

南海刺糠虾属新种描述*

刘瑞玉 王绍武

(中国科学院海洋研究所)

刺糠虾属 *Acanthomysis* Czerniavsky 是我国近海糠虾类 Mysidacea 中最常见的一属。它和新糠虾属 *Neomysis* 多生活在近岸浅海,特别在沿岸带、港湾及河口附近的低盐水域,种数较多,数量常常很大,可供食用或作鱼虾养殖用的饵料。

著者在我国近海糠虾类研究中,发现不少未经记录的刺糠虾。仅1959—1960年在南海采集的浮游生物样品中就发现5个新种,本文即为新种的描述。

1. 宽尾刺糠虾(新种) *Acanthomysis laticauda* sp. nov. (图1)

正模标本 成体雄性,体长7.5 mm。标本号 K136p-4a。南海22°00'N、113°30'E, 1960年2月14日采,水深7米,底质软泥。

副模标本 成体雌性,体长7.0 mm。标本号 K136p-4b, 采集地点与正模标本同;成体雄性,体长7.5 mm。标本号 K83p-8, 南海18°45'N、108°15'E, 水深42米,底质粗粉砂, 1960年2月12日采; 5♂♂, 3♀♀, 体长5.0—6.4 mm。标本号 Q206p-1a-h, 南海18°45'N、108°15'E, 水深41米,底质泥砂, 1960年5月18日采。

其他材料 南海自珠江口至北部湾近岸水域,水深6—219米, 1959年1月至1960年11月采获大量标本。在东海长江口附近也采获一些标本。

成体最大体长7.5 mm(雄性)、7.0 mm(雌性)。体较粗壮,甲壳表面具许多不规则排列的横细脊,突出成为薄片,从背面看两侧缘的薄片很像小刺,在头胸甲、第1—6腹节、尾节、尾肢、两对触角和眼柄上都清楚可见。腹部无横沟或大的排刺。额板三角形,末端稍钝,约伸至第1触角柄第1节中部。头胸甲前侧角圆。眼宽短,角膜肾形,其宽度与眼柄略等;眼柄长于角膜。

第1触角柄雄性粗壮,雌性纤细,其长度略等于或长于第2触角鳞片,第1节和第3节长度略等,约为第2节的3倍。第3节背面末端在内鞭和外鞭基部之间具一明显的齿突。第2触角鳞片稍窄长,长度约为最大宽度的5倍;末节长稍大于宽。柄部短,约为鳞片长度的 $\frac{2}{3}$ 。上唇对称,长显著大于宽,约为宽的 $1\frac{1}{2}$ 倍,前缘中央刺突细长而尖锐,大于或等于上唇本身长度。

第1、2胸肢内肢末节边缘有几个粗刺和较细的刚毛,其他各节仅有较细的刚毛。第3—8胸肢内肢掌节由4—6小节构成,多数为5节,各胸肢外肢基节外末角具1或2小刺。雄性第4腹肢外肢细长,基节长度大于末节的3倍,末端具2长短不等的刚毛,长毛与基节长度略等(大部分稍短于基节,少数较长);短毛与末节的长度略等。

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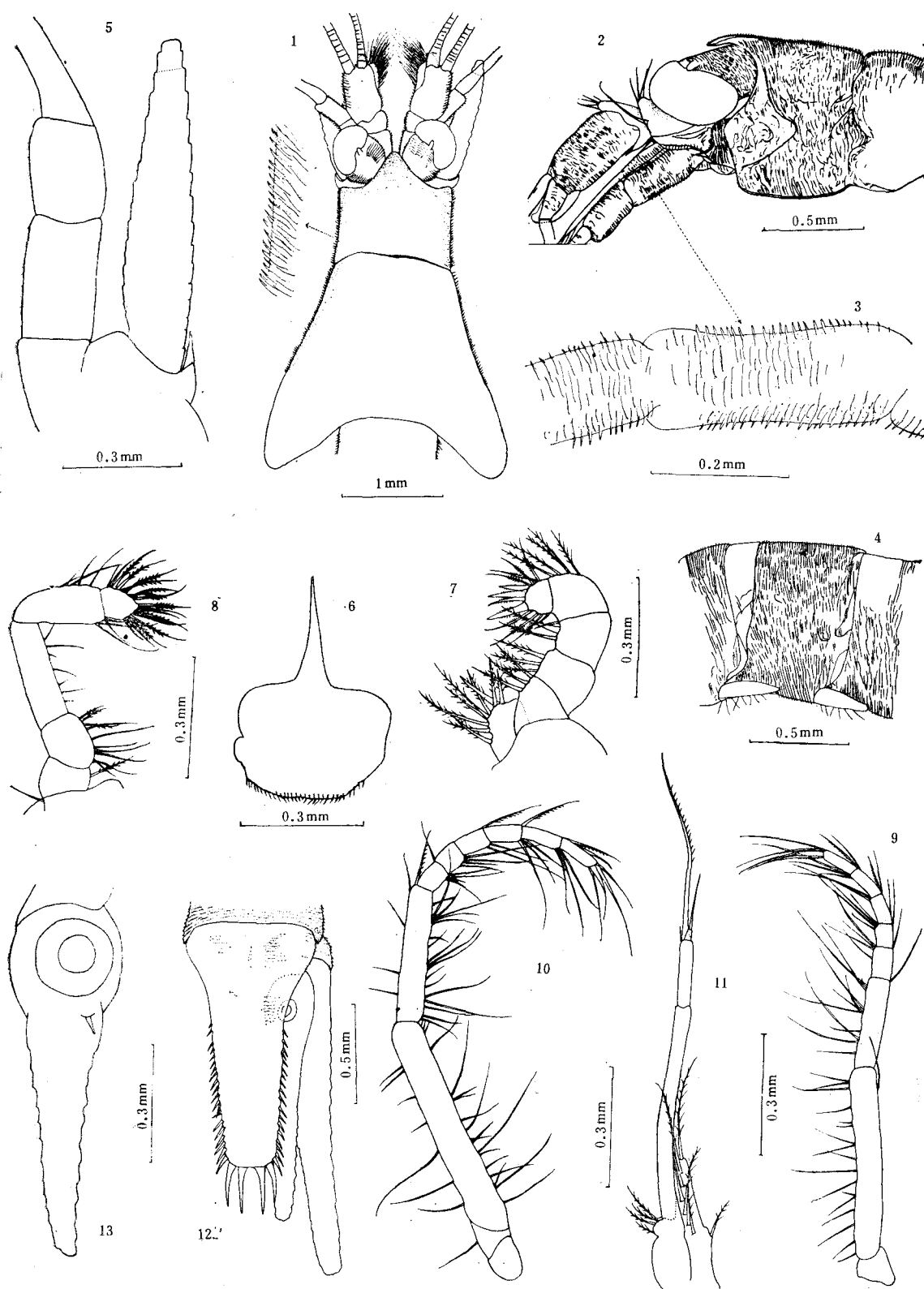


图1 宽尾刺糠虾(新种) *Acanthomysis laticauda* sp. nov.

1. 雄性头部背面(东海); 2. 雄性头部侧面; 3. 第2触角柄侧面; 4. 雄性腹部第2节侧面; 5. 第2触角;
6. 上唇; 7. 第1胸肢内肢; 8. 第2胸肢内肢; 9. 第3胸肢内肢; 10. 第6胸肢内肢; 11. 雄性第4腹
肢; 12. 尾部(东海); 13. 尾肢内肢。

尾节呈舌状,长约为基部宽的 2 倍。侧缘基部光裸无刺,末部 $\frac{3}{5}-\frac{2}{3}$ 约有 18—23 刺,刺由前向后依次增大。末端显著宽而平截,约为基部宽的 $\frac{2}{5}$,为其长度的 $\frac{1}{5}$,具 4 个粗刺,中央 1 对稍大,两侧 1 对略短。

尾肢内肢内缘在平衡囊后腹面具一个小尖刺。

本新种主要特征,如额板、尾节和雄性第 4 腹肢的形状以及第 5—8 胸肢内肢掌节的小节数、尾肢内肢小刺数与 *A. hodgarti* (W. M. Tattersall) 相似,特别是尾节的形状及侧缘刺和末端刺的排列更为近似。在 *Acanthomysis* 属中,尾节侧缘基部无刺的仅有本新种与 *A. hodgarti* (W. M. Tattersall) 和 *A. ornata* O. S. Tattersall,后两种甲壳表面光滑无横脊形成的薄片,且尾节末端较窄,*A. hodgarti* 尾节末端宽约为基部宽的 $\frac{1}{5}$,侧缘刺数较多(达 28 个)而小,端刺也较小;*A. ornata* 第 2 触角鳞片很短小,稍长于触角柄;尾节特别窄长,长度约为基部宽的 4 倍,末端宽约为基部宽的 $\frac{1}{7}$,侧缘刺仅 12—14 个,与本新种显著不同。

本新种甲壳表面有许多细横脊形成的突出薄片,颇似 *A. aspera* Li¹⁾,但后者尾节侧缘全长有不同大小的刺,相间排列成组,尾节背面接近两侧缘各有 1 条纵脊。雄性第 4 腹肢末端刚毛大小几乎相等;第 3—8 胸肢掌节分为 6—7 小节,很易区别。

2. 强刺刺糠虾(新种) *Acanthomysis crassispinosa* sp. nov. (图 2)

正模标本 成体雌性,体长 6.0 mm。标本号 K170p-5a,南海 22°00'N、113°30'E,1960 年 4 月 10 日采,水深 55 米,底质软泥。

副模标本 成体雌性,体长 5.5 mm。标本号 K170p-5b,采集地点、日期与正模标本同。(解剖)。

身体适度粗壮,体表具紧密排列的横皱褶,比 *A. laticauda* sp. nov. 稍稀,在甲壳表面形成低钝脊,而不形成显著的突出薄片,横脊在腹部较为显著,而在头胸甲上模糊不清。

额板短小,略呈三角形,侧缘稍凹,末端钝尖,仅达眼柄基部附近。眼大,长略大于宽;角膜肾形,与眼柄宽度略等。第 1 触角柄适度发达,第 1 节长于第 3 节,超过第 2 节长的 2 倍。第 2 触角鳞片长为宽的 $4\frac{1}{2}$ 倍,末节长宽略等,约为鳞片全长的 $\frac{1}{9}$,基节外缘具一明显的刺。上唇长稍大于宽,中央刺突显著短于上唇本身。

第 1、2 胸肢正常。第 3—8 胸肢内肢掌节由 4 或 5 小节构成。胸肢外肢基节外末角具 1 或 2 小刺。

尾节长舌形,长约为基部宽的 $2\frac{1}{2}$ 倍,侧缘全长具刺,约 40 个上下,侧缘基部 $\frac{1}{3}$ 的刺较小,大小略等,末部 $\frac{2}{3}$ 的刺大小相间,排列成组,在 2 较大刺间有小刺 1—4 个。尾节末端有 2 对约等大的粗刺,刺长约为尾节长的 $\frac{1}{5}$,为基部宽的 $\frac{1}{2}$,末端宽的 $1\frac{1}{2}$ 倍。

尾肢内肢稍长于尾节,内缘平衡囊的腹面无刺。

本新种尾节的形状及侧刺的排列与 *A. aokii* Li 极为相似,但后者体表光滑无细密横脊;额角末端稍尖,而且很短,呈宽三角形;第 3—8 胸肢内肢掌节由 5—6 小节构成,多数

1) 作者仔细检查了采自黄海的 *A. aspera* Li 标本,发现该种头胸甲、腹部和附肢表面实际上是覆以许多不规则的小横薄片,与 *A. laticauda* sp. nov. 基本相同;并非像 Li (1964, p. 493) 所描述的那样是覆以许多小刺。

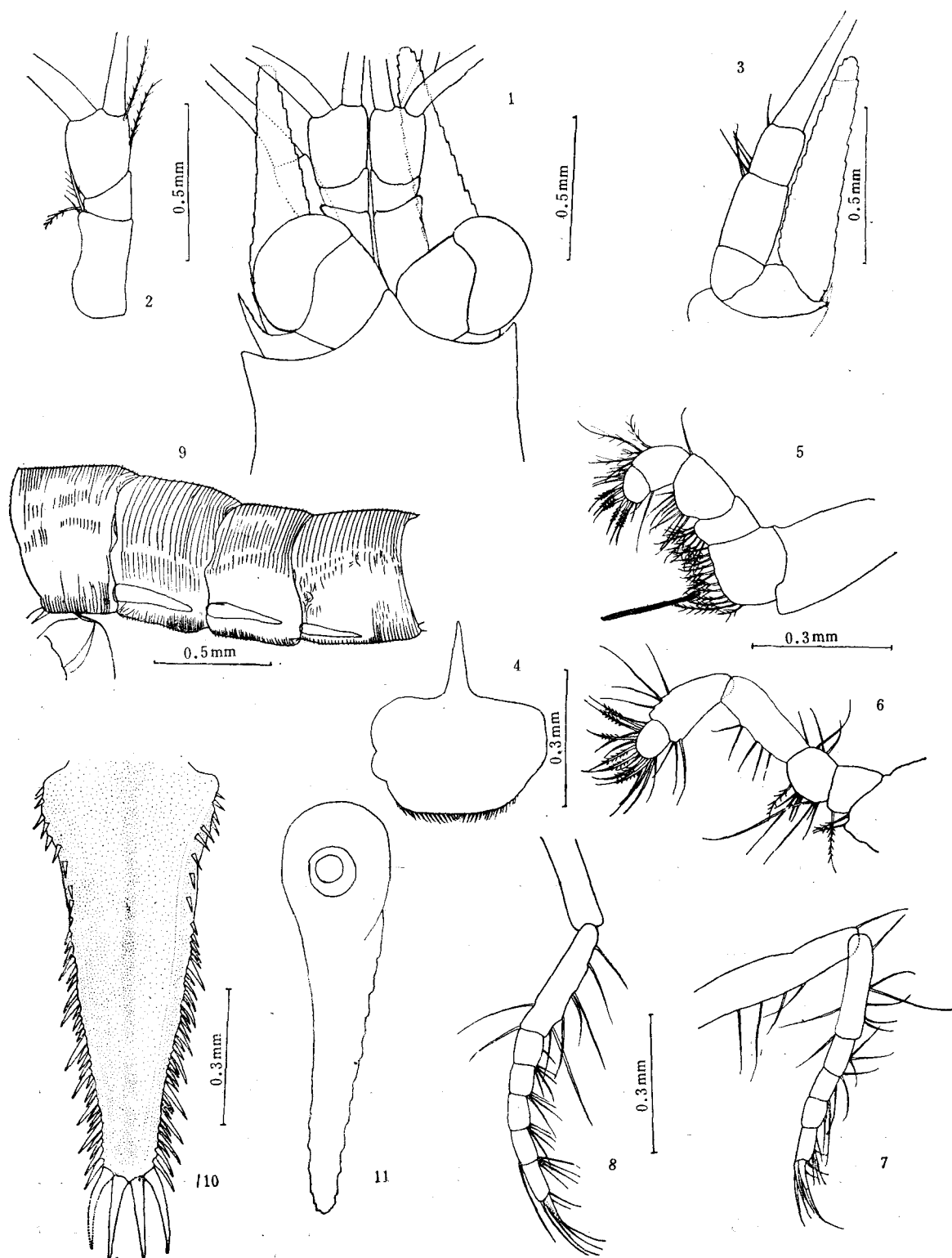


图2 强刺刺糠虾(新种) *Acanthomysis crassispinosa* sp. nov.

1. 雌性头部背面; 2. 第1触角柄; 3. 第2触角; 4. 上唇; 5. 第1胸肢内肢; 6. 第2胸肢内肢;
7. 第7胸肢内肢; 8. 第8胸肢内肢; 9. 雌性腹部侧面; 10. 尾节; 11. 尾肢内肢。

为6节;尾肢内肢腹面仅具一刺。而本新种体表具弱横脊;第3—8胸肢内肢掌节4、5小节,多数为5小节;尾节中央纵沟很深,末端刺特别粗大;尾肢内肢腹面无小刺。

本新种腹部表面有许多微小的横脊或小薄片,尾节末端具4大刺,侧缘刺大小相间排列,颇似 *A. aspera* Li, 但后者第3—8胸肢内肢掌节由6或7小节构成,尾节末端4大刺较短,其长度约为尾节长的 $\frac{1}{7}$ — $\frac{1}{8}$; 而新种末端刺粗大,长度约为尾节全长的 $\frac{1}{5}$, 为尾节末端宽的 $1\frac{1}{2}$ 倍,尾肢内肢内缘腹面无刺。

尚未发现雄性标本。

3. 窄尾刺糠虾(新种) *Acanthomysis leptura* sp. nov. (图3)

正模标本 成体雄性,体长7.0 mm。标本号 L71P-2, 南海 20°30' N、111°00' E, 1959年4月26日采,水深30米,底质砂质泥。

副模标本 成体雄性,体长7.0 mm。标本号 L72P-1, 南海 20°45' N、111°00' E, 水深32米,底质软泥。采集日期、地点、水深、底质均与正模标本同; 3♂♂, 3♀♀, 体长6.0—7.5 mm。标本号 L71p-2a—t。

其他材料 南海近岸水域 20°15'—22°00' N、110°00'—113°30' E, 13♂♂, 54♀♀, 7个幼体,水深6—32米,底质软泥、细砂。1959年1月至7月采。

成体长度7.5mm。体适度粗壮,甲壳光滑,腹部无褶或沟。额板窄三角形,侧缘稍凹,末端稍钝,覆盖眼柄的基部。前侧角圆。眼粗短,角膜肾形,较眼柄宽而短。

第1触角柄雄性者粗壮,第3节长稍大于宽,第3节稍长于第1节,雄性突起内缘凹;雌性者略纤细,第3节长接近宽的2倍。第2触角鳞片显著超过第1触角柄,其长约为宽的6倍左右,末节小,长显著大于宽,基节外末角有尖刺。第2触角柄较粗,约为鳞片长度的 $\frac{3}{4}$ 。

上唇长大于宽,中央刺突不太长,短于上唇本身,末端略尖。

大颚正常,触须第2节内缘膨大,上具光裸刚毛;末节具光裸刚毛和带小刺的刚毛。第1小颚外板外缘光裸,无小刺和突起。第2小颚内叶具粗刺状刚毛,上具小刺;外叶发达,上具羽状刚毛。

第1、2胸肢正常。第3—8胸肢内肢掌节由4或5小节构成;指节呈刚毛状。外肢基节外末角具2—4个不显著的小刺。

雄性第4腹肢粗大,外肢基节长约为末节的4倍左右,末节具2根长短不等的粗大刚毛,长毛约为短毛的 $1\frac{1}{3}$ 倍,稍超过末节的2倍,末端伸达第6腹节的后部。

尾节窄而长,呈长舌状,长约为基部宽的 $2\frac{1}{2}$ 倍,约为第6腹节长的 $1\frac{1}{2}$ 倍;侧缘全长有刺,约40—50个,基部的刺大小相似,后半部刺大小相间、排列成组,2大刺间有1—4个较显著的小刺;尾节末端圆形,很窄,末端宽约为基部宽度的 $\frac{1}{6}$, 具2或3对长度略等的大刺。最后1对大的侧刺与末端刺大小相等,它们之间有时具1个很小的刺。

尾肢内肢内缘腹面一般具2或3个不等长的尖刺。

本新种体表光滑,腹部无横沟和排刺,尾节末部显著窄,与 *A. indica* (W.M. Tattersall) 及 *A. hwanhaiensis* Ii 近似,但尾节侧缘刺的大小和排列不同。现将此 3 种比较如下:

<i>Acanthomysis leptura</i> sp. nov.	<i>A. hwanhaiensis</i> Ii	<i>A. indica</i> (W. M. Tattersall)
1. 第3—8 胸肢内肢掌节由 4 或 5 小节构成。	由 6—8 小节构成。	由 3 小节构成。
2. 尾节长度为基部宽度的 $2\frac{1}{2}$ 倍,末端 4 或 6 大刺,长度略相等。	长约为基部宽的 $2\frac{1}{2}$ 倍,末端 3 对刺(在内外 2 大刺间有 1 小刺)。	长约为基部宽的 2 倍,末端 6 或 8 粗刺。
3. 尾肢内肢内缘 3 尖刺。	4 尖刺。	5 尖刺。

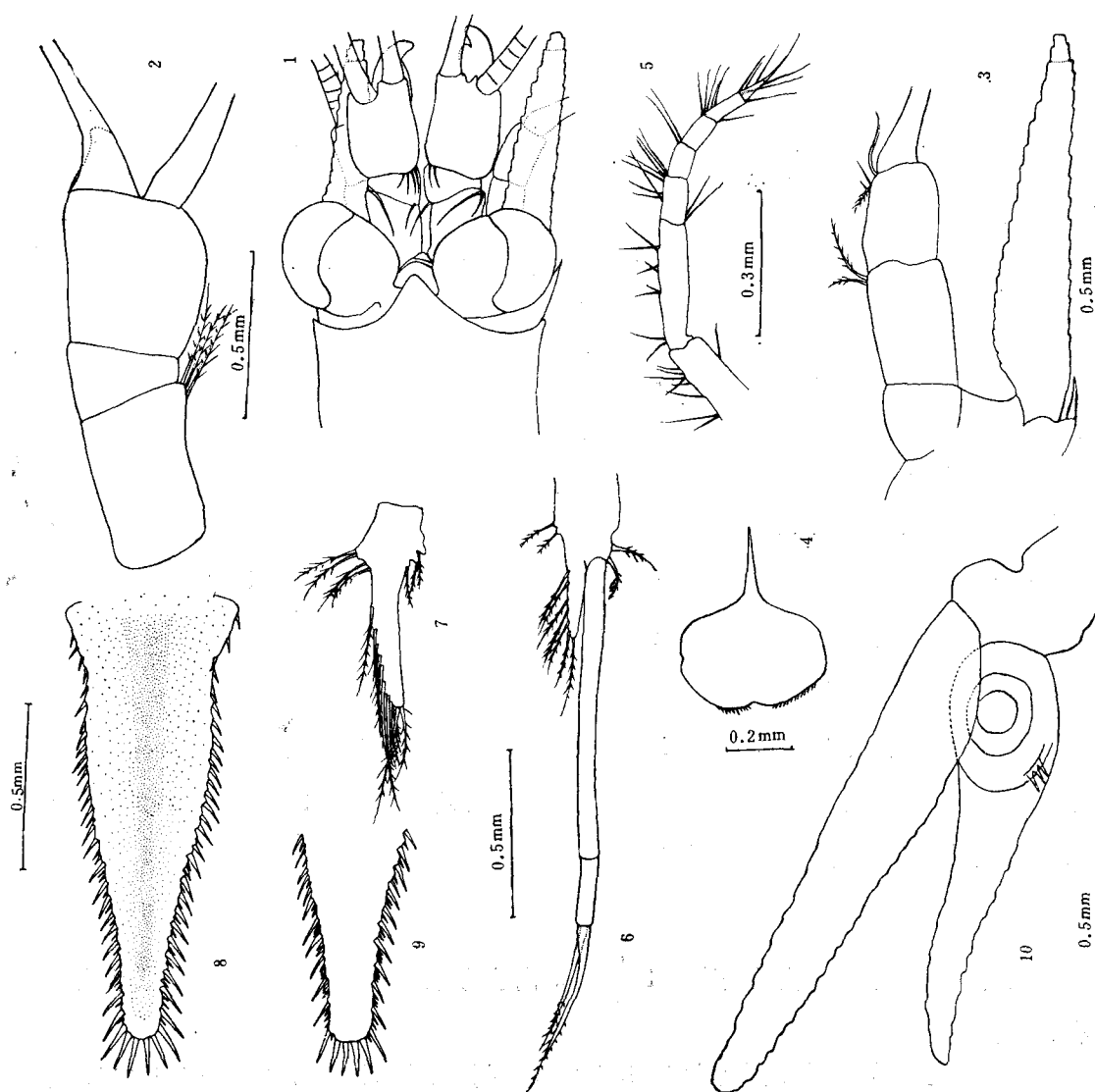


图 3 窄尾刺糠虾(新种) *Acanthomysis leptura* sp. nov.

1. 雄性头部背面; 2. 第 1 触角柄; 3. 第 2 触角; 4. 上唇; 5. 第 8 胸肢内肢; 6. 雄性第 4 腹肢;
7. 雄性第 5 腹肢; 8. 尾节; 9. 尾节后部(另一雄性标本); 10. 尾肢。

4. 圆尾刺糠虾(新种) *Acanthomysis rotundicauda* sp. nov. (图 4)

正模标本 成体雄性, 体长 8.0 mm。标本号 ×85P-8, 南海 18°30'N、108°30'E, 1960 年 2 月 13 日采, 水深 27 米, 底质粗粉砂。

副模标本 成体雄性, 体长 8.0 mm。标本号 ×38 p-3, 采集地点与正模标本同, 1959 年 12 月 11 日采。2 ♀ ♀, 体长 6.4 mm。标本号 ×84 p-7 a—b, 南海 18°45'N、108°30'E, 水深 21 米, 底质粗砂, 1960 年 2 月 13 日采; 3 ♀ ♀, 体长 7.5—7.8 mm。标本号 R5p-8a—c, 南海 19°00'N、108°30'E, 水深 31 米, 底质软泥, 1959 年 1 月 26 日采。

其他材料 2 ♂ ♂, 12 ♀ ♀, 南海近岸水域 18°30'—22°00'N、108°30'—113°30'E, 水深 6—31 米, 底质泥砂, 1959 年 1 月至 1960 年 5 月采。

成体最大长 8.0 mm (雄性)、7.5 mm (雌性)。甲壳光滑, 第 6 腹节背甲两侧各具一列锯齿, 约 6—8 个。

额板三角形, 末端钝尖, 不到第 1 触角柄第 1 节的中部。

眼粗短, 角膜稍宽于眼柄, 宽肾形。

第 1 触角柄粗壮, 第 1 节和第 3 节约等长, 不足第 2 节的 2 倍, 雄性第 3 节长宽大约相等。雄性突起大, 蹄形。

第 2 触角鳞片末端明显地超过第 1 触角柄, 但不超过雄性突起的末端, 长约为宽的 5 倍, 末节小, 长宽略等, 约为鳞片全长的 $\frac{1}{12}$ 。

大颚正常, 触须第 1 节极不明显; 第 2 节膨胀; 第 3 节顶端圆, 上具带刺的刚毛。第 1 小颚外叶末端内侧具光滑的刺状刚毛和带小刺的刚毛。第 2 小颚比较发达, 外叶较大, 上具羽状刚毛; 内叶具带小刺的刚毛和羽状刚毛。

上唇长略大于宽, 前缘中央刺突较短, 末端稍钝, 刺突约为上唇本身的 $\frac{1}{3}$ 。

第 3—8 胸肢内肢掌节由 3 或 4 小节构成, 胸肢外肢基节外末角具 1—4 个小刺。

雄性第 4 腹肢外肢基节长约为末节的 $6\frac{1}{2}$ 倍, 末节显著较短, 末端具 2 根等长的刺状刚毛, 长约为末节的 $5\frac{1}{2}$ 倍, 其末端伸达第 6 腹节中部附近。

尾节细长, 长约为第 6 腹节的 $1\frac{2}{3}$ 倍, 约为基部宽的 $2\frac{1}{5}$ 倍, 背面纵行凹陷很深, 侧缘近基部刺大小相似, 末部 $\frac{3}{5}$ 侧刺大小排列成组, 在两大刺间有 1—4 个不等大的小刺; 末端圆, 有小刺和大刺各 2 对, 中央 1 对及第 3 对很小, 约为第 2 及第 4 对刺长度的 $\frac{1}{2}$ 或不到 $\frac{1}{2}$ 。

尾肢外肢较长, 约为内肢长度的 $1\frac{1}{4}$ 倍。内肢约与尾节等长, 内缘腹面平衡囊附近有 3 个小刺。

本新种尾节形状和侧刺大小排列, 尾肢内肢的刺数及排列与 *A. fujinagai* Ii 1964 极为相似, 但本新种额板稍突出; 第 2 小颚末外缘无小刺; 第 3—8 胸肢内肢掌节由 3 或 4 小节构成; 雄性第 4 腹肢第 1 节和第 2 节末端两侧各具明显的刚毛; 腹部只第 6 腹节两侧各具一横排刺。

尾节形状和刺的排列也很似 *A. nakazatoi*, 但后者第 6 腹节光滑, 第 1—4 腹节有横沟; 本新种第 6 腹节两侧各具一横排刺。

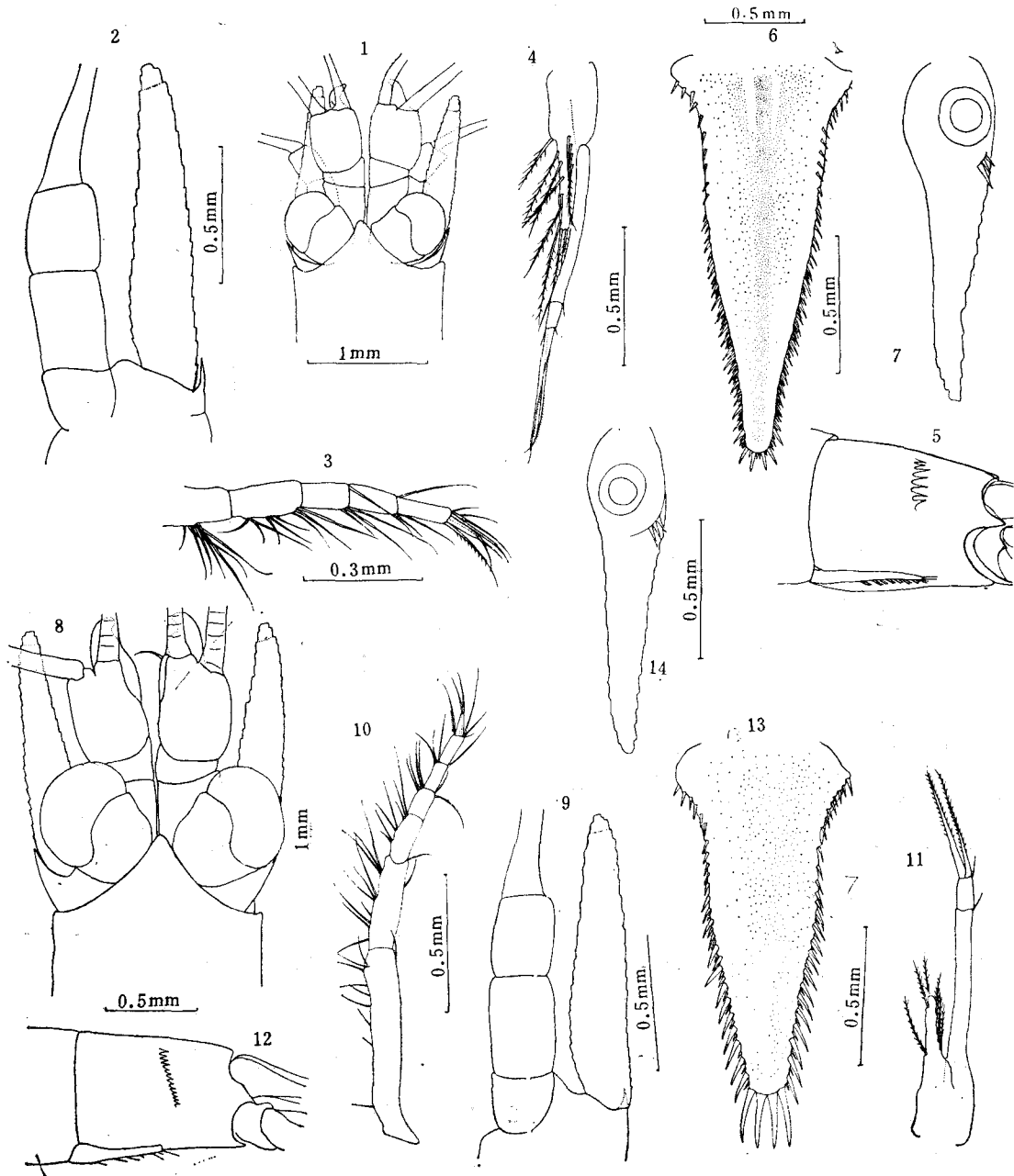


图 4 圆尾刺糠虾(新种) *Acanthomysis rotundicauda* sp. nov.

1. 雄性头部背面; 2. 第 2 触角; 3. 第 3 胸肢内肢掌节; 4. 雄性第 4 腹肢; 5. 第 6 腹节侧面;
6. 尾节; 7. 尾肢内肢

锯齿刺糠虾(新种) *Acanthomysis serrata* sp. nov.

8. 雄性头部背面; 9. 第 2 触角; 10. 第 3 胸肢内肢; 11. 雄性第 4 腹肢; 12. 第 6 腹节侧面;
13. 尾节; 14. 尾肢内肢。

5. 锯齿刺糠虾(新种) *Acanthomysis serrata* sp. nov. (图 4)

正模标本 成体雄性, 体长 6.0 mm。标本号 L41 p-5a, 南海珠江口附近沿岸水域, 22°00' N, 113°30' E, 1959 年 2 月 21 日采, 水深 8 米, 底质软泥。

副模标本 成体雌性, 2 ♀ ♀, 体长 8.6 mm, 9.5 mm。标本号 L41 p-5b—c, 采集地点与正模标本同。

其他材料 14 ♂ ♂, 19 ♀ ♀, 采集地与正模标本同, 水深 6—8 米, 底质软泥, 1959 年 2 月至 4 月采。

甲壳表面光滑, 无小横脊或薄片突, 第 6 腹节后半两侧各有一横排尖刺, 约 10 多个, 排刺在背部中断。第 1—4 腹节两侧腹肢基部各有 1 短纵沟, 第 1、2 节较 3、4 节者更为显著。第 5 节无任何沟。

头胸甲宽约为长的 $\frac{2}{3}$, 前端适度突出, 形成三角形的额板, 末端稍钝尖, 略超过眼柄基部, 侧缘多少覆盖眼柄。眼大而宽, 角膜肾形, 显著宽于眼柄, 长度与眼略等, 眼柄基部具短的毛刺。雄性第 1 触角柄粗壮, 基节显著短于末节, 末节等于或长于第 2 节长的 2 倍。雄性突起较发达, 内缘凹。第 2 触角鳞片长约为宽的 5 倍, 末节很短, 长宽略等。触角柄粗壮, 约为鳞片长度的 $\frac{2}{3}$ (♀) 或超过 $\frac{2}{3}$ (♂), 末节长度显著短于第 2 节。

上唇中央刺突短小而尖锐, 刺长约为上唇本身长的 $\frac{2}{5}$ 。

第 1、2 胸肢正常。第 3—8 胸肢内肢掌节由 4、5 小节构成, 外肢基板外末角具 2—4 微小的刺。雄性第 4 腹肢外肢基节为末节长度的 $4\frac{1}{3}$ 到 $4\frac{2}{3}$ 倍, 末端具 2 粗而长的刚毛, 长度略等, 稍大于末节的 3 倍。

尾节呈长舌状, 末端窄, 长度稍大于基部宽的 2 倍。侧缘全长有刺。基半的刺较小, 略等大, 末半的刺大小相间排列成组, 2 大刺间有 1—3 个很小的刺, 大刺自前向后依次增大。尾节末端略钝, 具 4 个等长的强刺, 其长度显著大于末端宽度, 约为宽度的 $1\frac{1}{3}$ 倍。尾肢内肢内缘有 2—4 个小尖刺。

本新种与 *Acanthomysis crassispinosa* sp. nov. 和 *A. okayamaensis* Ii 近似。但 *A. crassispinosa* sp. nov. 体表面有许多小横脊, 第 6 腹节两侧无横排刺, 尾肢内肢无小刺, 与本新种容易区别。*A. okayamaensis* Ii 第 1 触角和第 2 触角鳞片较细而长, 第 2 触角柄显著短小 (雄性超过鳞片长度 $\frac{1}{2}$, 雌性短于鳞片长度 $\frac{1}{2}$)。第 3—8 胸肢内肢掌节的小节数目较多为 6—8 节。尾肢内肢内缘小刺数多为 2—4 个, 易与本新种区别。

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FIVE NEW SPECIES OF THE GENUS *ACANTHOMYSIS* (CRUSTACEA MYSIDACEA) FROM THE SOUTH CHINA SEA*

Liu Ruiyu (J. Y. Liu) and Wang Shaowu

(Institute of Oceanology, Academia Sinica)

Abstract

A distinctive feature of the mysidacean fauna of the inshore waters of the China Seas is that it is rich in species of two genera, viz., *Acanthomysis* and *Neomysis*. Five new species of *Acanthomysis* are found in the zooplankton samples collected from the continental shelf region of the northern South China Sea in 1959—1960. In this paper an account of the new species (*Acanthomysis laticauda* sp. nov., *A. crassispinosa* sp. nov., *A. leptura* sp. nov., *A. rotundicauda* sp. nov., *A. serrata* sp. nov.) are presented. The type materials of new species are deposited in the Institute of Oceanology, Academia Sinica.

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1. *Acanthomysis laticauda* sp. nov. (Fig. 1)

Holotype Adult male, BL 7.5 mm. No. X136P-4a, South China Sea, 22°00'N, 113°30'E; depth: 7 m; bottom: mud. 1960. II. 14.

Paratypes Adult female, BL 7.0 mm. No. K136P-4b, locality same as holotype. Adult male, BL 7.5 mm. No. K83P-8, South China Sea, 18°45'N, 108°15'E; depth 42 m; bottom: coarse silt. 1960. II. 12. 5 males, 3 females, BL 8.0—6.4 mm. No. Q206P-1, South China Sea, 18°45'N, 108°15'E; depth: 41 m; bottom: muddy sand. 1960. V. 18.

Other materials Large number of specimens collected from shallow waters along Guangdong and Guangxi coasts in 1959—1960; depth: 6—219 m.

Body stout. Surface of carapace, abdomen and all appendages, including the eyes and the last pair of oostegites, covered with numerous minute transverse flaky projections, those located at the lateral margins of the body or appendages look like hispid spinules when observed from above (fig. 1: 1, 2). Abdominal somites without transverse grooves or rows of spines. Frontal margin moderately produced, forming a short triangular rostral plate with bluntly pointed apex. Eyes large, cornea as broad as its stalk. Antennular peduncle thick in male, slender in female, 1st and 3rd joints subequal in length, upper distal margin of 3rd joint with a denticular process. Antennal scale rather narrow, about 5 times as long as wide; distal article small, slightly longer than broad; basal segment of antenna with a sharp spine at outer distal corner.

Labrum broader than long, median process stout, spiniform, about $1/2$, or more than $1/2$, the total length of labrum. 3rd—8th thoracic limbs with propodus divided into 4—6 (usually 5) subjoints; 1 or 2 spinules on outer distal corner of exopod. Exopod of 4th male pleopod moderately long, distal joint almost $1/3$ as long as proximal one, bearing 2 apical setae of different length: the longer seta about as long as the proximal joint, while the shorter one about as long as the distal joint.

Telson linguiform, about twice as long as broad at base; lateral margin unarmed anteriorly, distal $3/5$ or $2/3$ with 18 to 2 spines increasing in size posteriorly; distal end rather broad and almost truncated, bearing 4 strong spines of subequal length, the median pair slightly longer. Inner uropod with single sharp spine on inner lower margin near statocyst.

The present new species is very similar to *A. hodgarti* (W. M. Tattersall) in the shape of the telson and in the absence of spines on the basal portion of its lateral margin, but it may be distinguished from the latter by the broader distal end of the telson (about $2/5$ as broad as its base). In *A. hodgarti* the distal end of the telson is much narrower ($1/5$ as broad as its base), the number of spines on the lateral margin are more numerous (26—28), and the surface of the carapace and abdomen is quite smooth. *A. laticauda* sp. nov. also resembles *A. aspera* Li in the surface of the carapace and abdomen being covered with numerous minute flaky projections¹⁾, but in the latter species the telson is armed with spines throughout the length of the lateral margin; the apical setae of the exopod of the 4th pleopod in the adult male are sub-equal in

1) After a careful examination of the specimens of *A. aspera* Li 1964, collected from the Huanghai sea (Yellow Sea), the present authors found that the surface of the body (carapace, abdomen and all appendages) of this species is actually covered with minute transverse flaky projections as in *A. laticauda* sp. nov., but is not hispid with numerous spinules all over as described by Li (1964, pp. 493).

length, the propodus of the 3rd to 8th thoracic limbs is divided into 6 or 7 subjoints.

This new species is found abundantly in the shallow coastal waters of the South China Sea and the western part of the East China Sea.

2. *Acanthomysis crassispinosa* sp. nov. (Fig. 2)

Holotype Adult female, BL 6.0mm. No. K170P-5a, South China Sea, 22°00'N, 113°30'E; depth 55 m; bottom: mud. 1960. IV, 10.

Paratype Adult female, BL 5.5 mm. No. K170P-5b, locality same as holotype.

Body rather stout. Surface of body with numerous minute transverse blunt ridges or low flakes which are rather distinctly developed on abdominal somites but are obscure on carapace. Frontal plate short and narrow, triangular in shape, lateral margins slightly concave, less produced and bluntly pointed at apex. Eyes large, cornea reniform, as broad as the stalk. Antennal scale about $4\frac{1}{2}$ times as long as broad, distal joint as long as broad. Basal segment of antenna with a spine on outer distal corner. Labrum with a rather short, spiniform median process. Third to eighth thoracic limbs with the propodus divided into 4 or 5 subjoints; outer distal corner of basal plate of exopod with 2 spinules.

Telson elongate, linguiform, $2\frac{1}{2}$ times as long as broad at base, armed with about 40 spines throughout the lateral margin, spines on anterior part are smaller and subequal in length those on distal $\frac{2}{3}$ arranged in groups, several spines are much longer than the rest, between 2 longer spines are a group of 1—4 smaller ones. Distal margin of telson with 2 pairs of subequal stout spines, the length of which is about $\frac{3}{7}$ the breadth of telson at base, and about $1\frac{1}{2}$ times its breadth at apex. Inner uropod unarmed on inner margin.

Acanthomysis crassispinosa sp. nov. resembles *A. aoki* Ii in the shape and the spinulation of the telson. It is also similar to *A. aspera* Ii in the surface of body being covered with numerous low transverse flaky ridges, and in the spinulation of the telson. But in *A. aoki* Ii, the surface of the carapace and abdomen is smooth, the apex of the rostral plate is shorter and acutely pointed, the third to eighth thoracic limbs with the propodus divided into 4—6 subjoints, the inner uropod is armed with a single spine on the inner margin. In *A. aspera* Ii the propodus of each of the third to eighth thoracic limbs is divided into 6 or 7 subjoints, the apical spines of the telson are comparatively shorter, being $\frac{1}{7}$ to $\frac{1}{8}$ as long as the telson.

Only females are found.

3. *Acanthomysis leptura* sp. nov. (Fig. 3)

Holotype Adult male, BL 7.0 mm. No. L71P-1a. South China Sea, 20°30'N, 111°00'E; depth: 30 m; bottom: sandy mud. 1959. IV. 26.

Paratypes 3 adult males, 3 adult females, BL 6.0—7.5 mm. No. L71P-1b. Locality same as holotype. 1 adult male, BL 7.0 mm. No. L72P-1, South China Sea, 20°45'N, 111°00'E; depth: 32 m; bottom mud. 1959. IV. 26.

Other materials 13 males, 54 females, 7 young. collected from the coastal waters of the South China Sea, depth: 6—32 m; bottom: mud, fine sand.

Body smooth, without transverse grooves, rows of spines, or flaky projections on abdomen. Frontal plate narrowly triangular, bluntly pointed at apex, lateral margins slightly concave. Eyes large, cornea reniform, broader and shorter than stalk. Anten-

nular peduncle stout in male, 3rd segment slightly longer than broad. Antennal scale about 6 times as long as broad, distal joint slightly longer than broad; antennal peduncle rather stout, about $3/4$ as long as scale; outer distal corner of basal segment of antenna armed with a sharp spine. Outer margin of external plate of 1st maxilla without spinules. Labrum with the median process less than $1/2$ of its total length. Third to eighth thoracic limbs with propodus divided into 4 or 5 subjoints; outer distal corner of basal plate of exopod bearing 2—4 spinules.

Fourth male pleopod stout, proximal joint of exopod about $4-4\frac{1}{2}$ times as long as distal joint; terminal setae stout, unequal in length, the longer seta about $1\frac{1}{3}$ times as long as the shorter one, twice as long as the distal joint.

Telson elongate and narrow distally, linguiform, $2\frac{1}{2}$ times as long as wide at base, $1\frac{1}{2}$ times as long as 6th abdominal somite, armed with 40 to 50 spines throughout the lateral margin, spines on basal part subequal in length, those on posterior half of different sizes, about a dozen of them much longer, with a group of 1-4 small spines between 2 larger ones. Distal end of telson narrow and rounded, about $1/6$ as broad as its base, with 2 or 3 pairs of strong spines of subequal length, 1 very small spine present between the outermost apical spine and the ultimate larger lateral spine.

Inner uropod with 3 small spines on inner margin near statocyst.

The present new species is closely related to *A. indica* (W. M. Tattersall) and *A. hwanhaiensis* Li in the shape and armature of the telson, in the surface of the abdominal somite being smooth, that is, without grooves or rows of spines, and in the telson being narrow at the apex. The distinguishing characteristics of these 3 species are as follows:

<i>Acanthomysis leptura</i> sp. nov.	<i>A. hwanhaiensis</i> Li	<i>A. indica</i> (Tattersall)
Number of subjoints of propodus of 3rd—8th thoracic limbs: 4—5	6—8	3
Telson: $2\frac{1}{2}$ times as long as wide at base; Apical spines: 2 or 3 pairs, large, of equal length	$2\frac{1}{2}$ times as long as wide at base; 2 pairs, and 1 small spine between the inner and the outer ones	2 times as long as wide at base; 3 or 4 pairs, strong, of equal length
Number of spines on inner margin of inner uropod: 3	4	5

4. *Acanthomysis rotundicauda* sp. nov. (Fig. 4)

Holotype Adult male, BL. 8.0 mm. No. X85P-8. South China Sea, $18^{\circ}30'N$, $108^{\circ}30'E$; depth 27 m; bottom: coarse silt. 1960. XI. 13.

Paratypes Adult male, BL. 8.0 mm. No. X38P-3, locality same as holotype, 1959. XII. 11. 2 females. No. X84P-7, South China Sea, $18^{\circ}45'N$, $108^{\circ}30'E$; depth 21 m; bottom: coarse sand, 1960. II. 13. 3 females. No. R5P-8, South China Sea, $19^{\circ}00'N$, $108^{\circ}30'E$; depth 31 m; bottom: mud, 1959. I. 26.

Other materials 2 males, 12 females, collected from coastal waters of the South China Sea, depth 6—31 m.

Surface of body smooth, lateral sides of sixth abdominal somite with a transverse row of 6—8 spines (interrupted at mid dorsum), 1st, 3rd and 4th abdominal somites with a very shallow transverse groove. Frontal plate triangular, apex bluntly pointed, reaching almost to middle of 1st antennular joint. Eyes large, cornea reniform, broader

than stalk. Antennular peduncle stout; male process long, inner margin concave. Antennal scale 5 times as long as broad, surpassing distal end of antennular peduncle, but not reaching apex of male appendage.

Labrum with short and bluntly pointed median process, about $1/3$ of total length of labrum. Third to eighth thoracic limbs with propodus divided into 3 or 4 subjoints; basal plate of exopod with 1—4 spinules on outer distal corner.

Proximal joint of exopod of fourth male pleopod $6\frac{1}{2}$ times as long as distal joint, which is very short; apical setae long, subequal in length, about $5\frac{1}{2}$ times as long as distal joint.

Telson long and narrow, $2\frac{1}{5}$ times as long as wide at base; spines on proximal part of lateral margin subequal in size, those on distal half setting in groups, with 1—4 small spines between 2 larger ones. Distal end of telson rounded, with 4 pairs of spines, 1st (median) and third pair very small, less than $\frac{1}{2}$ the length of 2nd and 4th pairs.

Inner uropod subequal in length with telson, armed with 3 small spines on inner margin near statocyst.

This new species resembles *A. fujinagai* Ii in the shape and armature of the telson and uropods, but the anterior end of its rostral plate is more produced, the proximal and distal joints of the exopod of the 4th male pleopod bear a short seta on each of their disto-lateral corner, and the 6th abdominal somite is armed with a transverse row of spines. *A. rotundicauda* sp. nov. also resembles *A. nakazatoi* Ii in the armature of the telson, but the 6th abdominal somite in the latter species is smooth, without a transverse row of spines.

5. *Acanthomysis serrata* sp. nov. (Fig. 4)

Holotype Adult male, BL. 6.0 mm. No. L41P-5a, South China Sea, $22^{\circ}00'N$, $113^{\circ}30'E$; depth: 8 m; bottom: mud. 1959. XII. 21.

Paratypes 2 females, BL. 8.6 mm, 9.5 mm. No. L41P-5b—c, locality same as holotype.

Other materials 14 males, 19 females, locality same as holotype.

Body rather robust, surface of body smooth, with a short transverse groove on each side of the 1st—4th abdominal somites, and a transverse row (interrupted at mid-dorsum) of sharp spines on the 6th abdominal somite. Rostral plate narrowly triangular, with bluntly pointed apex covering the base of the eye-stalk. Eyes large, cornea reniform, as long as, but broader than the eye-stalk which is hirsute on proximal part. Antennal scale 5 times as long as broad, distal joint as long as broad, antennal peduncle $2/3$ as long as scale. Anterior median process of labrum spiniform, short and sharp, $2/5$ as long as the labrum.

Third to eighth thoracic limbs with propodus divided into 4 or 5 subjoints; outer distal corner of basal plate of exopod with 2—4 spinules. Proximal joint of fourth pleopod of male $4\frac{1}{3}$ to $4\frac{2}{3}$ times as long as the distal one, apical setae stout, subequal in length, slightly more than 3 times as long as distal point.

Telson elongate, linguiform, apex rather narrow, more than 2 times as long as wide at base; spines on anterior half of lateral margin small, subequal in length, those on the posterior half arranged in groups, with 1—3 small spines between 2 longer ones, distal end of telson armed with 4 stronger spines of subequal length, almost twice as long as

wide of telson at apex. Inner uropod with 2—4 small sharp spines on inner border near statocyst.

Acanthomysis serrata sp. nov. is closely allied to *A. crassispinosa* sp. nov. In the latter species, however, the surface of the body is covered with numerous transverse blunt ridges or low flakes, the 2 pairs of apical spines are stouter, the sixth abdominal somite and the inner margin of the inner uropod are unarmed.