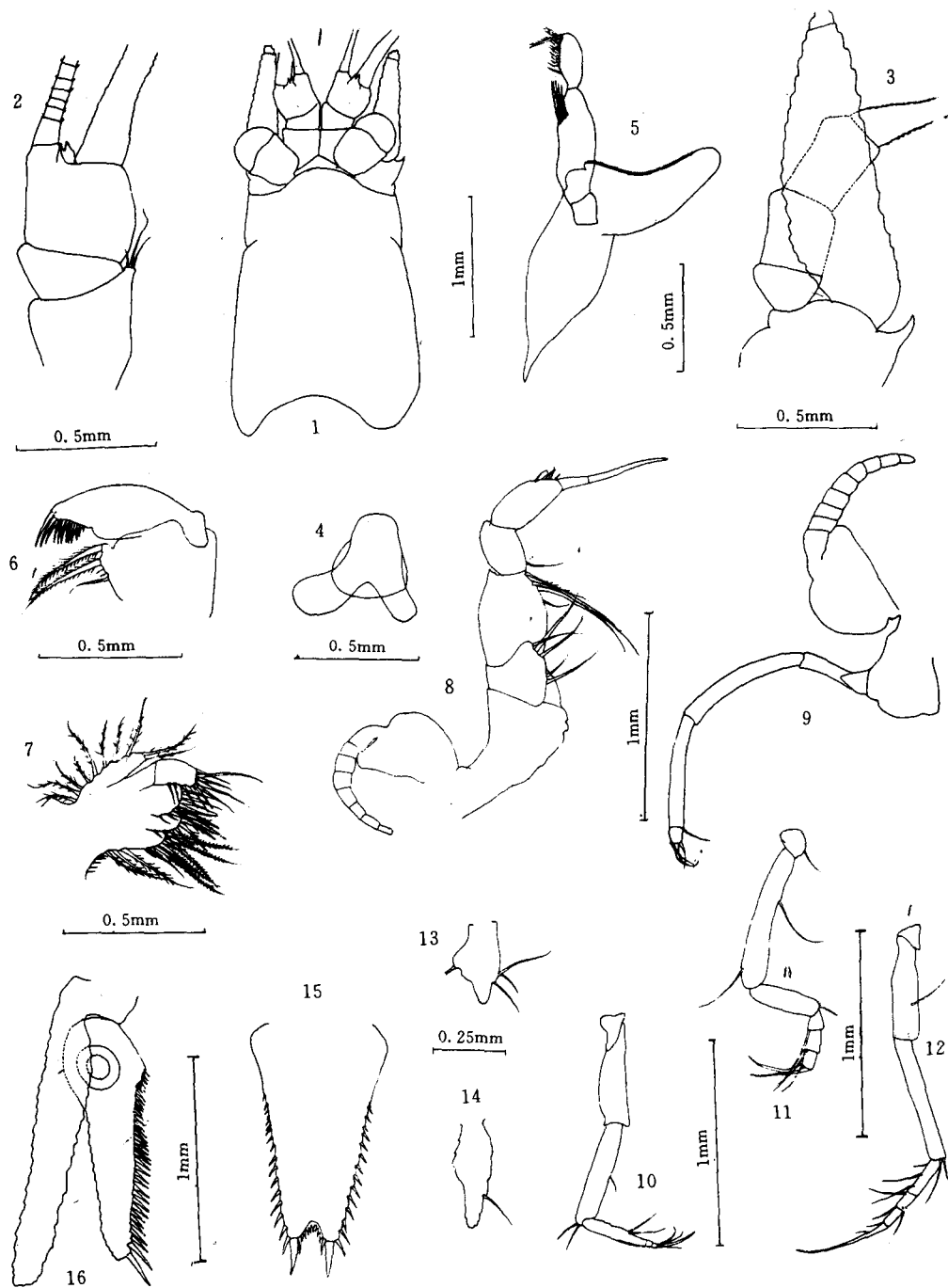
其他材料 1♂, 体长4.3mm, K121P-6。1960年采自南海北部20°45'N, 111°30'E, 水深51m, 底质软泥。

体短而粗壮,甲壳表面光裸。头胸甲后缘背面显著内凹,末2胸节裸露。

额板宽圆,不突出,前缘不覆盖眼柄和第1触角柄的基部。颈沟显著,前侧角圆。

眼粗壮,长显著大于宽,角膜肾形,长约为眼柄的1半,呈紫色;眼柄明显长于角膜,其宽度略等。

雄性第1触角柄粗壮,第1节较长,外末角突出,具3根羽状刚毛;第2节约为基节长的 $\frac{2}{3}$,内末角具1根纤细的刺状刚毛;第3节与第1节长略等,其背面具2个粗短刺的圆叶。内鞭纤细。第2触角鳞片为披针形,长约宽的 $3\frac{1}{2}$,具小的末节,宽略大于长,末端显著超过第1触角柄。第2触角柄较长,约与第1触角柄略等,第1节很短;第2节显著长于

图 11 圆凹小糠虾(新种) *Mesidella rotundincisa* sp. nov.

1. 雄性头胸部背面; 2. 雄性第1触角柄; 3. 第2触角; 4. 上唇; 5. 大颚; 6. 第1小颚;
7. 第2小颚; 8. 第1胸肢; 9. 第2胸肢; 10. 第3胸肢内肢; 11. 第4胸肢内肢; 12. 第6胸肢内肢;
13. 雌性第1腹肢; 14. 雌性第6腹肢; 15. 尾节; 16. 尾肢

第1节,约为第1节的 $1\frac{2}{3}$;第3节略长于第2节。

大颚切齿突具1列细微的齿;触须第1节短,第2节长,约为第1节的 $3\frac{3}{4}$,内缘末 $\frac{1}{3}$ 具1列刚毛。第1小颚基叶宽,具3根粗大刚毛和1根细小刚毛;外肢窄,末端具12个大小不等的刺。第2小颚内肢宽短,外肢窄长,具11根粗壮的羽状刚毛。

上唇前缘钝圆,后缘有缺刻,形成两叶,左叶较大,右叶较小,末端圆形。

++第1胸肢内肢粗壮,腕掌节粗短,掌节略长于腕节,外末缘具4个短而粗壮的刺。指节末端具1强刺。第2胸肢内肢细长,腕节略长于掌节,指节短。第3—8胸肢内肢掌节由2节构成,指节末部具刺;胸肢外肢基板圆,外缘末角光裸无刺,鞭部由8—9节构成。雄性交接器呈长筒形。雌性具3对育卵板。

雄性腹肢简单,与雌性相似,第1对宽短,向后依次细长。

尾节呈长三角形,基部宽,向末部趋窄,长不足基部宽的2倍,侧缘基部 $\frac{1}{3}$ 光裸,末部 $\frac{2}{3}$ 具14—17刺,由前向后逐渐大,末端具浅的缺刻,侧缘具4刺,末叶中央刺显著长而粗大。

尾肢内肢适度粗壮,自平衡囊至末端约具36刺,末2刺显著长而粗壮。尾肢外肢略细长于内肢,两缘具发达的羽状刚毛。

本新种与 *Mysidella tanakai* Ii, 1964, *M. nana* Murano, 1970 和 *Mysidella rotundincisa* sp. nov. 外形十分相似,但额板形状上唇前缘,尾节末部缺刻和尾肢内肢内缘刺都有显著不同(表5)。

表5 *M. rotundincisa* 与近似种的主要区别

	<i>Mysidella tanakai</i> Ii	<i>M. nana</i> Murano	<i>M. rotundincisa</i> sp. nov.	<i>M. incisa</i> sp. nov.
额板形状	宽三角形	宽圆	宽圆	窄三角形
上唇前缘	尖,具小刺突	宽圆,呈弧形	呈椭圆形	宽三角形
尾节末部缺刻	呈窄椭圆形,侧缘具17—18刺	呈宽椭圆形,侧缘约具10刺	呈圆形,侧缘具5刺	尖,呈三角形,侧缘具3刺
尾肢内肢缘刺	大小相似	大小相似	末2刺显著长而粗壮	仅末刺显著长而粗壮

12. 尖凹小糠虾(新种) *Mysidella incisa* sp. nov. (图12)

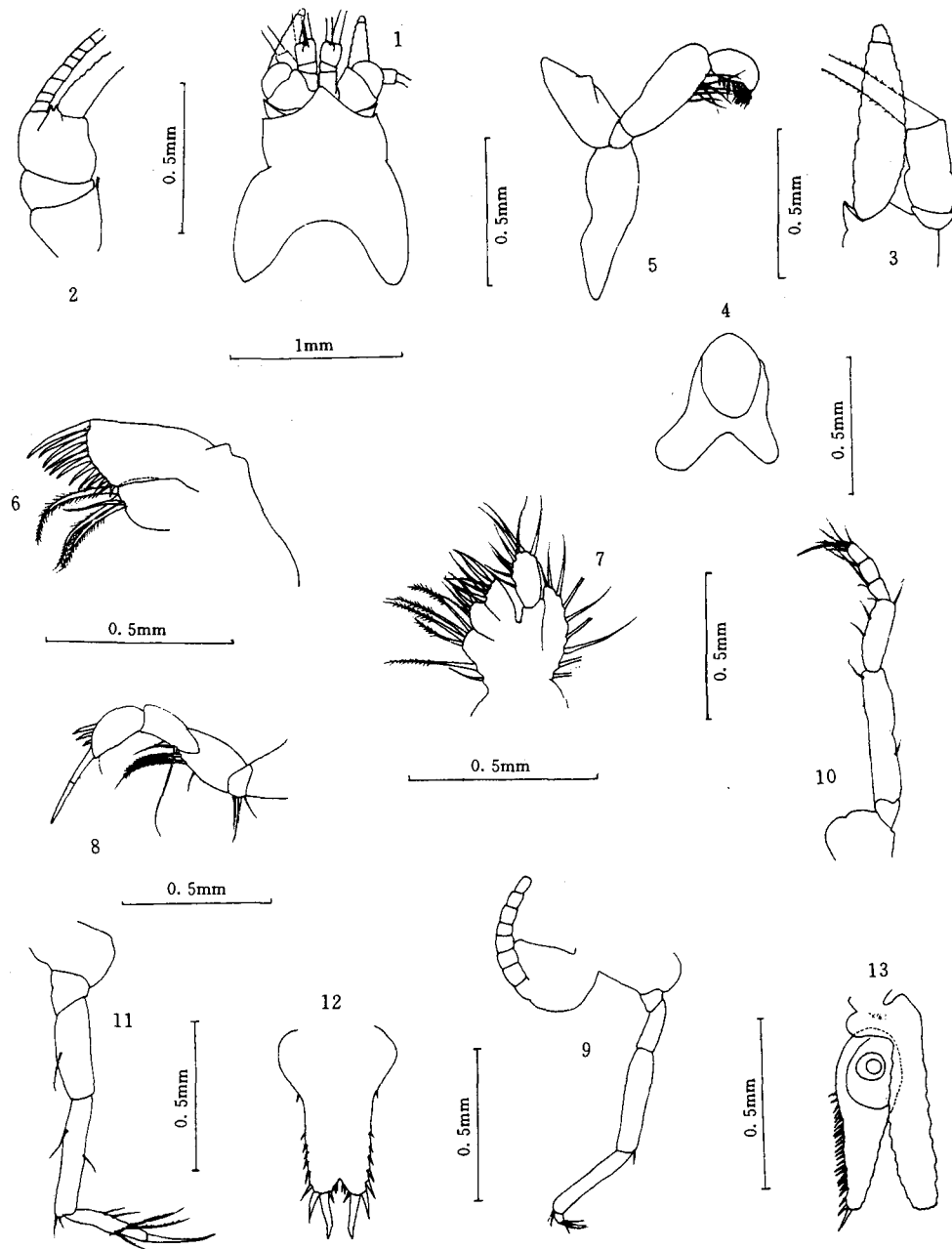
正模标本 成体雄性,体长3.0mm, K35P-1。1959年4月18日采自南海北部琼州海峡水域20°15'N, 109°30'E, 水深20m, 底质砂质泥。

副模标本 成体雌性,体长3.0mm, K47P-10。1959年7月2日采自南海北部海陵岛南部附近海域21°30'N, 112°00'E, 水深21m, 底质软泥。

体小,甲壳表面光滑。

额板三角形,顶端约伸至第1触角柄和眼柄的基部。头胸甲短,后缘背面凹深,末2胸节裸露。

眼粗壮,长宽略等,角膜肾形,短而窄于眼柄;眼柄显著长而粗壮。

图 12 尖凹小糠虾(新种) *Mesidella incisa* sp. nov.

1. 雌性头胸部背面; 2. 雌性第1触角柄; 3. 第2触角; 4. 上唇; 5. 大颚; 6. 第1小颚; 7. 第2小颚;
8. 第1胸肢内肢; 9. 第2胸肢; 10. 第4胸肢内肢; 11. 第6胸肢内肢; 12. 尾节; 13. 尾肢

雌性第1触角柄细而短,第1节较长,外末角稍突出;第2节短,仅为第1节的 $\frac{2}{3}$;第3节与基节长略等,在两鞭之间背面小叶上具2个粗壮的尖刺突。第2触角鳞片呈披针形,长约为宽的4倍,具显著的末节,长宽略等,末端大大超过第1触角柄;第2触角柄适度短

而粗壮,约为鳞片的 $\frac{2}{3}$,第1节很短,第2节显著长,约为第1节的 $2\frac{1}{2}$,第3节略长于第2节。

大颚切突光裸;触须第1节短而窄,第2节长,向末部渐宽,末 $\frac{3}{8}$ 内缘具8根刚毛。第1小颚与 *Mysidella rotundincisa* sp. nov. 相似。第2小颚内肢末节呈椭圆形,具9根粗壮刚毛;外肢显著窄长,具9根粗壮的羽状刚毛。

上唇前缘窄圆,后缘缺刻略呈三角形,左叶大,右叶小,其末端都呈圆形。

第1胸肢内肢较小而纤细,掌节外缘末部 $\frac{1}{3}$ 具3个长短不等,末端尖锐的粗刺,指节末部具粗壮的刺。第2胸肢内肢适度长而粗壮。第3—8胸肢内肢掌节由2—3节构成,关节垂直或斜。胸肢内肢基板宽圆,外缘末角无齿,雌性具3对育卵板。

雌性腹肢板状,简单不分节,前面腹肢较宽短,向后依次窄长。

尾节基部很宽,向末部变窄,略呈舌状,长不足基部宽的 $1\frac{1}{2}$,侧缘基部光裸,向后趋窄并具1小刺,刺后又有1小段光裸,末缘 $\frac{2}{5}$ 具5—6刺,末端缺刻浅三角形,侧缘具2个小刺,末端叶各具3刺,中央刺特别粗大,外侧刺显著短粗,内侧刺比外侧刺细小。尾肢内肢短而粗壮,平衡囊显著大,内缘由平衡囊至末端具24刺,末刺显著长而粗壮。尾肢外肢短,约与内肢略等。

本新种与 *Mysidella rotundincisa* sp. non. 的外形近似,但两种的额板形状,上唇前缘,尾节末部缺刻和尾肢内肢刺都有显著的区别。

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ON NEW AND RARE SPECIES OF MYSIDACEA (CRUSTACEA) FROM THE NORTHERN SOUTH CHINA SEA *

Wang Shaowu

(Institute of Oceanology, Chinese Academy of Sciences)

ABSTRACT

Of 65 species of Mysidacea previously reported from the South China Sea by the present author, 46 species were collected from the northern part.

The present paper reports results of further study of the materials collected from the northern South China Sea in the area 17°00'—23°00'N, 108°00'—117°30'E covered by the 1958—60 National Comprehensive Oceanographic Survey. Of 12 new and rare species belonging to 2 families and 9 genera are reported, 10 are new to science, 2 are recorded for the first time from Chinese coast of the South China Sea. Two new genera *Liimysis* and *Shenimysis* are established to accept the new species *Liimysis longicauda* and *Shenimysis cordata*. The type specimens are deposited in the Institute of Oceanology, Chinese Academia of Sciences (Qingdao). The twelve species are listed below:

1. *Petalophthalmus liui* sp. nov. **
2. *Pseudomma spinosum* sp. nov.
3. *P. semispinosum* sp. nov.
4. *Pseuderythropus gracilis* Coifmann. ***
5. *Nakazawaia japonica* Murano * * *
6. *Liimysis longicauda* gen. et sp. nov. * *
7. *Shenimysis cordata* gen. nov. et sp. nov. * *
8. *Hypererythropus semispinosa* sp. nov.
9. *Heteromysis inflaticauda* sp. nov.
10. *Mesidella tenuicauda* sp. nov.
11. *M. rotundincisa* sp. nov.

* Contribution No. 2938 from the Institute of Oceanology, Chinese Academia of Sciences.

** New genera and new species are named in honour of Prof. Shen Jiarui (C. J. Shen) and Liu Ruiyu (J. Y. Liu), for their contributions to studies of Mysicacean Crustacea.

*** Recorded for the first time from the northern South China Sea.

12. *M. incisa* sp. nov.

1. *Petalophthalmus liui* sp. nov. (Fig. 1: A, B.)

Holotype Adult male, BL. 9.1mm. No. L10p-2a. Southeast off Hainan Island, the northern South China Sea, 19°30'N, 111°30'E; depth: 219m; bottom: medium sand, 1959. 1. 26.

Paratype Adult male, BL. 10.5mm. No. L10p-2b, locality same as holotype.

Other materials 15 young, BL. 4.5—7.0mm. collected from coastal water of the northern South China Sea, depth: 194—195m; bottom: sand.

Body slender, surface of carapace and body smooth, light brown in alcohol.

Rostral plate short and narrow, spine-shaped, blunt at tip, reaching to base of eyestalks. Side of rostral plate with a conspicuous denticle.

Eyes broad and short, inflated, cornea reniform, broader than eyestalk; eyestalk narrow and long, narrower at base, broad distally.

Antennular peduncle moderately stout in male; basal joint longer than two distal joints combined; second joint short, about $1/2$ as long as the first joint; third joint shortest, $1/2$ as long as the second joint. base of outer flagella thick and bent male process with thin and long dense hairs on inner margin. Antennal scale lanceolate, with plumose setae on both margins, about $6 \frac{1}{2}$ times as long as broad, distal joint longer than broad; antennal peduncle short and slender, about $2/3$ as long as the scale.

Labrum hexagonal, anterior margin broad, rather convex, laterally pointed, conspicuously broader than long, but less than $1 \frac{1}{2}$ times as broad as long.

Mandible small, but well developed; palp well developed, prehensile, first joint short and slender, second joint conspicuously long and stout, third joint thin and shorter than the first one, with stout spinulose setae. First maxilla very small, proximal endite with 3 thick and short setae on distal part; distal endite with 9 spinulose stout setae. Second maxilla thin and long, distal joint of endopod oval in shape, lateral margin with 19 plumose setae.

First thoracic limb stout, without exopod; merus rather convex, distal end of dactylus with stout spines. merus of second thoracic limb inwardly expanded, with an oblong lobe, its margin with long and short spines, Endopod of third to fourth thoracic limbs short and slender. Endopod of fifth thoracic limb long and slender, dactylus very short. Endopod dactylus of sixth to eighth thoracic limbs thin and long spines like. Exopod of second to eighth thoracic limbs with basal plate oblong, outer distal corner angulated, flagellum consisting of 9—11 joints. Male genital organ moderate in size. Female with seven pairs of oostegites.

Endopod of male first pleopod simple and unjointed; exopod consisted of 13 joints; endopod and exopod of second pleopod all consisting of 12 joints, inner distal corner of exopod with two strong modified setae; endopod and exopod of third to fifth pleopods all consisted of 12—14 joints. Female pleopods simple and unjointed, fifth pleopod con-

spicuously large.

Telson oblong, about $2\frac{1}{2}$ times as long as broad at base; anterior $\frac{1}{4}$ of lateral margin smooth, concave at base, distal $\frac{3}{4}$ with 16—19 subequal spines. Distal end with 1 median spine and 3 short and 3 long spines, with 4 plumose setae, between the median and its 2 neighbouring small spines.

Endopod of uropod slender, without statocyst, distal end conspicuously overreaches telson. Exopod of uropod with 2 joints, basal joint very long, about $2\frac{1}{2}$ times as long as the distal joint, inner margin with setae, outer margin naked, outer distal corner with 2 spines, the anterior one smaller, distal joint very short, broader than long, distal end rounded, with plumose setae.

The present new species is very similar to *Petalophthalmus oculatus* Illing, 1906, but its rostral plate is narrowly triangular, with bluntly pointed apex; the eyes are stout and short, the cornea is reniform; the antennal peduncle is conspicuously shorter than the scale, which is quite different from the latter species. The present new species is also similar to *P. macrops*, but the shape of rostrai plates, the eyes and telson of the two species are conspicuously different, and compared below:

	<i>Petalophthalmus oculatus</i>	<i>P. macrops</i>	<i>P. liui</i> sp. nov
Rostral plate	apex very sharply pointed	apex slightly pointed	apex bluntly pointed
Cornea	globose	globose	reniform
Antennal peduncle	longer than scale	shorter than scale	shorter than scale

2. *Pseudomma spinosum* sp. nov. (Fig. 2)

Holotype: Adult male, BL. 5mm. No. K53p-6a. Northern South China Sea. southeast off Hainan Island 19°00'N, 112°00'E; depth: 195m; bottom: muddy sand, 1959. 7. 3.

Paratype: Adult female, BL. 5mm. No. K53P-6b. locality same as holotype

Other materials 1 ♂, 3 ♀, BL. 4.5—5.0mm. No. K53p-6c—f. locality same as holotype and paratype; 1 female, BL. 5mm. No. K31p-6. collected from 19°30'N, 112°30'E, depth: 260m, bottom: coarse sand, 1959. 4. 19; 1 female, BL. 4.8mm. No. K121p-1a. locality same as holotype.

Body small, surface of carapace smooth. Dorsal surface of the second abdominal somite conspicuously protruded.

Rostral plate round, bow-shaped. Eyeplate antero lateral corner pointed, spinous, its inner margin spinulose, outer margin smooth, with large median cleft on anterior margin, carapace leaving the last thoracic somite dorsally uncovered.

Antennular peduncle in the male stout, first joint longer than second, outer distal corner conspicuously protruded; second joint short; third joint about as long as the first and second joints combined. Male appendage hoofshaped, with dense setae. Antennal scale longer than antennular peduncle, about $4-4\frac{1}{2}$ times as long as broad, not divided; antennal peduncle stout, reaching distal $\frac{2}{3}$ of the scale.

Endopod of first thoracic limb stout; distal part of dactylus with 1 stout spine; endopod of second thoracic limb long and stout; endopod of third to eighth thoracic limbs slender, propodus consisted of 3 subjoints. Basal plate of exopod of thoracic limb broad and large, with only 1 denticle on outer distal corner, flagellum composed of 8—9 joints, both margin with developed plumose setae. Female with three pairs of oostegites.

First to fifth abdominal somites broad and short, sixth abdominal somite conspicuously thin and long.

Male pleopods well developed. Endopod of first pleopod unjointed, leaf-like; exopod composed of 8 joints; endopod and exopod of second to fifth pleopods composed of 8—9 joints, without modified setae. Female pleopods unjointed, leaf-like.

Telson linguiform slightly more than $1\frac{1}{2}$ times as long as broad at base, lateral margin with 3 short and stout spines at base, a small portion of which without spines, the distal $\frac{2}{3}$ of the margin armed with 12—15 stout and short spines, distal end with 1 pair of small median spines and 3 pairs of large lateral spines and with 1 small spine between the 2 large lateral spines, the median spine only $\frac{1}{3}$ as long as the inner lateral spine.

Uropodal endopod conspicuously longer and slenter than telson, unarmed statocyst prominent. Uropodal exopod slightly longer than the endopod.

The present new species is similar to *Pseudomma semispinosum* sp. nov. but differs in its body being smooth, antero-lateral corner of the eyeplate being spinous, the telson being armed with small spine on distal end between the 2 lateral large spines. The characteristics of these 2 species are compared belows:

	<i>Pseudomma semispinosum</i> sp. nov.	<i>P. spinosum</i> sp. nov.
Surface of body	with numerous spinules	smooth
Antro-lateral corner of eyeplate	with papilla-shaped processes	spine shaped
Telson	with 4—5 spines on distal half of lateral margin, without small spines on distal end between 2 large spines	with 12—15 spines on distal $\frac{2}{3}$ of lateral margin, with 1 small spine on distal end between 2 large spines

The shape of the eyeplate and the small spine between the 2 large spines on distal end of the telson are conspicuously different from those of other species in the genus.

3. *Pseudomma semispinosum* sp. nov. (Fig. 3)

Holotype: Adult male, BL. 3.6mm. No. K121p-1b. Southeast off Hainan Island, northern South China Sea, 19°00'N, 112°00'E; depth: 195m; bottom: sandy, 1960. 2. 6.

Paratype: Adult female, BL. 4 mm. No. K67p-5. Northern South China Sea, 19°30'N, 113°00'E; depth: 220m; bottom: fine sand.

Body small and slender, surface with minute spinules particularly prominent on

sixth abdominal somite.

Rostral plate round, slightly bow-shaped. Eyeplate broad and short, with a small "V" shaped cleft at middle of anterior margin.

Antennular peduncle in the male stout, first joint about 2 times as long as second; third joint conspicuously long, longer than 2 basal joints combined. Male appendage stout and large, hoofshaped, with dense setae. Antennal scale with a fine and long tooth at outer distal corner, distal end of the blade not protruded, evidently shorter than the outer distal tooth, unjointed; antennal peduncle large and stout, first joint shortest; second joint slightly longer than first one, about $1\frac{1}{4}$ times as long as the first joint; third joint conspicuously long, slightly shorter than 2 basal joints combined.

Mandible with well developed incisor and molar processes; first joint of palp short and narrow, second joint with the basal $\frac{2}{3}$ very broad, and the distal $\frac{1}{3}$ very narrow, both margins with stout plumose setae; third joint slightly rectangular, inner margin fringed with short plumose setae and three thin and long setae. First and second maxilla similar to those of other species of the genus.

Endopod of first and second thoracic limbs comparatively slender, basal plate of exopod broad, outer distal corner with only 1 tooth, flagellum composed of 9 joints. Endopod of third and fourth thoracic limbs slender, endopods of other thoracic limbs all broken off; exopod of third to eighth thoracic limbs similar to anterior appendage, not toothed only in eighth thoracic limb, flagellum composed of 8—9 joints. Female with three pairs of oostegite.

First to fifth abdominal somites short, sixth somite conspicuously thin and long, about $1\frac{1}{2}$ times as long as the fifth one.

Endopod of first male pleopod leaf-like; exopod conspicuously long, about $2\frac{1}{2}$ times as long as the endopod, composed of 7 joints, endopod and exopod of second and fifth pleopods all composed of 5—6 joints. Female pleopods leaf-like, unjointed, anterior pleopods broad and short, thin and long in size posteriorly.

Telson linguiform, broad at base, narrower distally, slightly less than $1\frac{1}{2}$ times as long as broad at base; distal end of telson about $\frac{1}{3}$ as broad as its base, lateral margin unarmed anteriorly, distal half with 4—5 stout and short spines; distal end with 3 pairs of strong spines, the inner pair conspicuously thick, with 1 pair of plumose setae. Uropodal endopod with a large statocyst at base, unarmed on inner margin, tending to narrow backwards.

The present new species resembles *Pseudomma brevisuamosum* Murano, 1974 in shape, but with the body comparatively shorter, the distal part of outer margin of the antennal scale armed with spines and the uropodal endopod is conspicuously different. They can be distinguished as follows:

	<i>Pseudomma brevisquamosum</i> Murano	<i>P. semispinosum</i> sp. nov.
Body length	8.6—8.9mm.	3.6—4.0mm.
Outer margin of eyeplate	smooth	with spinules
Distal border of antennal scale	convex, longer than outer tooth	not convex, shorter than outer tooth
Inner margin of inner uropod	with 1 spine	without spine

4. *Pseuderythrops garcilis* Coifmann, 1936 (Fig. 4)

Pseuderythrops garcilis Nouvel, 1959:234. — Pillai, 1964: 25; 1967: 1710; 1972:91.

1 ♂, 1 ♀, K33P-4, northern South China Sea, 19°30'N, 113°00'E, depth: 180m, bottom: muddy sand; 1959. 4. 21; 1 young, K67p-3, locality same as above, depth: 220m, bottom: fine sand, 1959. 7. 11.

Distribution: Red Sea, Arabian Sea, northern South China Sea.

5. *Nakazawaia japonica* Murano, 1981 (Fig. 5)

Nakazawaia japonica Murano, 1981: 294.

4 ♂, 7 ♀, 1 young, northern South China Sea, 18°30'—20°30'N, 111°00'—113°00'E, depth: 78—260m, bottom: muddy sand, 1959. 4. 18—60. 2. 6.

Distribution: East China Sea, East coast of Japan and northern South China Sea.

Genus *Liuimysis* gen. nov.

The entire frontal region produced anteriorly to form a prominent broadly rounded rostral plate. Eyes large, cornea globular. Outer margin of antennal scale naked, but ending in a sharp tooth, with a short distal joint attached to the blade, which is broader than long. Second joint of mandibular palp very broad, narrowed from the middle toward distal end. Distal endite of first maxilla with a large blunt process on outer margin. Endopod of second maxilla thin and long, exopod very small.

Propodus of third to eighth limbs consisting of 3 joints, basal and second articulation between articles oblique, that between 2 distal articles is vertical, dactylus spiniform.

Telson narrow and elongated, triangular; anterior $\frac{1}{3}$ of lateral margin unarmed, distal $\frac{2}{3}$ with spines arranged in groups, a group of 1—5 smaller spines between 2 longer spines were found, very narrow in distal $\frac{1}{4}$. The rounded apex of telson armed with 2 median spines and 2 large outer spines.

The present new genus is similar to *Thalassomysis* W. Tattersall, 1939 but the shape of the eyes, the large and small lateral spines of the telson are conspicuously different. It is also allied to genus *Meterthrops*, but the shapes of antennal scale and the lateral spine of telson are different.

The stout eyes and the elongated narrow telson of the present new genus distinguishes it from the allied genera.

6. *Liuimysis longicauda* sp. nov. (Fig. 6)

Holotype Adult female, BL. 7.0mm. No. K121p-8a. Northern South China Sea, 19°00'N, 112°00'E, depth: 195m, bottom: sand.

Paratype Young male, BL. 4.5mm. No. K121p-8b. locality same as holotype.

Other materials 3♀♀, 3 young ♀♀, No. K121p-8c—h, locality same as that of the holotype and paratype.

Body moderate stout. Surface smooth, posterior margin slightly concaved, carapace leaves the last thoracic dorsally uncovered. Cervical groove conspicuously deep.

Rostral plate broadly rounded, anterior margin covers the base of the eyestalks and large part of the antennular peduncle.

Eyes short and broad, slightly longer than broad, cornea semiglobular, conspicuously shorter than eyestalk, as broad as or slightly narrower than eyestalk.

Antennular peduncle slender in female, shorter than antennal scale, first joint conspicuously longer than third one, outer distal corner protruded, with 3—4 plumose setae, about 3 times as long as second joint, which is very short.

Antennal scale about 3 times as long as broad, with an oblique suture between it and the distal joint, which is short and broader than long; antennal peduncle short and slender, only $\frac{2}{5}$ as long as the scale, first joint longer, about as long as the second and third joints combined.

Labrum short, pyriform, anterior end narrower, posterior part broad, with deep incision.

Mandibular palp with first joint very short and thin; second joint long and broad; third joint very narrow and short, oblong. Distal endite of first maxilla with 2 lobes, proximal endite small, with 3 stout spinulose setae at tip, outer margin of distal endite with a process on outer edge of distal joint. Endopod of second maxilla narrow and long; exopod very small, distal $\frac{2}{5}$ of outer margin with 3 small plumose setae.

Endopod of first thoracic limb short and broad, without gnathobase, dactylus spine-shaped; exopod of thoracic limb rounded at outer distal corner, flagellum, with 8 joints. Endopod of second thoracic limb moderately stout, dactylus spine shaped; basal plate of exopod similar to those of anterior one; flagellum with 9 joints. Endopod of third to sixth thoracic limbs slender, propodus consisting of 3 subjoints, basal suture oblique, basal article with ventral margin protruded, distal suture vertical, dactylus claw shaped, exopod similar to that of second thoracic limb. Female with two pairs of oostegites.

Abdominal somites thick and short, subequal in length and thickness, sixth somite conspicuously thin and long, about $1\frac{1}{2}$ times as long as the fifth.

Female pleopods simple and unjointed, first pleopod stout and short, the following pleopods thinner and longer. Endopod of young male first pleopod rudimentary and unjointed, exopod with six joints; second to fifth pleopod with 6—8 joints.

Telson narrow and long, triangular, posteriorly narrowing sharply, being narrowest at proximal and where the lateral margin is smooth, being slightly widened at middle length of

the distal $\frac{2}{3}$ of lateral margin armed with spikes, arranged in groups, with 1—5 small spines between every 2 larger ones. Distal end narrow, with 1 pair of small median spines and 1 pair of large lateral ones 3 times as long as the median pair. Endopod of uropod conspicuously shorter than telson, statocyst very large, with a single large spine near the inner lower margin, exopod of uropod longer than telson.

The present new species is very similar to *Thalassomysis sewelli* W. M. Tattersall, 1939, but in the present new species the second joint of its mandibular palp is broad at base, and narrowed distally; the proximal endite of its first maxilla is ended by 3 strong spinulated setae, the distal endite bearing blunt process on outer margin. The endopod of second maxilla is thin and long, the exopod bearing very small; only with 3 short setae on the distal part; the propodus of third to seventh thoracic limbs consists of 3 subjoints; basal suture oblique, obviously different from that of other species and genera in Erythropini.

Genus *shenimysis* gen. nov.

Rostal plate narrow and round. Frontal margin of carapace with supra-ocular spine. Antennal scale with 2—4 sharp teeth on outer margin, distal end of the blade with a transverse suture.

Labrum globular, anterior margin broadly rounded, posterior margin narrow, with a median incision. Distal endite of first maxilla concave. Endopod of second maxilla narrow and elongated, distal margin truncate. Endopod of male third pleopod with modified long setae.

Telson broad and short, cordiform, with lateral margin unarmed, distal end narrow, with 2 pairs of small spines, the inner pair being conspicuously longer than the outer pair.

The present new genus is closely related to Genus *Erythrope* G. O. Sars, 1869 and Genus *Euchaetomera* G. O. Sars, 1883, but the eyes are globular, not evenly flat. The telson is cordiform and different form that of the later two genus; eyes are not divided into an anterior and a posterior part.

In the present new genus the antennal scale is armed with a distal tooth on outer margin; the posterior 4 pairs of pleopods in the male are well developed and biramous; the telson is entire, without distal incision, consequently it belongs to the Tribe Erythropini.

7. *Shenimysis cordata* sp. nov. (Fig. 7)

Holotype: Adult male, BL. 4.0mm. No. K67p-2a. Northern South China Sea, 19°00'N, 113°00'E, depth: 220m, bottom: fine sand, 1959. 7. 11.

Paratype: Adult female, BL. 4.5mm. No. L59p-5. Northern South China sea, 19°00'N, 112°00'E, depth: 194m, bottom: median sand, 1959. 4. 2.

Other materials 2 ♂, 2 ♀, BL. 4.0—4.5mm. Collected from the coastal water of the South China Sea, specimens were damaged, but with main parts preserved well.

Body short and stout, surface smooth, light brown in colour.

Rostral plate narrow and rounded, covers the base of the first joint of antennular peduncle, its anterolateral margin armed with a supra-ocular spine overhanging the eyestalks.

Eye wide and short, about as long as broad, globular, cornea longer than eyestalks, purple-red in color.

Antennular penduncle of both sexes stout, first joint conspicuously long, more than 2 times as long as second joint which is very short; third joint longer than basal joint, both inner and outer flagellum well developed, thickness subequal, male process not obvious. Antennal scale about 4 times as long as broad, outer margin with 4 large and small different tooth, distal joint much broader than long, distal part overreaching outer distal tooth; antennal peduncle short and stout, basal joint longer than both distal joints, second joint shortest, third joint longer than second one.

Labrum rounded, about as long as broad, anterior margin broad, posterior margin rather narrow.

Mandible normal; first joint of palp short and narrow, second joint well developed, inner margin with sparse setae, third joint broad and short, oval. Proximal endite of first maxilla broad and round, with 2 stout median setae, lateral margin with thick and short setae; distal endite long, lateral margin with 6 setae, distal part with smoothly thickness differing spinous process. Endopod of second maxilla with distal joint narrow and long, oblong, exopod broad and large, lobe-shaped.

Endopod of first thoracic limb short and broad, gnathobase not prominent, carpus-propodus broad and short, dactylus broad and large; distal spines moderately stout; epipodite lobe-shaped. Endopod of second thoracic limb thin and long, about 2 times as long as endopod of first thoracic limb. Endopod of third to eighth thoracic limbs all lost; exopod basal plate oblong, with 1 tooth on the outer distal corner; flagellum composed of 9 joints. Female with two pairs of oostegites.

First to fifth abdominal somites thick and short, sub-equal in length, sixth abdominal somite thinner and longer, about 2 times as long as the fifth one.

Male pleopod biramous, endopod of first pleopod leaf-like, unjointed; exopod with 9 joints. Endopod of third pleopod with 9 joints. distal part with strong modified setae on inner distal corner; exopod with 9 joints. Female pleopods all flake-shaped, unjointed.

Telson broad and short, about $\frac{3}{5}$ as long as broad at base, cordiform, broadest at base, narrowed posteriorly; distal end of telson about $\frac{1}{4}$ as broad as its base; lateral margin smooth, distal end slightly concaved, with 2 pairs of small spines, inner pair longer than outer pair. Endopod of uropod conspicuously stout, unarmed on inner lower margin near stotocyst. Exopod of uropod shorter than inner one, distal end truncate, fringed with well-developed plumose setae.

The present new species is closely related to *Erythrops minuta* 1910, but differs from it in that the new species is pillar-shaped and armed with supra-ocular spines, has ont evenly-flat eyes distal tooth in outer margin of antennal scale; very broad telson basal margin, narrowed posteriorly; smooth lateral margin, and 2 pairs of small spines at the distal end. The present new species's telson is similar in shape to that of *Euchaetomera oculata* Hansen, 1910 but the structures of the eyes are conspicuously different.

8. *Hypererythrops semispinosa* sp. nov. (Fig. 8)

Holotype; Adult male, BL. 5.0mm. No. K121p-9a. Northern South China Sea, 19°00'N, 112°00'E; depth: 195m; bottom: muddy sand. 1960, 2, 6.

Paratype: Adult female, Bl. 4. 2mm. No. K121p-9b. locality same as the of holo type.

Other materials: 8 ♂, 1 ♀, locality same as that of holotype, 1959. 7. 3 to 1960. 2. 6.

Body moderately stout, the cephalothorax of male thin and long, of female broader and shorter.

Rostal plate triangular, rather broad in male, comparatively narrower and longer in female, with rounded apex, covering the base of the antennular peduncle.

Eyes slightly flattened, about as long as broad, cornea reniform, shorter and broader than eyestalk; eyestalk narrow and long.

Antennular peduncle of male stout, first joint long, about 3 times as long as the second joint which is very short, outer distal corner convex, with 3 short and stout setae; third joint sub-equal to or longer than first joint; male appendage hoof-shaped, with dense setae. Antennal scale narrow and long, about $5\frac{1}{2}$ times as long as broad, inner margin with setae, outer margin smooth, with distal tooth, distal part conspicuously prominent, overreaching the outer tooth and with a transverse suture; antennal peduncle longer, first joint very short, both distal joints about $1\frac{3}{5}$ times longer than the basal joint. Labrum with narrow anterior margin and broad posterior margin.

Mandible normal; first joint of palp short and narrow; second joint moderately long and stout, distal $\frac{1}{3}$ with dense spinulose setae. Proximal endite of first maxilla broad, with 3—4 long and stout spinulose setae at middle, both lateral margins with stout plumose setae; distal endite with dense setae, lateral margin with spinous setae, distal end with naked stout spines. Endopod of second maxilla oval, both margins with spinous setae. Exopod lobed with 16 short plumose setae.

Endopod of male first pleopod leaf-shaped, smooth, with 1 spinule on distal margin; exopod consisting of 10 joints. Endopods and exopods of second to fifth pleopods all with 8—10 joints, pseudobranchia on endopod leaf-shaped. Endopod of fourth pleopod with modified setae on distal end of distal joint. Female pleopod simple, unjointed.

Telson triangular, broad at base, narrowed posteriorly, about $1\frac{1}{2}$ times as long as broad at base, basal $\frac{3}{4}$ of lateral margin smooth, armed with 2—3 stout spines only on distal $\frac{1}{4}$, the median pair of spines conspicuously longer than the lateral spines. Endopod of uropod longer than telson, surface of inner margin smooth. Exopod narrow and long, about $8\frac{3}{4}$ —10 times as long as broad.

The present new species resembles *Hypererythrops spinifera* (Hansen, 1910) and *H. zimmeri* Li, 1937 in general features, but in the latter species the telson is armed with spines on the whole lateral margin.

The present new species is also similar to *H. caribbaea* W. M. Tattersall, 1937 and *H. serrirenter* Holt & Tattersall, 1905 in the shape and armature of telson, but can be distinguished from the latter spp. by the shape of its eyes and antennal scale.

9. *Heteromysis inflaticauda* sp. nov. (Fig. 9)

Holotype: Adult female, BL. 4mm. No. K59p-1. Northern South China Sea, 21°30'N, 112°30'E, depth: 47m, bottom: sandy mud.

Body small and slender, surface and light brown in color. Carapace broad and short, cervical groove prominent, antero-lateral corner of carapace rounded, posterior margin concaving in ward, leaving the last thoracic dorsal uncovered. Abdomen conspicuously longer than cephalothorax.

Rostral plate broadly triangular, bluntly pointed at apex, its lateral margin covers the base of eyestalk, but leaves the base of first joint of the antennular peduncle uncovered.

Eyes longer than broad, cornea small, conspicuously shorter and narrower than eyestalk, which is long and broad, about $\frac{2}{3}$ of the eye.

Antennal scale lanceolate, about 3 times as long as broad, distal joint short, broader than long; antennal peduncle long and stout, overreaching the scale, basal joint short, about $\frac{2}{5}$ as long as the second joint; second joint very long, longer than basal and distal joint combined; third joint slightly longer than first.

Labrum pyriform, anterior end narrow and pointed, posterior margin broad, without deep incision.

Mandible incisor and molar process not distinct; first joint of palp shorter and narrower, second joint long and broad, proximal endite of first maxilla broad, distal endite narrow. Second maxilla normal in shape.

Endopod of first thoracic limb broad and short, gnathobase not produced, dactylus clawshaped, with plumose setae on distal part. Endopod of third thoracic limb conspicuously stout, inner margin of carpus with 6 spines. Endopod of second and fourth to eighth thoracic limbs all broken; exopod of thoracic limbs basal plate narrow and long, outer margin of distal corner straight, flagellum consisting of 8—9 joints.

Female with two pairs of oostegites, anterior pair smaller, posterior one large and prominent. First to fifth abdominal somite short, sixth abdominal somite thin and long, about $1\frac{2}{5}$ times as long as the fifth one. Pleopod in both sexes unjointed, increasing in length backwards, fourth pleopod about 2 times as long as the fifth one.

Telson broad and short, less than 2 times as long as broad at base, lateral margin unarmed anteriorly, distal half with 15—19 spines, distal end with deep incision, about $\frac{1}{3}$ as long as telson. Endopod of uropod broad at base, distal end of inner margin armed with about 28 spines increasing in size posteriorly. Exopod of uropod broad, shorter than endopod, with setae on both margin distal end rounded.

The present new species is similar to *Heteromysis xanthops* Li, 1964 has conspicuously protruded, triangular rostral plate, with bluntly rounded tip; the inner margin of uropodal endopod with spines throughout, but in the latter species the rostral plate is

not protruded; the apex is round, both lateral margins rather concaved; basal $\frac{2}{3}$ of endopod of uropod with spines, distal $\frac{1}{3}$ of it being smooth.

10. *Mesidella tenuicauda* sp. nov. (Fig. 10)

Holotype: Adult male, BL. 3 mm. No. K38p-6. Northern South China Sea, 20°00'N, 112°30'E, depth: 78m; bottom: fine sand.

Body small, thick and short, surface smooth, carapace comparatively longer than *H. incisa* sp. nov. cervical groove distinct, posterior margin deeply concaved, leaving the last thoracic somits dorsally uncovered.

Rostral plate not protruded, frontal margin of carapace broad and round, lateral margin covers the base of the eyestalk, but leaves the antennular peduncle uncovered.

Eyes longer than broad, cornea semi-globular, as broad as, or slightly shorter than the eyestalk, purple in color.

Antennular peduncle of male thick and short, the outer distal corner of first joint prominently protruded, about as long as third joint; second joint very short, about $\frac{2}{3}$ as long as the basal one; its inner margin long, outer margin very short, with a sharp pointed triangular tooth between both flagella on dorsal surface of distal end of third joint, inner flagellum slender, male appendage not thick, with dense setae. Antennal scale elongated, lanceolate, about 4 times as long as broad, distal part evidently curved inward, distal joint small, as long as broad; antennal peduncle long and thick, first joint very short; second joint longer, about 2 times as long as the first joint; third about $1\frac{1}{6}$ times as long as the second joint.

Labrum rounded anteriorly, posterior end broad and bifurcated, with wide incision, left lobe large, with distal end rounded, right lobe small, pointed at distal end.

Mandible large and naked, the incisor portion much dilated and flattened to form a blade with no teeth or spines; first joint of palp very short, less than $\frac{1}{3}$ as long as the second joint, second joint conspicuously long, distal half of inner margin with 10 thin and long setae, distal joint rather narrow and longer than the basal joint, its distal end with long and stout setae. Proximal endite of first maxilla broad, distal endite conspicuously long, distal end with 13—15 stout spines. Endopod of second maxilla small, with thick spinous setae; exopod narrow and long, the margin with 7—9 stout setae.

Endopod of first thoracic limb stout, inner margin of the propodus with only 1 short and thin seta, outer margin with 5 thick spines close together; dactylus quite thin and long, forming a long spine, about 2 times as long as the propodus. Endopod of second thoracic limb slender, distal part of distal joint with 4 long and stout serrated setae. Endopod of third to eighth thoracic limbs have been lost; basal plate of exopod broad, with outer distal corner almost straight, flagellum, consisting of 7—8 joints. Male genital organ bar-shape, about $6\frac{1}{2}$ times as long as broad.

First abdominal somite longer than the second to fifth ones, sixth abdominal somites longer than fifth one. pleopods of male simple, unjointed, similar to those of female.

Telson broad at base, narrowed posteriorly, less than $1\frac{1}{2}$ times as long as broad at base, basal half of lateral margin smooth, distal half with 11—12 spines of similar size, a broad and deep incision with rounded bottom is formed at distal end, its lateral margins each with 6 spinules. Inner uropod moderately stout, conspicuously longer than telson, inner margin with 29 spines along the statocyst to distal end; exopod of uropod thin and long, about 6 times as long as broad, fringed with plumose setae.

The present new species is very similar to *Mysidella nana* Murano, 1970, but differs from it in body size, number and size of lateral spines of telson and armature on inner margin of the incision.

	<i>Mysidella nana</i> Murano	<i>M. tenuicauda</i> sp. nov.
Length of body	5.3mm	3.0mm
Telson	Lateral margin with 18-19 spines, the distal spines small and slender, distal incision narrower, with 8 spines	Lateral margin with 11-12 spines, the distal one large and stouter, distal incision broader, with 6 spines.
Endopod of uropod	Inner margin with 35 spines of similar size	Inner margin with 31 spines, distal 2 spines conspicuously stout and large

11. *Mysidella rotundincisa* sp. nov. (Fig. 11)

Holotype: Adult male, BL. 4.0mm. No. K31-6. Northern South China Sea, 19°30'N, 112°30'E. depth: 260m, bottom: muddy, with coarse sand.

Paratype: Adult female, BL. 3.5mm. No. K38p-2. Northern South China Sea, 21°30'N, 113°00'E. depth: 25.5m, bottom: mud. 1959. 4. 22.

Other materials: 1 ♂, BL. 4.3mm. No. K121p-6. Northern South China Sea, 19°00'N, 112°00'E. depth: 195m, bottom: sand.

Body short and stout, surface of crust smooth. posterior margin of carapace concaved, leaves last 2 thoracic somites uncovered dorsally.

Rostral plate broad and rounded, not protruded, anterior margin not covering the base of the eyestalk and antennular peduncle. Cervical groove prominent. Anterolateral corner rounded.

Eyes stout, as long as broad, cornea reniform, about half as long as eyestalk, purple; about as long as broad.

Antennular peduncle stout in male, first joint longer, outer distal corner protruded, with 3 plumose setae; second joint about $\frac{2}{3}$ as long as the basal joint, inner distal corner with 1 slender sinuous setae; third joint about as long as the first joint, its dorsal surface with 2 short sharp teeth on a round lobe. Inner flagellum slender. Antennal scale lanceolate, about $3\frac{1}{2}$ times as long as broad, distal joint very small, about as long

as broad, distal end conspicuously overreaching antennular peduncle. Antennal peduncle longer, about as long as antennular peduncle, first joint very short; second joint about $1\frac{2}{3}$ times as long as the first joint; third joint longer than the second joint.

Incisor process of mandible with 1 minute tooth; first joint of palp short, second joint long, about $3\frac{3}{4}$ times as long as the first joint, distal $\frac{1}{3}$ of inner margin with 1 setae. Proximal endite of first maxilla broad, with 3 thick and 1 thin setae; distal endite narrow, distal end with 12 spines of different size. Endopod of second maxilla broad and short, exopod narrow and long, with 11 stout plumose setae.

Labrum broad and rounded anteriorly; posterior margin with an incision, forming two lobes, right lobe smaller.

Endopod of first thoracic limb stout, carpus-propodus stout and short, propodus longer than carpus, outer distal margin with 4 short and stout spines. Distal end of dactylus with 1 strong spine. Endopod of second thoracic limbs thin and long, carpus longer than propodus, dactylus short. third to eighth thoracic limbs stouter and shorter, propodus composed of 2 joints, distal end of dactylus with spines; exopod of thoracic limbs with basal plate rounded, distal corner of outer margin smooth, flagellum composed of 8—9 joints. Male genital organ long, tube-form. Female with three pairs of oostegites.

Male pleopods simple, resemble, those of female, first pleopod broad and short, the others get thinner and longer backwards.

Telson narrow, triangular in shape, broad at base, tend to narrow toward the distal end, less than 2 times as long as broad at base, basal $\frac{1}{3}$ of lateral margin smooth, distal $\frac{2}{3}$ with 14—17 spines increasing in size posteriorly, distal end with shallow incision, whose lateral margin is armed with 4 spines, distal lobe median spines conspicuously long and thick. Endopod of uropod moderately stout, with 36 spines on inner margin from statocyst to distal end, of which the distal 2 spines are conspicuously long and stout. Exopod of uropod thinner and longer than endopod, both margins with plumose setae.

The present new species is very similar to *Mysidella tanakai* Li 1964, *M. nana* Murano and *M. rotundincisa* sp. nov., but differs in the shapes of rostral plate, the anterior end of labrum, the distal incision of telson and the inner margin of the uropodal endopod.

	<i>Mysidella tanakai</i> Li	<i>M. nana</i> Murano	<i>M. rotundincisa</i> sp. nov.	<i>M. incisa</i> sp. nov.
Rostral	Broad triangular	broad and rounded	broad and rounded	narrow triangular
Anterior margin of labrum	sharp, with small spine process	broad, bow shaped	oval	broad triangular

Distal incision of telson	narrow oval, lateral margin with 17—18 spines	broad oval, lateral margin with about 10 spines	rounded, lateral margin with 5 spines	sharp, triangular, lateral margin with 3 spines
Spines of uropodal endopod on inner margin	similar size	similar in size	2 distal spines conspicuously stout	only distal one conspicuously stout

12. *Mysidella incisa* sp. nov. (Fig. 12)

Holotype: Adult female, BL. 3.0mm. No. K35p-1. Qiongzhou Strait, northern South China Sea, 20°15'N, 109°30'E, depth: 20m, bottom sand mud 1959. 4. 18.

Paratype: Adult female, BL. 3.0mm. No. K47p-10. Hailing Island, northern South China Sea, 21°30'N, 112°00'E, depth: 21m, bottom: mud. 1959. 7. 2.

Body small, surface smooth.

Rostral plate triangular, apex reaching to about base of antennular peduncle and eyestalk. Carapace, short, posterior dorsal margin deeply concaved, carapace leaves the distal 2 thoracic joints uncovered dorsally.

Eyes stout, about as long as broad, cornea reniform, shorter and narrower than eyestalk; eyestalk conspicuously long and thick.

Female antennular peduncle moderately thin and short, first joint longer, outer distal corner rather protruded; second joint short, only $\frac{2}{3}$ as long as the first, joint; third joint about as long as the basal joint, with 2 sharp teeth on a small dorsal lobe between both flagella. Antennal scale lanceolate, about 4 times as long as broad, with a small distal joint, about as long as broad, distal end conspicuously overreaching the antennular peduncle; antennal peduncle moderately short, stout, about $\frac{2}{3}$ as long as the scale, first joint very short, second joint conspicuously long, about $2\frac{1}{2}$ times as long as the first, third joint rather long than second one.

Incisor process of mandible without teeth or spines; first joint of palp short and narrow, second joint long, distal $\frac{3}{8}$ of inner margin with 8 setae. First maxilla resembles that of *Mysidella rotundincisa* sp. nov. Endopod of second maxilla oval, with 9 stout distal setae; exopod conspicuously narrow and long, with 9 stoutly plumose setae.

Labrum narrow and round anteriorly, posteriorly bilobed, the median incision triangular, left lobe wide and large, right lobe small.

Endopod of first thoracic limb short and thin, distal $\frac{1}{3}$ of outer margin of propodus with 3 strong spines which increase in size proximally; dactylus long, with stout apical spines. Endopod of second thoracic limb moderately long and thick. Propodus of third to eighth thoracic limbs consist of 2—3 joints, with the articulations vertical or oblique. Basal plate of exopod of thoracic limbs broad and rounded, outer distal corner smooth.

Female with three pairs of oostegites.

Female pleopod plate-shape, simple and unjointed, anterior pleopod comparatively broad and short, being narrower and longer towards posterior pairs.

Telson broad at base, narrowed at proximal $\frac{1}{3}$, less than $1\frac{1}{2}$ times as long as broad at base, lateral margin with 1 small movable spine at basal $\frac{1}{3}$ and another 5—6 movable spines on distal $\frac{2}{5}$. Distal median incision of telson quite shallow, its lateral margin with 2 small spinules, distal lobes of telson each armed with 2 apical spines, the median spines particularly stout, the outer spines are shorter, but stronger than inner ones. Endopod of uropod short and stout, statocyst conspicuously large, with 24 spines on inner border from statocyst to distal end, spines conspicuously long and stout. Exopod of uropod short, about as long as the endopod.

The present new species is similar to *Mysidella rotundincisa* sp. nov. but differs from the latter species in the shape of the rostral plate, the labrum, the distal incision of telson, and the spines of uropodal endopod.