

**ON ELEVEN NEW SPECIES OF FRESHWATER CRABS
OF THE GENUS *SOMANNIATHELPHUSA* BOTT, 1968,
FROM SOUTHERN CHINA (CRUSTACEA: DECAPODA:
BRACHYURA: PARATHELPHUSIDAE)**

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ABSTRACT. - Eleven new species of freshwater crabs of the genus *Somanniathelphusa* Bott, 1968, s. str. are described from southern China, viz. *S. nanningensis*, *S. guilinensis*, *S. yulinensis*, *S. longicaudus*, *S. megachelus*, *S. araeochelus*, *S. zhapoensis*, *S. yangshanensis*, *S. zhangpuensis*, *S. huaanensis* and *S. amoyensis*. These species are differentiated mainly by their carapace, anterolateral margin, male abdomen, and first and second male pleopod characters.

KEY WORDS. - *Somanniathelphusa*, new species, southern China, Brachyura, Parathelphusidae, taxonomy.

INTRODUCTION

Naiyanetr (1994) revised the generic system for the species previously classified in *Somanniathelphusa* Bott, 1968, establishing three new genera for the Indo-Chinese, Thai and Malaysian fauna. Until now, six species of *Somanniathelphusa* s. str. have been reported from China, viz. *S. sinensis* (H. Milne Edwards, 1853), *S. chongi* (Wu, 1935), *S. brevipedum* Dai et al., 1975, *S. taiwanensis* Bott, 1968, *S. zanklon* Ng & Dudgeon, 1992, and *S. falx* Ng & Dudgeon, 1992. The identity of the type species, *S. sinensis*, was clarified by Ng & Dudgeon (1992).

Examination of a large series of specimens of *Somanniathelphusa* s. str. from various parts of southern China (including southeastern parts of Yunnan, Guangxi, Guangdong, Fujian provinces, except Hainan Island), show that there are many more species than had been reported. The present paper reports on 11 new species from China. The specimens are deposited in the Institute of Zoology, Academia Sinica, Beijing.

DESCRIPTION OF NEW SPECIES

Genus *Somanniathelphusa* Bott, 1968

Diagnosis. - Medium-sized (35-46 mm carapace breadth) crabs. Carapace hexagonal, antero-lateral border with 4 teeth including exorbital tooth. Subfrontal with triangular region. Mandibular palp with 2-lobed terminal segment. Male abdomen with lateral margins of segments 5-6 constricted. First male pleopod with last 2 segments fused, proximal part bulb-like, slender distally.

Type species. - *Parathelphusa sinensis* H. Milne Edwards, 1853, by original designation.

Somanniathelphusa nanningensis, new species

(Pl. I:1; Fig. 1)

Material examined. - Holotype: 1 male (carapace length 33 mm, breadth 44 mm) (GX9091130A), Guofeng Wood field, Nanning, Guangxi Zhuang Autonomous Region, coll. 5 Dec.1990.

Paratypes - Allotype: female (carapace length 26.7 mm, breadth 32.7mm) (GX9091130B), 2 males, same data as holotype.

Description. - Carapace slightly convex, more conspicuous on branchial region, surface glabrous; finely punctated. Cervical groove shallow, depressed on median portion. H-shaped groove between gastric and cardiac regions deep. Post-frontal lobes crested and sharp, postorbital crest blunt, only with short transverse crest innerly. Frontal margin nearly straight, slightly emarginated medially. Exorbital teeth conspicuously smaller than second and third teeth, slightly bent inwards, second tooth equal or slightly smaller than third tooth, last tooth small, slightly bent outwards. Subfrontal triangular region about 3.2 times as broad as long. Third maxilliped with merus about 1.2 times as broad as long, ischium about 1.6 times as long as broad, exopod stout, reaching approximately 1/2 length of merus, with stout flagellum.

Male chelipeds strongly unequal, merus with a subdistal spine dorsally, carpus covered with rugae on dorsal surface, inner-distal angle with a slender, acute spine, slightly bent inwards, with 3 granules under its base. Larger manus about 1.3 times as long as high, movable finger about 1.1 times as long as manus, with big gap between two fingers when closed. Ambulatory legs slender, last legs with propodus about 1.5 times as long as broad, clearly shorter than dactylus.

Male abdomen T-shaped, sixth segment about 2.1 times as long as broad, last segment about 1.4 times as long as broad, almost equal in length to sixth segment. Median groove of thoracic sternum deep; fifth sternite with)(-shaped groove, longitudinal groove of sternites 6 and 7 interrupted medially. First male pleopod hook-like distally. Second male pleopod with short distal segment. Female abdomen rounded large, sixth segment about 3.1 times as broad as long; last segment semicircular, about 2.8 times as broad as long, shorter than sixth segment. Female genital pore transversely ovate.

Etymology. - The species name is derived from its type locality.

Remarks. - This new species is closely related to *S. brevipedum* Dai et al., 1975, but antero-lateral teeth are less acute than those of the latter species, the second tooth being

distinctly longer than (not equal) to the first tooth; the subfrontal triangular region about 3.2 (not 3.8) times as broad as long; the sixth male abdominal segment is 2.1 (not 1.9) times as long as broad; the first male pleopod is arched laterally outwards (not hook-like); and the female genital pore is transversely ovate (not elliptical).

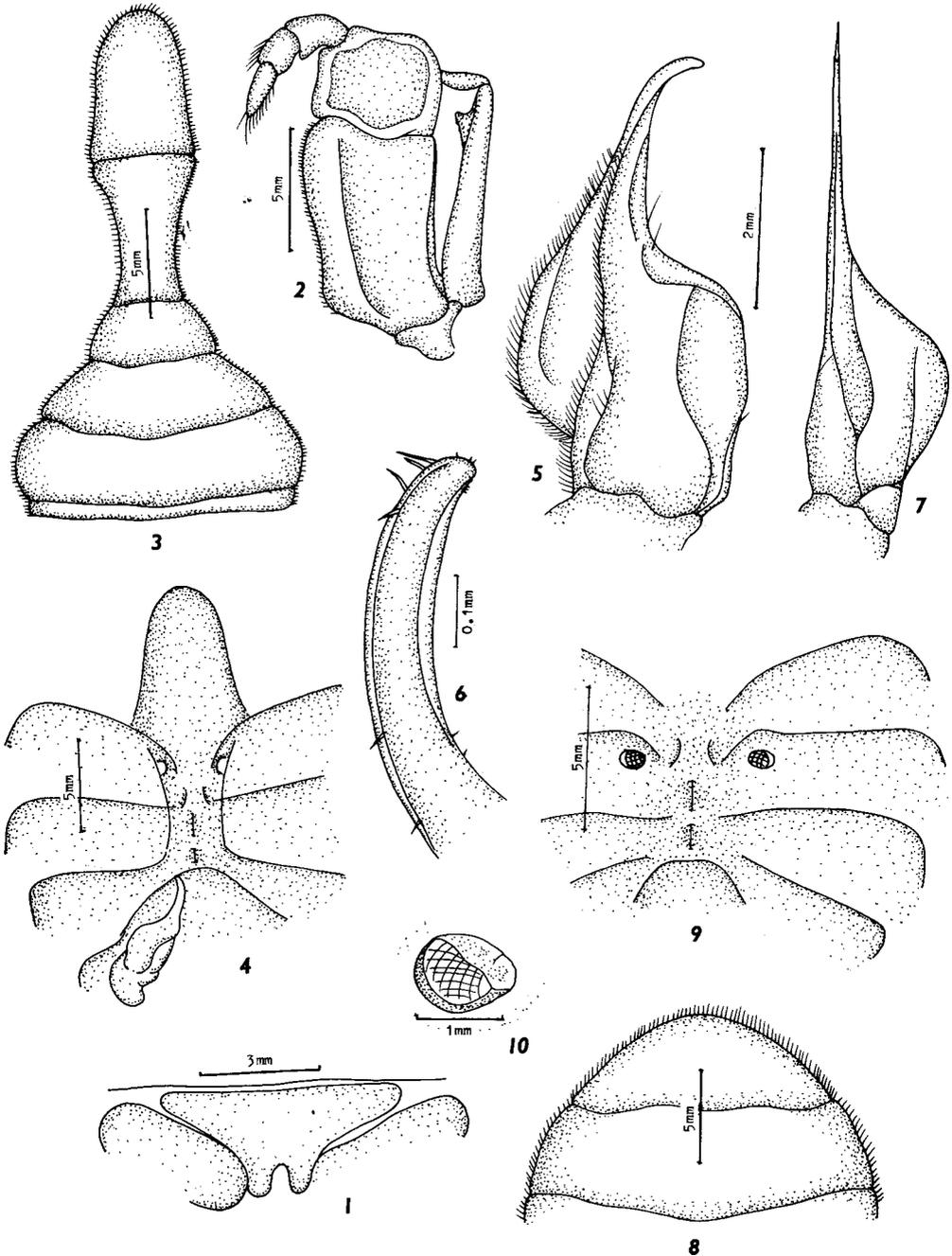


Fig. 1. *Somanniathelphusa nanningensis*, new species. 1-7. holotype male (GX9091130A), carapace length 33 mm, breadth 44 mm, 8-10. allotype female (GX9091130B) carapace length 26.7 mm, breadth 32.7 mm. 1. subfrontal triangular region; 2. third maxilliped; 3. abdomen; 4. sternum; 5. first pleopod; 6. distal end of first male pleopod; 7. second male pleopod; 8. female abdomen; 9. sternum, 10. female genital pore.

***Somanniathelphusa guilinensis*, new species**

(Pl. I:2; Fig. 2)

Material examined. - Holotype: 1 male (carapace length 27.4 mm, breadth 35.2 mm) (GX7591125A), Yangshan, Guilin, Guangxi Zhuang Autonomous Region, coll. 30 Sep.1975.

Paratypes - Allotype: female (carapace length 26.5 mm, breadth 32.5 mm) (GX7591125B), Yangshan, Guilin, Guangxi Zhuang Autonomous region, coll. 14 Apr.1980. — 9 males (4 juv.), 9 females (all juv.), same data as holotype.

Description. - Carapace convex, more conspicuously so on hepatic and branchial regions. H-shaped groove between gastric and cardiac regions deep. Post-frontal lobes crested, postorbital crest more sharp inner part and blunt outer part. Frontal border sharp, emarginated medially. Exorbital tooth longer or equal to second tooth, third tooth longest, last tooth small, directed obliquely forwards. Postero-lateral border long, with fine rugae. Subfrontal triangular region about 3.2 times as broad as long. Third maxillipeds with merus about 1.2 times as broad as long, ischium about 1.6 times as long as broad, exopod about reaching proximal 2/3, with stout flagellum.

Male chelipeds clearly unequal, merus with acute spine subdistally; carpus with an acute spine on inner distal angle, directed obliquely inwards; larger manus about 1.3 times as long as high, almost equal to movable finger, inner border of movable finger with large tooth, with 3-4 blunt teeth proximally, immovable finger with 2 blunt teeth, almost no gap between them when closed. Ambulatory legs glabrous, last leg with propodus about 1.8 times as long as broad, subequal to dactylus.

Male abdomen T-shaped, sixth segment slender, about 1.9 times as long as broad, last segment about 1.4 times as long as broad, almost equal in length to sixth segment. Median groove of thoracic sternum deep, fifth segment with)(-shaped groove, longitudinal groove of sternites 6 and 7 interrupted medially. First male pleopod with distal portion bent outwards, with scattered short spinules (under strong magnification). Second male pleopod with proximal 1/2 triangular in shape, with distal 1/2 slender. Female abdomen rounded, with sixth segment about 3 times as broad as long, last segment about 2.7 times as broad as long, distal border convex, slightly shorter than sixth segment. Female genital pore obliquely ovate.

Etymology. - The species is named after its type locality.

Remarks. - This new species is most closely related to *S. sinensis* (H. Milne Edwards, 1853), but differs from the latter in the subfrontal triangular region being about 3 (not 6 times) as broad as long; the larger manus is as long as (not conspicuously shorter than movable finger); and the distalmost portion of the first male pleopod is bent outwards, directed ventrally and hook-like.

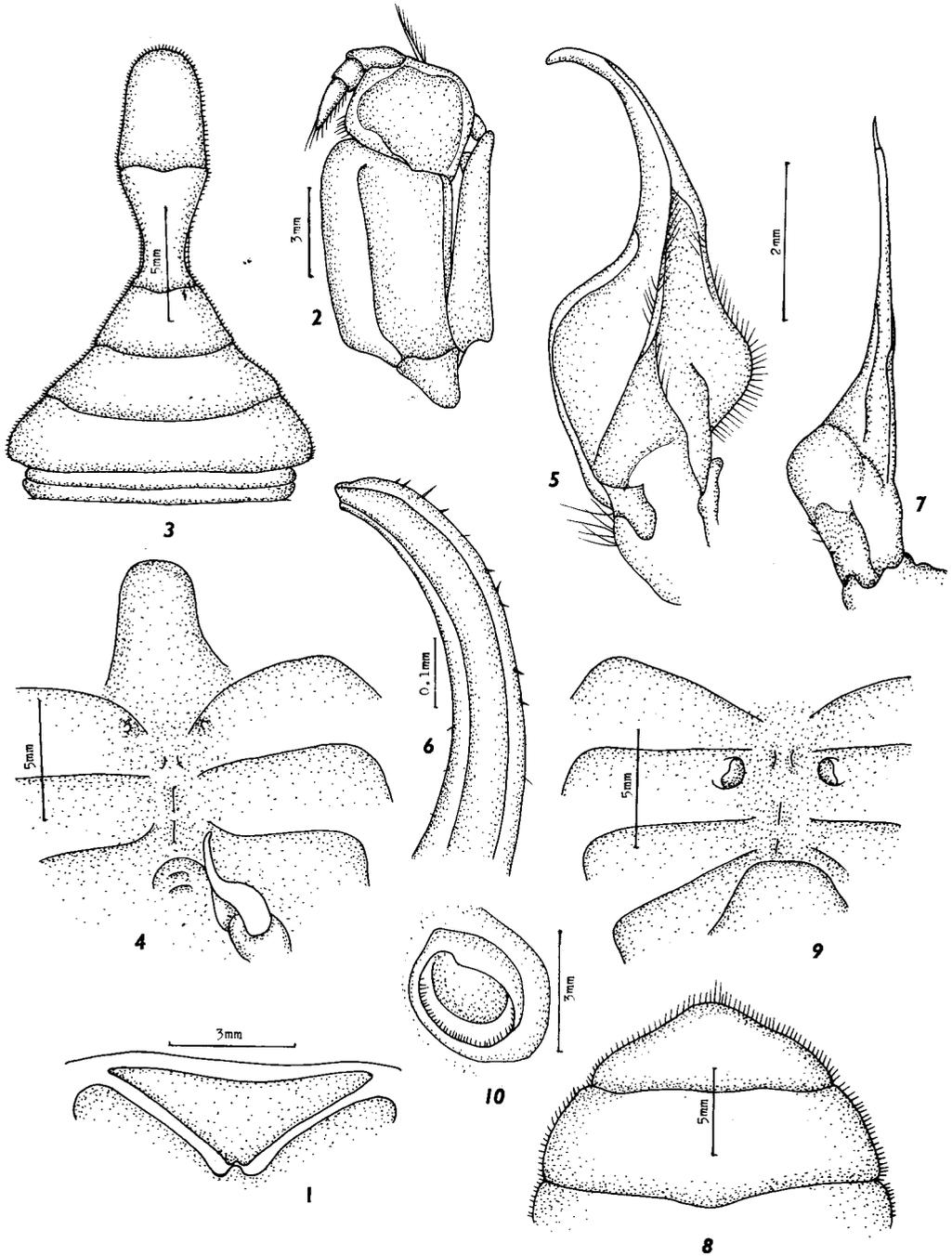


Fig. 2. *Somanniathelphusa guilinesis*, new species. 1-7. holotype male (GX7591125A), carapace length 27.4 mm, breadth 35.2 mm; 8-10. allotype female (GX9091130B), carapace length 26.5 mm, breadth 32.5 mm. 1. subfrontal triangular region, 2. third maxilliped; 3. abdomen; 4. sternum; 5. first male pleopod; 6. distal end of first male pleopod; 7. second male pleopod; 8. female abdomen; 9. sternum; 10. female genital pore.

***Somanniathelphusa yulinensis*, new species**

(Pl. I:3; Fig. 3)

Material examined. - Holotype: 1 male (carapace length 35.6 mm, breadth 45.1 mm) (GX7791124A), Yulin, Guangxi Zhuang Autonomous Region, coll. Aug.1975.

Paratypes - Allotype: female (carapace length 29.8 mm, breadth 36.8 mm) (GX7791124B); paratypes: 4 males (1 juv.), 3 females (2 juv.), Yulin, Guangxi Zhuang Autonomous Region, coll. 14 Oct.1977. — 2 males (1 juv.), 6 females (1 juv.), same data as holotype.

Description. - Carapace convex, more distinctly so on branchial and intestinal regions. Surface pitted, cervical groove with fine rugae. H-shaped groove between gastric and cardiac regions deep. Post-frontal lobe strongly crested, postorbital crest with inner part sharp, outer part blunt. Frontal border sharp, emarginated medially. Exorbital tooth about equal in size to second tooth, slightly bent inwards, third tooth largest, last tooth small, slightly directed obliquely outwards. Postero-lateral border longer than antero-lateral border, covered with oblique crests. Subfrontal triangular regions about 3.7 times as broad as long. Third maxilliped with merus about 1.2 times as broad as long, with ischium about 1.7 times as long as broad, exopod stout, reaching proximal 2/3 of merus, with stout flagellum.

Male chelipeds strongly unequal, merus with acute spine on dorso-distal border; carpus with inner-distal spine straight, directed obliquely inwards, with 4-5 tubercles at base; larger manus about 1.3 times as long as high, fingers slender, movable finger about 1.3 times as long as manus, inner border with blunt rounded teeth, with 2-3 larger teeth, immovable finger with 1 large tooth, with relatively large gap when fingers closed. Ambulatory legs slender, merus with scattered short setae on anterior border, last legs with propodus about 2 times as long as broad, slightly shorter than dactylus.

Male abdomen T-shaped, sixth segment about 1.6 times as long as broad, last segment about 1.2 times as long as broad, slightly shorter or equal in length to sixth segment. Median groove of thoracic sternum deep, fifth sternite with)(-shaped groove, longitudinal groove of sternites 6 and 7 interrupted medially. First male pleopod directed laterally outwards, not hook-like, with spinules (under strong magnification), slightly bilobed distally. Female abdomen large rounded, sixth segment about 3.3 times as broad as long, distal border of last segment produced medially, about 3.3 times as broad as long, shorter than sixth segment. Female genital pore rounded.

Etymology. - The species name is derived from its type locality.

Remarks. - This species is closely related to *S. brevipodum* Dai et al., 1975, but its anterolateral teeth are less acute than those of the latter; the second tooth is distinctly longer than (not equal to the first tooth); the subfrontal triangular region is about 3.2 (not 3.8 times) as broad as long; the male abdomen has the sixth segment about 2.1 (not 1.9) times as long as broad; the first male pleopod is only arched laterally outwards (not hook-like); and the female genital pore is elliptical (not depressed and rounded).

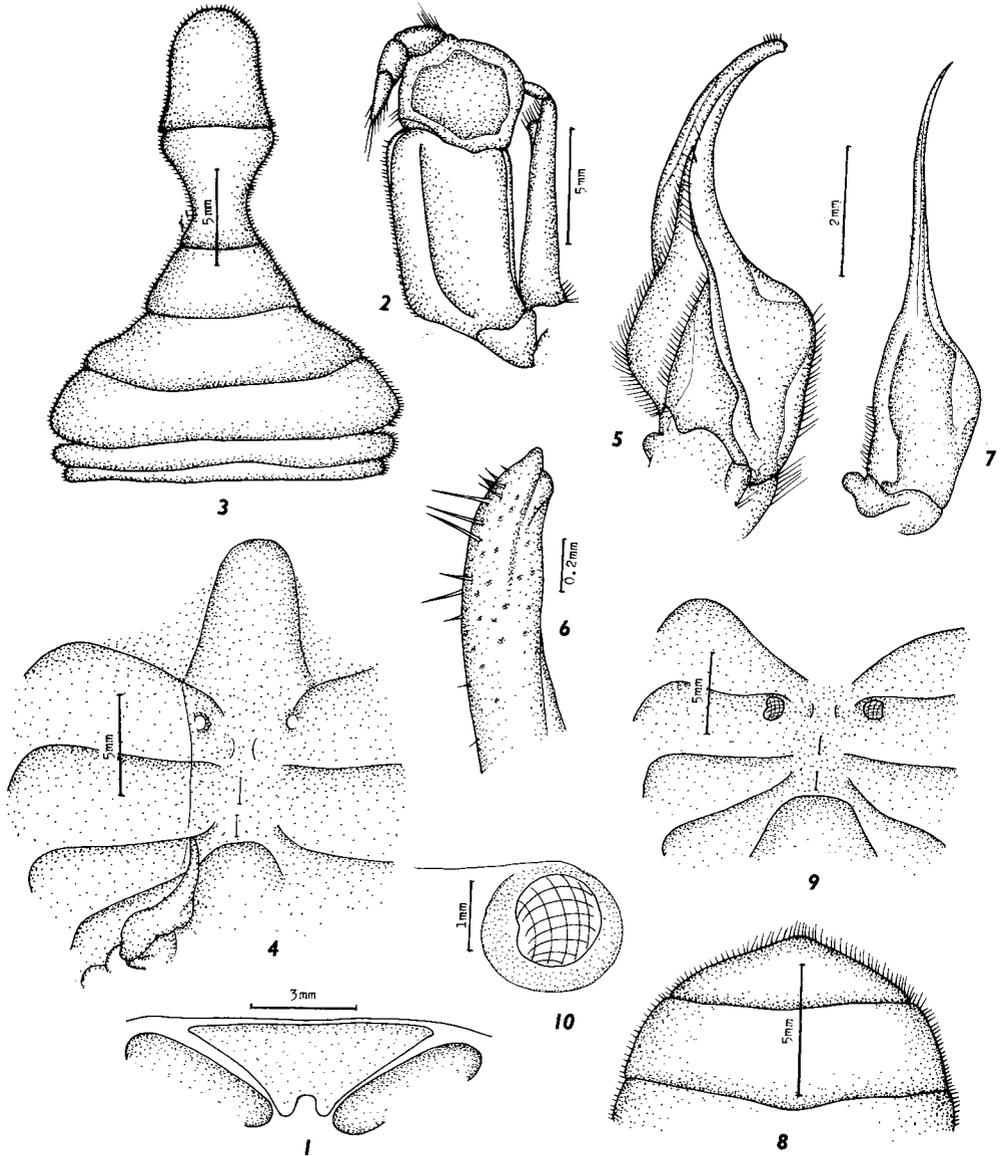


Fig. 3. *Somanniathelphusa yulinensis*, new species. 1-7. holotype male (GX7791124A), carapace length 35.6 mm, breadth 45.1 mm; 8-10. allotype female (GX7781124B), carapace length 29.8 mm, breadth 36.8 mm. 1. subfrontal triangular region, 2. third maxilliped; 3. abdomen; 4. sternum; 5. first male pleopod; 6. distal end of first male pleopod; 7. second male pleopod; 8. female abdomen; 9. sternum; 10. female genital pore.

***Somanniathelphusa longicaudus*, new species**

(Pl. I:4; Fig. 4)

Material examined. - Holotype: 1 male (carapace length 37.5 mm, breadth 47.3 mm) (GX7591135), Nanning, Guangxi Zhuang Autonomous Region, coll. 24 Sep.1975.

Paratypes - 7 females (all juv.), same data as holotype.

Description. - Carapace convex, surface glabrous. Cervical groove deep, distinct. H-shaped groove between gastric and cardiac regions deep. Post-frontal lobe sharp, postorbital crest short. Frontal margin sharp, slightly emarginated medially. Exorbital tooth bent inwards, slightly longer than second tooth, shorter than third tooth, last tooth small. Subfrontal triangular region about 3 times as broad as long. Third maxilliped with merus about 1.1 times as broad as long, ischium about 1.6 times as long as broad, exopod reaching proximal 1/2 of merus, with stout flagellum.

Male chelipeds strongly unequal, carpus with acute spine on inner-distal angle, slightly bent inwards. Larger manus about 1.4 times as long as high, distinctly shorter than movable finger, with big gap between 2 fingers when closed. Ambulatory legs stout, last leg with propodus about 2.2 times as long as broad, shorter than dactylus.

Male abdomen T-shaped, sixth segment about 1.7 times as long as broad, last segment about 1.3 times as long as broad, distinctly longer than sixth segment. Median groove of thoracic sternum deep, fifth sternite with)(-shaped groove, longitudinal groove of sternites 6 and 7 interrupted medially. First male pleopod bent laterally outwards, basal 1/2 swollen, globular, not hooked distally. Second male pleopod with a short distal segment.

Etymology. - The species name is derived from the Latin, alluding to the relatively elongated last male abdominal segment.

Remarks. - This new species is similar to *S. guilinensis*, new species, and *S. yulinensis*, new species, but differs mainly in having the last male abdominal segment distinctly longer than the sixth segment (not shorter or equal in length to sixth segment). It also differs in having the first male pleopod bilobed distally, and the chelipeds being stouter.

***Somanniathelphusa megachelus*, new species**

(Pl. I:5; Fig. 5)

Material examined. - Holotype: 1 male (carapace length 35 mm, breadth 44.2 mm) (GX7591131), Nanning, Guangxi Zhuang Autonomous Region, coll. 1975.

Description. - Carapace slightly convex fore and aft. Surface finely pitted. Cervical groove slightly broad, deep. H-shaped groove between gastric and cardiac regions deep. Post-frontal lobes sharp, prominent. Post-orbital crest blunt and indistinct. Frontal margin sharp, slightly emarginated medially. Exorbital tooth slightly directed inwards, almost equal in size to second tooth, notch between these two teeth broadly rounded, third tooth slightly longer, last tooth small and sharp, directed obliquely outwards. Subfrontal triangular region about 2.1 times as broad as long. Third maxilliped with merus about 1.1 times as broad as long, ischium about 1.8 times as long as broad, exopod stout, reaching proximal 1/2 of merus, with a stout flagellum.

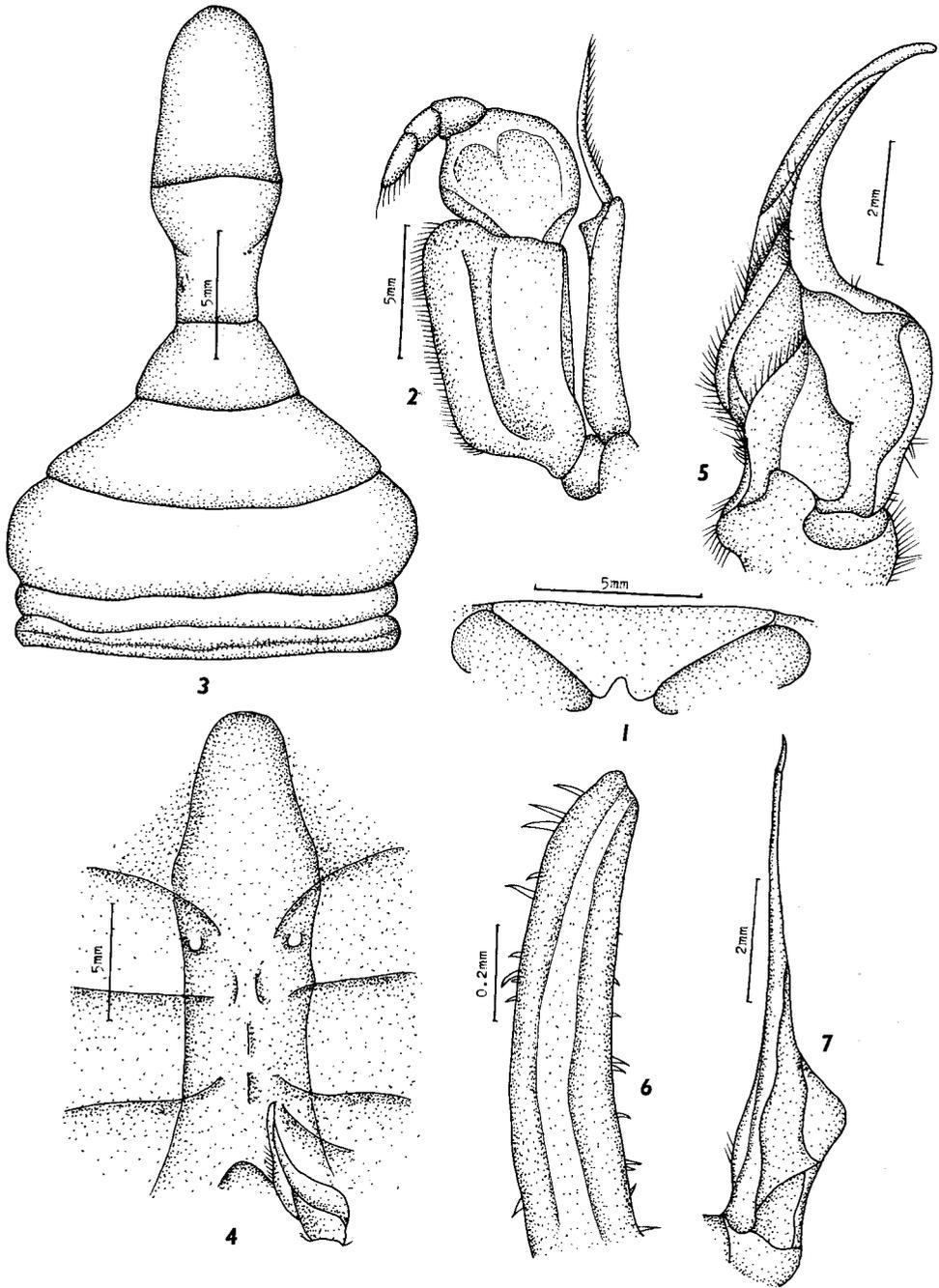


Fig. 4. *Somanniathelphusa longicaudus*, new species. 1-8. holotype male (GX7591135), carapace length 37.5 mm, breadth 47.3 mm. 1. subfrontal triangular region; 2. third maxilliped; 3. abdomen; 4. sternum; 5. first male pleopod; 6. distal end of first male pleopod; 7. second male pleopod.

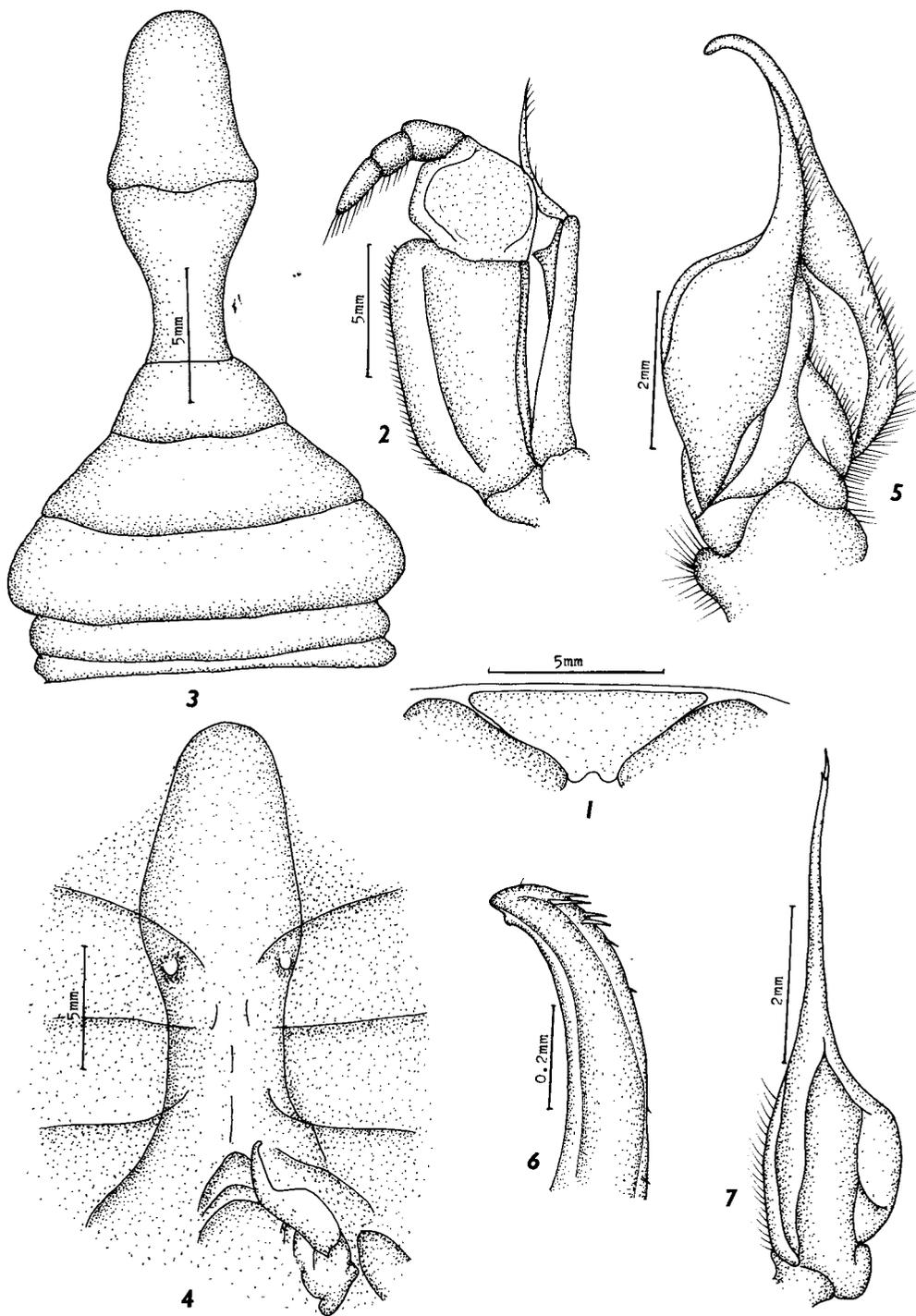


Fig. 5. *Somanniathelphusa megachelus*, new species. 1-7. holotype male (GX7591131), carapace length 35 mm, breadth 44.2 mm. 1. subfrontal triangular region; 2. third maxilliped; 3. abdomen; 4. sternum; 5. first male pleopod; 6. distal pleopod of first male pleopod; 7. second male pleopod.

Male chelipeds strongly unequal, carpus rhomboidal, inner-distal spine slightly directed inwards, with 1-2 granules at base. Larger manus about 1.4 times as long as high, movable finger about 1.1 times as long as manus, 2 fingers bent inwards distally, with big gap between them when closed. Ambulatory legs slender, last leg with propodus about 1.7 times as long as broad, shorter than dactylus.

Male abdomen T-shaped, fifth segment about 2.2 times as broad as long, sixth segment about 1.9 times as long as broad, last segment about 1.2 times as long as broad, almost equal in length to sixth segment. Median groove of thoracic sternum deep, fifth sternite with)(-shaped groove, longitudinal groove of sternites 6 and 7 interrupted medially. First male pleopod with distal 1/2 shorter than basal 1/2, bent laterally outwards, somewhat hook-like. Second male pleopod slender distal half, distal segment short, basal 1/2 swollen.

Etymology. - This species name is derived from the Greek, with reference to its large male chela. Used as a noun in apposition.

Remarks. - This new species has a distinctly larger chela than any other known species in this genus, and is similar to *S. nanningensis*, new species, and *S. longicaudus*, new species. It differs from the former in that the second antero-lateral tooth is equal to (not longer) than the first; the first male pleopod is more or less hook-like distally (not bent laterally outwards). It differs from the latter in that the male abdomen has the last segment equal in length to (not distinctly longer) than the sixth segment, and the first male pleopod has the distal half shorter (not longer) than the basal half.

***Somaniathelphusa araeochelus*, new species**

(Pl. I:6; Fig. 6)

Material examined. - Holotype: 1 male (carapace length 28.8 mm, breadth 36.1 mm) (GX7791132A), Nanning, Guangxi Zhuang Autonomous Region, coll. 24 Sep.1975.

Paratypes - Allotype: female (carapace length 27.9 mm, breadth 35.8 mm) (GX7791132B), 1 male, 1 female (juv.), same data as holotype.

Description. - Carapace convex fore and aft, surface glabrous, finely pitted. Cervical groove narrow and deep. H-shaped groove between gastric and cardiac regions deep. Post-frontal lobe sharp, post-orbital crest short. Frontal border nearly straight, outer orbital slightly bent inwards, almost equal in size to second tooth, third tooth slightly longer, last tooth small, with rounded notch between antero-lateral teeth. Subfrontal triangular region about 3.1 times as broad as long. Third maxilliped with merus about 1.2 times as broad as long, ischium about 1.7 times as long as broad; exopod stout, reaching proximal 1/2 of merus, with stout flagellum.

Male chelipeds unequal, carpus with inner-distal spine slightly bent inwards, 2-3 granules at base; larger manus about 1.4 times as long as high, slightly shorter than movable finger, inner border with blunt teeth, almost no gap when fingers closed. Ambulatory legs relatively slender, last leg with propodus about 1.8 times as long as broad, shorter than dactylus.

Male abdomen T-shaped, fifth segment about 2.1 times as broad as long, sixth segment about 1.6 times as long as broad; last segment about 1.2 times as long as broad, almost equal to sixth segment. Median groove of thoracic sternum deep, sternites 5 with)(-shaped groove;

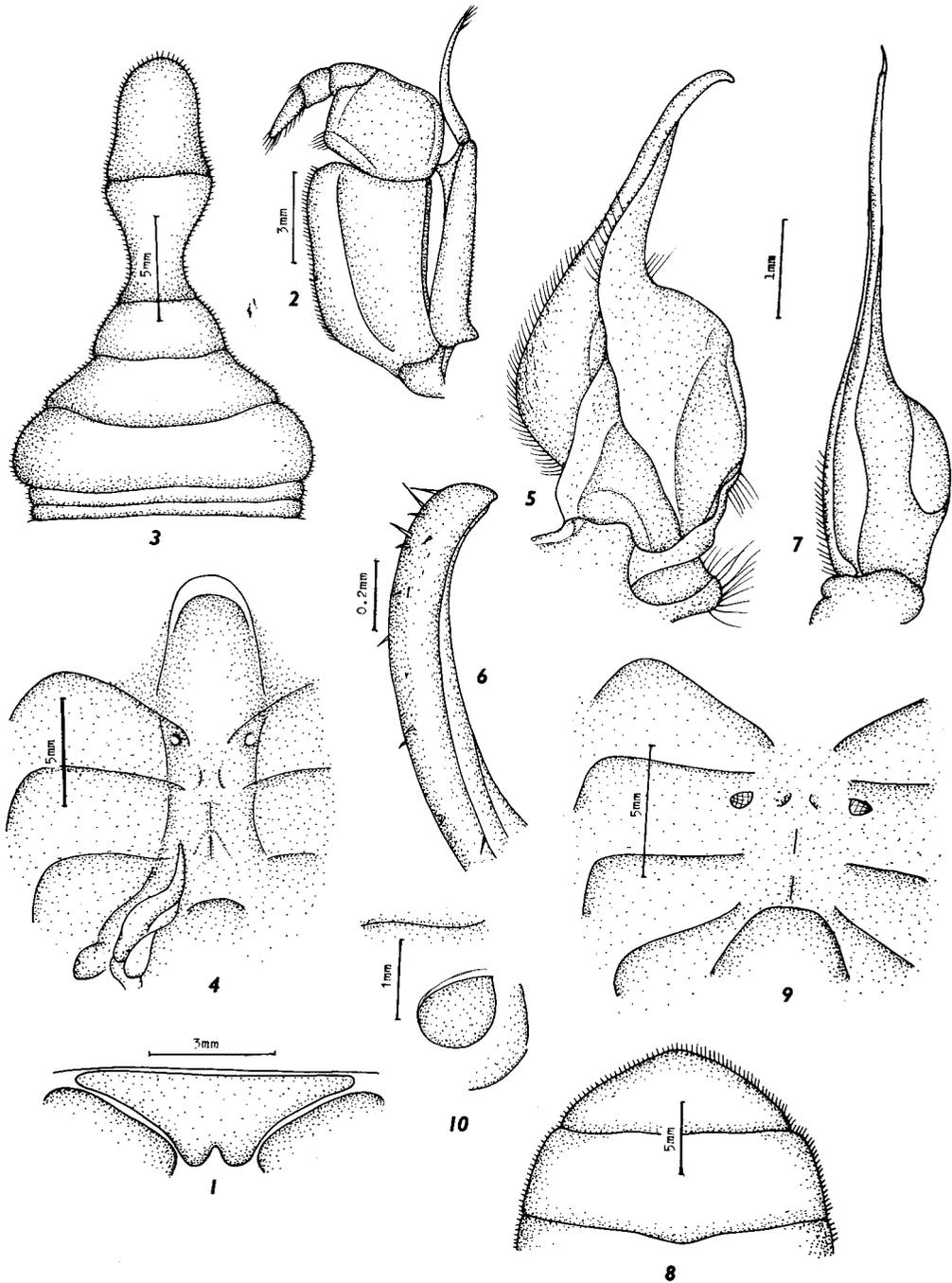
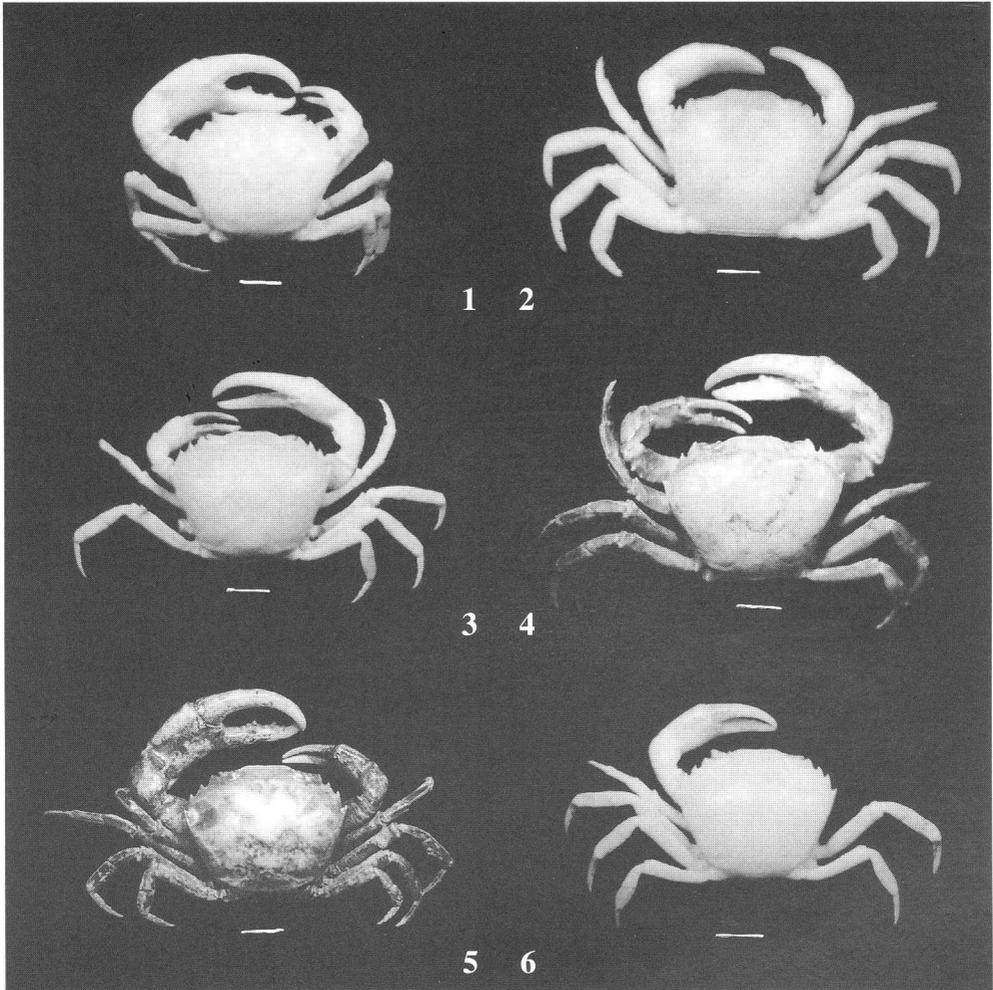


Fig. 6. *Somanniathelphusa araeochelus*, new species. 1-7. holotype male (GX7791132A), carapace length 28.8 mm, breadth 36.1 mm, 8-10. allotype female (GX7791132B), carapace length 27.9 mm, breadth 35.8 mm. 1. subfrontal triangular region; 2. third maxilliped; 3. abdomen; 4. sternum; 5. first male pleopod; 6. distal end of first male pleopod; 7. second male pleopod; 8. female abdomen; 9. sternum; 10. female genital pore.



Pl. I. 1: *Sommaniathelphusa nanningensis*, holotype; 2: *S. guilinensis*, holotype; 3: *S. yulinensis*, holotype; 4: *S. longicaudus*, holotype; 5: *S. megachelus*, holotype; 6: *S. araeochelus*, holotype. The scale presents 10mm

longitudinal groove of sternites 6 and 7 interrupted medially. First male pleopod with distal 1/2 shorter than basal 1/2, bent laterally outwards. Second male pleopod with distal segment short. Female abdomen ovate rounded, with sixth segment about 2.8 times as broad as long; last segment bluntly triangular in shape, about 2.7 times as broad as long, shorter than sixth segment. Female genital pore semicircular in shape, opening inwards and downwards.

Etymology. - This species name is derived from the Greek, with reference to its slender male chela. Used as a noun in apposition.

Remarks. - This species is comparatively close to *S. megachelus*, new species, but larger male chela is slender (not swollen), the subfrontal triangular region is about 3.4 (not 2.7) times as broad as long; the male abdomen has the sixth segment about 1.6 (not 1.9) times as long as broad; and the first male pleopod has the basal half comparatively more swollen, being bent laterally outwards (not hook-like).

***Somanniathelphusa zhapoensis*, new species**

(Pl. II:1; Fig. 7)

Material examined. - Holotype: 1 male (carapace length 31.0 mm, breadth 39.8 mm) (GD8791136A), Zhapo, Guangdong Province, coll. Nov.1987.

Paratypes - Allotype: female (carapace length 22.5 mm, breadth 28.6 mm) (GD871136B), 2 males, same data as holotype.

Description. - Carapace convex, surface glabrous, finely punctated. Cervical groove narrow, deep, H-shaped groove between gastric and cardiac regions deep, distinct. Post-frontal lobe sharp, post-orbital crest short. Frontal margin sharp, distinctly emarginated medially. Exorbital tooth shorter than second tooth, third tooth longer, last tooth small, acute. Subfrontal triangular region about 4.5 times as broad as long. Third maxilliped with merus about 1.3 times as broad as long, ischium about 1.6 times as long as broad, exopod stout, reaching proximal 1/2 of merus, with flagellum.

Male chelipeds unequal, carpus with short spine on inner-distal angle, slightly bent inwards; larger manus about 1.4 times as long as high, slightly short than movable finger, gap between fingers narrow when closed. Ambulatory legs slender, last leg with propodus about 2 times as long as broad, shorter than dactylus.

Male abdomen T-shaped, sixth segment about 1.9 times as long as broad; last segment about 1.2 times as long as broad, shorter than sixth segment. Median groove of thoracic sternum deep, fifth sternite with)(-shaped groove, longitudinal groove of sternites 6 and 7 interrupted medially. First male pleopod with basal 1/2 globular, distal 1/2 slightly bent outwards and ventrally, truncate distally. Second male pleopod slender, last segment short. Female abdomen with sixth segment 2.9 times as broad as long, shorter than sixth segment. Female genital pore elliptical.

Etymology. - This new species name is derived from its type locality.

Remarks. - This species is related to *S. sinensis* H. Milne Edwards, 1853, but differs mainly from the latter in having the antero-lateral teeth distinctly bent inwards; the first tooth being shorter than (not equal to) the second tooth; the subfrontal triangular region is about 4.5 (not 2.9) times as broad as long; and the first male pleopod has the basal part more swollen, with the distal end not hook-like.

***Somanniathelphusa yangshanensis*, new species**

(Pl. II:2; Fig. 8)

Material examined. - Holotype: 1 male (carapace length 31.0 mm, breadth 37.6 mm) (GD8191137A), Jiangying, Yangshan, Guangdong, coll. 10 Sep.1981.

Paratypes - Allotype: female (carapace length 26.8 mm, breadth 33.2 mm) (GD8191137B), 1 male, 1 female, same data as holotype. — 2 males (1 juv.), 2 females (2 juv.), Lechung, coll. 30 Mar.1964.

Description. - Carapace convex fore and aft. Branchial region swollen, surface glabrous, finely pitted. Cervical groove with median portion deeper, H-shaped groove between gastric and cardiac regions deep. Post-frontal lobe sharp, postorbital crest short. Frontal border

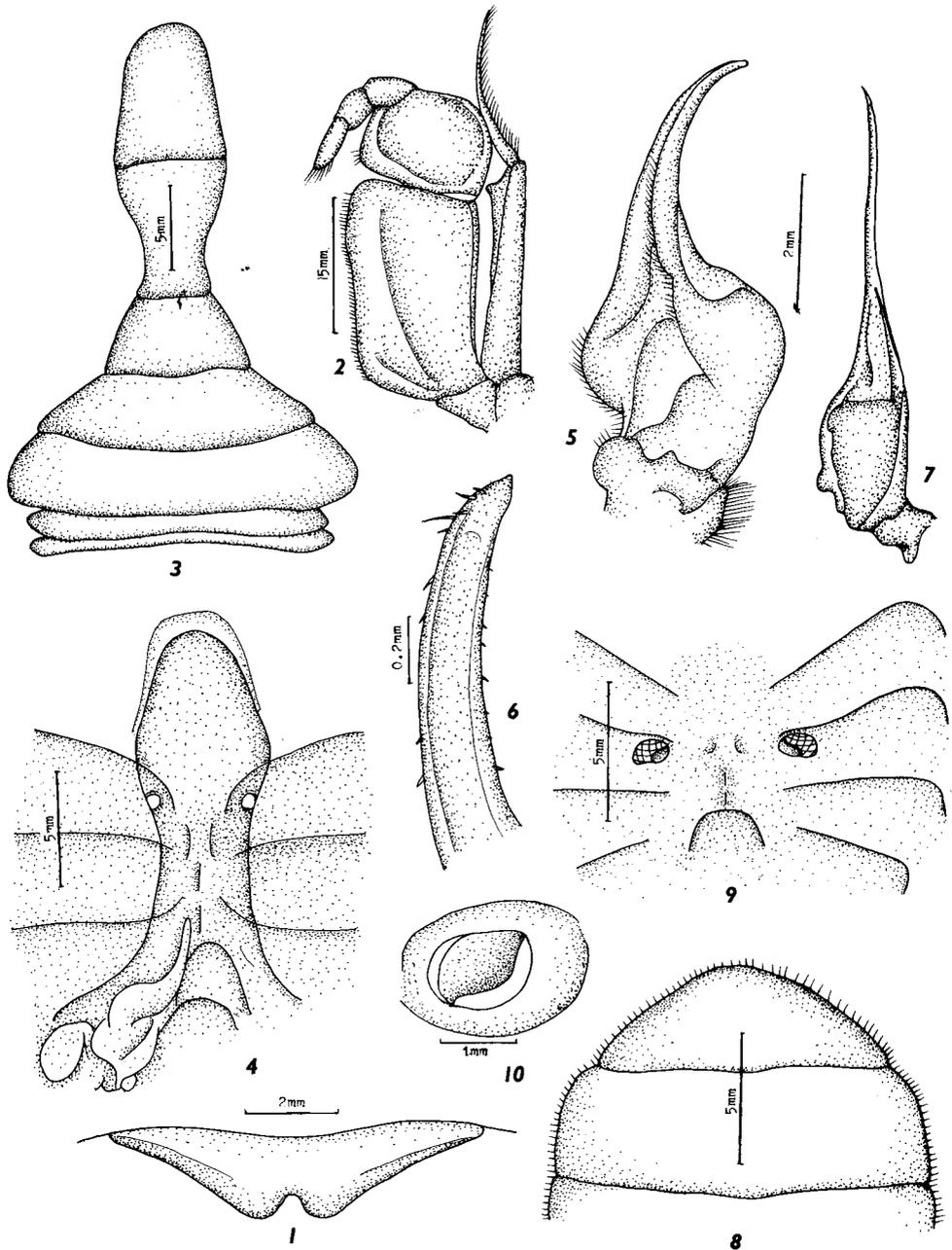


Fig. 7. *Somanniathelphusa zhapoensis*, new species. 1-7. holotype male (GX8791136A), carapace length 31 mm, breadth 39.8 mm, 6-9. allotype female (GX8791136B), carapace length 22.5 mm, breadth 28.6 mm. 1. subfrontal triangular region; 2. third maxilliped; 3. abdomen; 4. sternum; 5. first male pleopod; 6. distal end of first male pleopod; 7. second male pleopod; 8. female abdomen; 9. female genital pore.

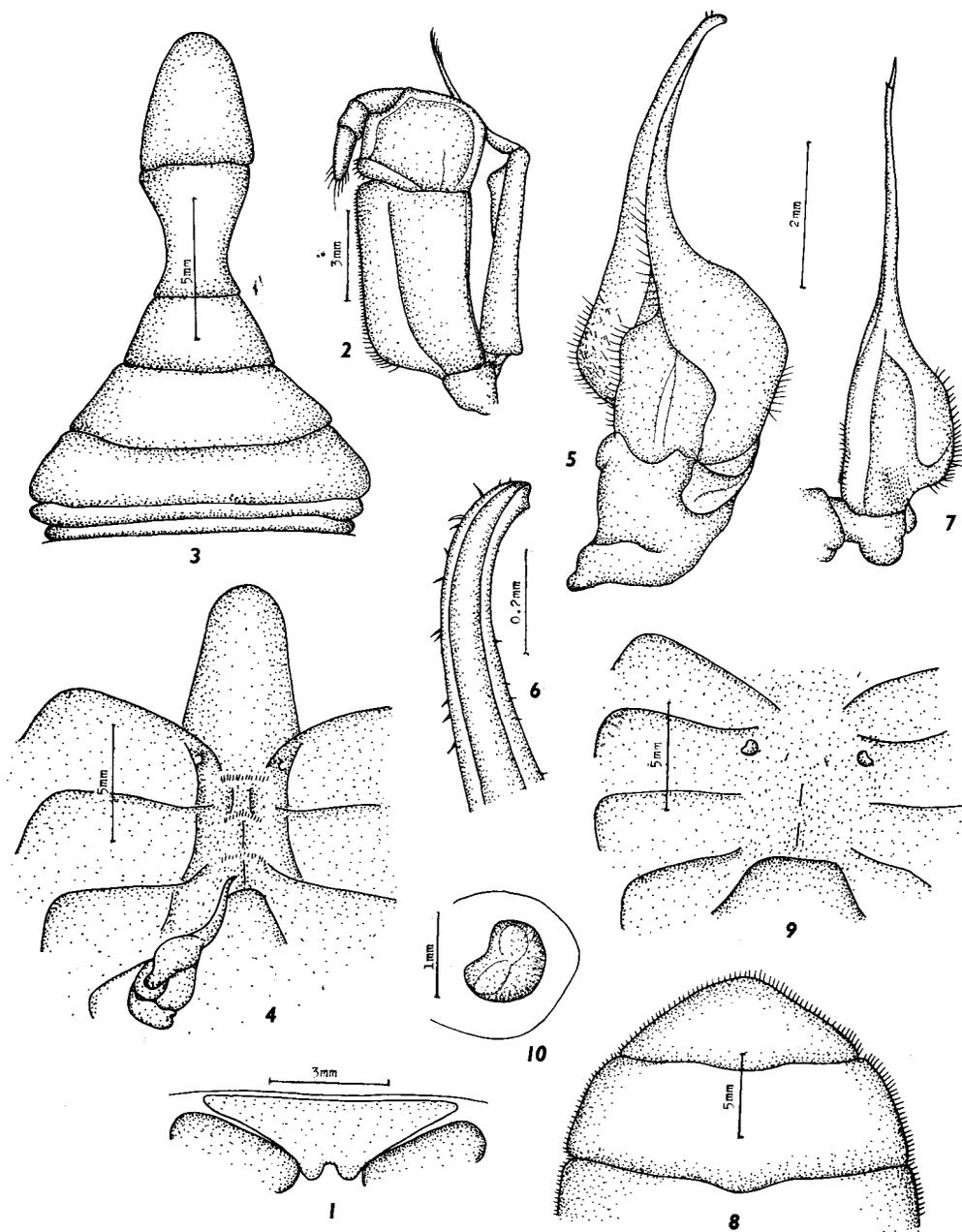


Fig. 8. *Somanniathelphusa yangshanensis*, new species. 1-8. holotype male (GD8191137A), carapace length 51 mm, breadth 37.6 mm, 9-10 allotype female (GD8191137B), carapace length 26.8 mm, breadth 33.2 mm. 1. subfrontal triangular region; 2. third maxilliped; 3. abdomen; 4. sternum; 5. first male pleopod; 6. distal end of first male pleopod; 7. second male pleopod; 8. female abdomen; 9. sternum; 10. female genital pore.

sharp, slightly emarginated medianly. Exorbital tooth moderately sized, curving inwards, with rounded notch between first and second teeth, almost equal sized with third tooth, last tooth small, directed anteriorly. Subfrontal triangular region about 3 times as broad as long. Third maxilliped with merus about 1.2 times as broad as long, ischium about 1.7 times as long as broad, exopod stout, with stout flagellum.

Male chelipeds strongly unequal; carpus nearly rhomboidal, inner-distal angle with acute spine, slightly bent inwards, with 2-3 granular teeth at base; larger manus about 1.3 times as long as high, slightly shorter than movable finger, gap narrow when fingers closed. Ambulatory legs slender, glabrous.

Male abdomen T-shaped, fifth segment about 2 times as broad as long, sixth segment about 1.6 times as long as broad; last segment about 1.2 times as long as broad, almost equal in length to sixth segment. Median groove of thoracic sternum deep, fifth sternite with)(-shaped groove, longitudinal groove of sternites 6 and 7 interrupted medially. First male pleopod with distal 1/2 distinctly longer than basal 1/2, bent laterally outwards, distal end truncate, slightly emarginated medially. Second male pleopod with distal segment reduced. Female abdomen with sixth segment about 2.8 times as broad as long, last segment about 2.4 times, slightly shorter than sixth segment. Female genital pore pea-like.

Etymology. - This name of the new species is derived from its type locality.

Remarks. - This species is related to *S. sinensis* H. Milne Edwards, 1853, but the notch between its first two teeth are more broadly rounded, and the second and third teeth are sharp and bent inwards. The subfrontal triangular region is also about 3 (not 3.5) times as broad as long; the male fifth abdominal segment is about 2 (not 1.6) times as broad as long; and the first male pleopod is more bent inwards. The last segment of the female abdomen is also more angular rather than semicircular.

***Somanniathelphusa zhangpuensis*, new species**

(Pl. II:3; Fig. 9)

Material examined. - Holotype: 1 male (carapace length 29.0 mm, breadth 36.2 mm) (FJ7791138A), Zhangpu, Fujian Province, coll. May. 1977.

Paratypes - Allotype: female (carapace length 18.4 mm, breadth 22.9 mm) (FJ7791139B), 7 males, 4 females, same data as holotype.

Description. - Carapace convex fore and aft. Branchial region slightly swollen. Surface glabrous finely pitted. Cervical groove deep, H-shaped groove between gastric and cardiac regions narrow, deep. Post-frontal lobe sharp, postorbital crest reaching dorso-orbital depression. Exorbital teeth bent inwards, almost equal in size to second teeth, third tooth longer, last tooth small and acute, directed obliquely outwards, notch between teeth comparatively broadly rounded. Subfrontal triangular region about 3 times as broad as long. Third maxillipeds with merus about 1.2 times as broad as long, ischium about 1.4 times as long as broad, exopod stout, reaching proximal 1/2 of merus, with stout flagellum.

Male chelipeds strongly unequal, carpus rhomboidal, inner-distal angle with a straight spine, directed inwards and upwards, with 4-5 granules at base; larger chela swollen, with manus about 1.2 times as long as high, shorter than movable finger, inner border of 2 fingers

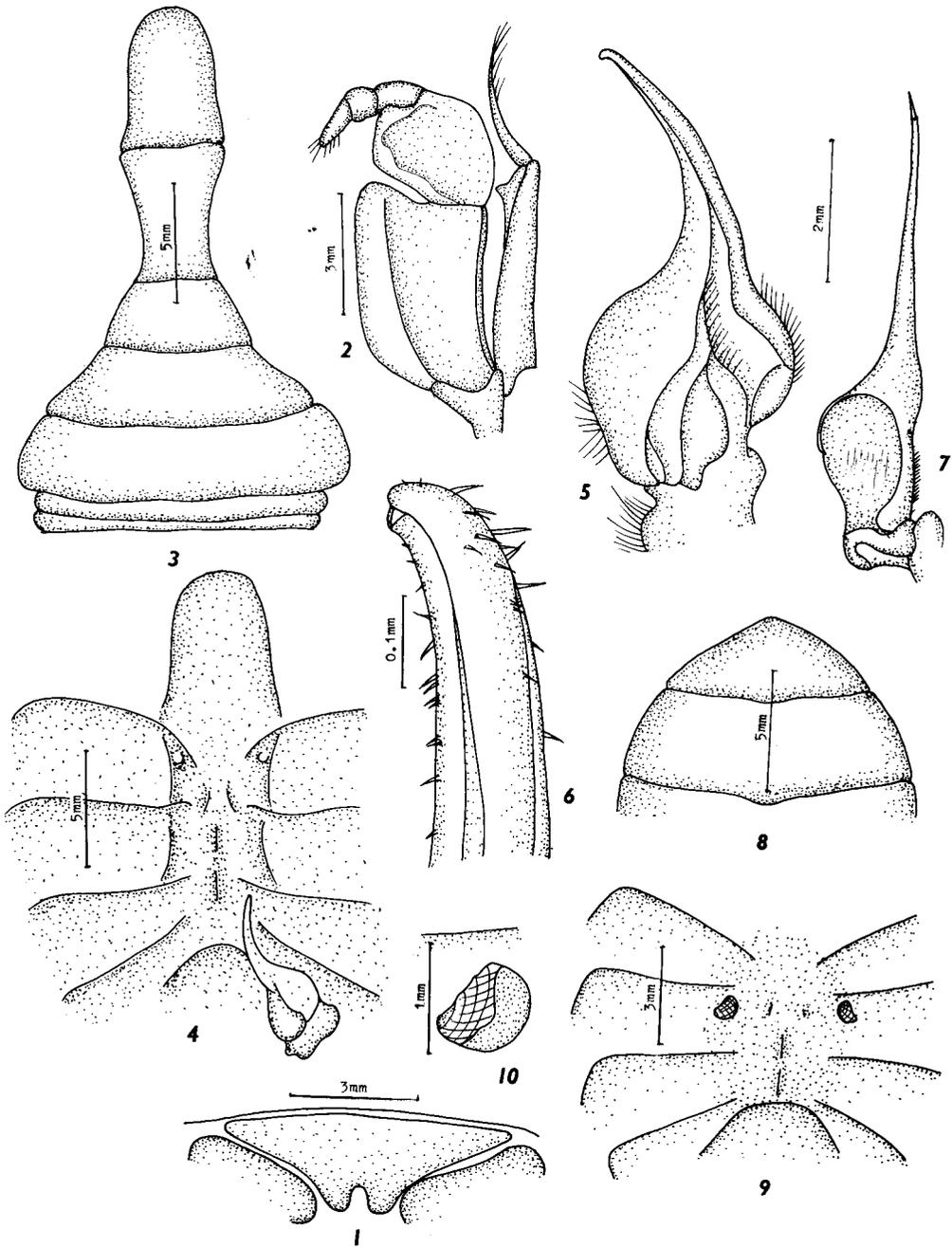


Fig. 9. *Somanniathelphusa zhangpuensis*, new species. 1-7. holotype male (FJ7791138A), carapace length 29 mm, 36.2 mm; 8-10. allotype female (FJ7791138B), carapace length 18.4 mm, breadth 22.8 mm. 1. subfrontal triangular region; 2. third maxilliped; 3. third maxilliped; 4. sternum; 5. first male pleopod; 6. distal end of first male pleopod; 7. second male pleopod; 8. female abdomen; 9. sternum; 10. female genital pore.

with bluntly rounded teeth, with broad gap between them when closed. Ambulatory legs glabrous, last leg with propodus about 1.9 times as long as broad, shorter than dactylus.

Male abdomen T-shaped, fifth segment about 1.9 times as broad as long, sixth segment about 1.6 times as long as broad, last segment about 1.3 times as long as broad, slightly shorter than sixth segment. Median groove of thoracic sternum deep, fifth sternite with H-shaped groove, longitudinal groove of sternites 6 and 7 interrupted medially. First male pleopod with distal 1/2 equal in length to basal 1/2, arched laterally outwards. Female abdomen with sixth segment about 2.2 times as broad as long, last segment about 2.4 times as broad as long, shorter than sixth segment. Female genital pore rounded.

Etymology. - The species name is derived from its type locality.

Remarks. - This species is related to *S. sinensis* H. Milne Edwards, 1853, but the notches between the antero-lateral teeth are deeper; the post-orbital crest reaches to the orbits; the male abdomen is comparatively narrower, with the last segment longer than (not equal) to sixth segment; and the first male pleopod is arched more strongly laterally outwards.

***Somanniathelphusa huaanensis*, new species**

(Pl. II:4; Fig. 10)

Material examined. - Holotype: 1 male (carapace length 24.5 mm, breadth 29.1 mm) (FJ7791139A), Huaan, Fujian Province, coll. Apr. 1977.

Paratypes - Allotype: female (carapace length 21.2 mm, breadth 25.2 mm) (FJ7781139B), 9 males (5 juvs.), 2 females (both juv.), same data as holotype.

Description. - Carapace convex fore and aft. Surface glabrous, finely pitted. Cervical groove deep. H-shaped groove between gastric and cardiac regions narrow, deep. Post-frontal lobe sharp, postorbital crest short. Frontal border emarginated medially. Exorbital tooth curving inwards, equal in size to second tooth, third tooth longer, last tooth small, directed obliquely outwards, notch between them shallow. Subfrontal triangular region about 3.4 times as broad as long. Third maxilliped with merus about 1.1 times as broad as long, ischium about 1.5 times as long as broad, exopod stout, reaching proximal 1/2 of merus, with stout flagellum.

Male chelipeds strongly unequal, carpus rhomboidal, inner-distal angle with acute spine, with few granules at base; large chela not very swollen, with manus about 1.4 times as long as high, movable finger about 1.1 times as long as manus, gap narrow when fingers closed. Ambulatory legs slender, glabrous, last leg with propodus about 1.8 times as long as broad, shorter than dactylus.

Male abdomen T-shaped, with fifth segment about 1.6 times as broad as long, sixth segment about 1.6 times as long as broad, last segment about 1.5 times as long as broad, slightly longer than sixth segment. Median groove of thoracic sternum deep, fifth sternite with H-shaped groove, longitudinal groove of sternites 6 and 7 interrupted medially. First male pleopod with distal 1/2 bent laterally outwards, distinctly longer than basal 1/2, distal end truncate, inner margin with fine spinules. Female abdomen ovate with sixth segment about 2.8 times as broad as long, last segment nearly triangular in shaped, about 2.2 times as broad as long, slightly short than sixth segment. Female genital pore pea-shaped.

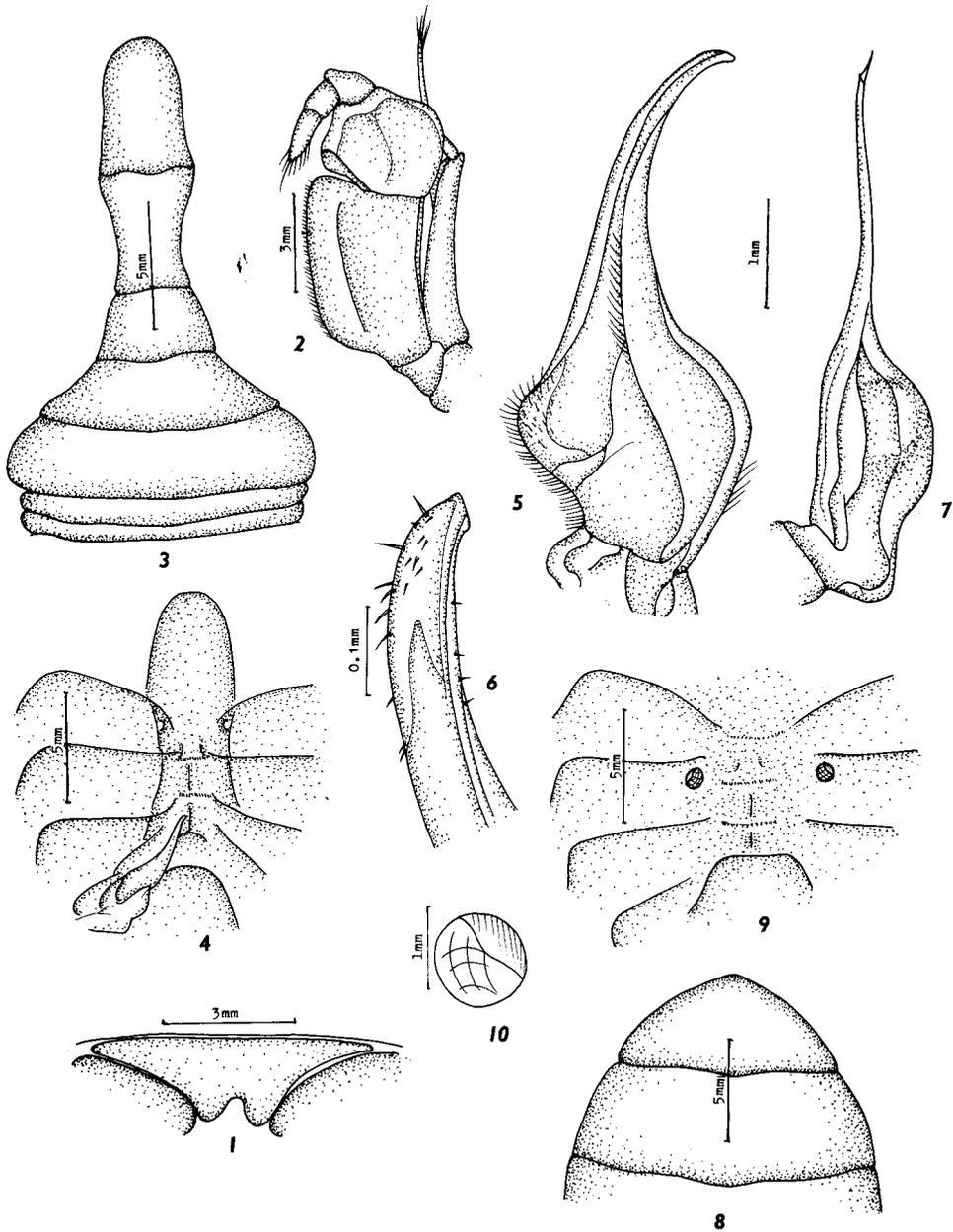


Fig. 10. *Somanniathelphusa huaanensis*, new species. 1-7. holotype male (FJ7791139A), carapace length 24.5 mm, breadth 29.1 mm. 8-10. allotype female (FJ7791139B), carapace length 21.2 mm, breadth 25.2 mm. 1. subfrontal triangular region; 2. third maxilliped; 3. abdomen; 4. sternum; 5. first male pleopod; 6. distal end of first male pleopod; 7. second male pleopod; 8. female abdomen; 9. sternum; 10. female genital pore.

Etymology. - The species name is derived from its type locality.

Remarks. - This species is closest to *S. taiwanensis* Bott, 1968, but its antero-lateral teeth are not as strongly bent inwards, the second tooth being equal in size (not longer) than the first tooth. The last segment of the male abdomen is about 1.5 (not 1.1) times as long as broad, and is longer (not shorter) than the sixth segment. The first male pleopod also has the distal half distinctly longer (not shorter) than the basal half.

***Somanniathelphusa amoyensis*, new species**

(Pl. II:5; Fig. 11)

Material examined. - Holotype: 1 male (carapace length 29.7 mm, breadth 38.1 mm) (FJ3091140A), Amoy, Fujian, coll. 1930.

Paratypes - Allotype: female (carapace length 26.1 mm, breadth 34.2 mm) (FJ3091140B), 3 males, 1 female, same data as holotype.

Description. - Carapace convex fore and aft. Surface glabrous, finely pitted. Post-frontal lobe sharp, postorbital crest bluntly rounded. Frontal border almost straight. Exorbital tooth bent inwards, equal to second tooth, notch between them broadly rounded. Frontal border almost straight, third tooth slightly longer, last tooth small, acute, directed obliquely outwards. Subfrontal triangular region about 2.8 times as broad as long. Third maxilliped with merus about 2.8 times as broad as long, ischium about 1.5 times as long as broad, exopod stout, reaching proximal 1/2 of merus, with stout flagellum.

Male chelipeds distinctly unequal, carpus rhomboidal, inner-distal angle with acute spine, with 4-5 granules at base; larger chela slender, with manus about 1.4 times as long as high, slightly shorter than movable finger, inner border with triangular blunt teeth, gap narrow when fingers closed. Ambulatory legs slender, glabrous.

Male abdomen T-shaped, fifth segment about 1.4 times as broad as long, sixth segment about 1.6 times as long as broad, last segment about 1.2 times as broad, shorter than sixth segment. Median groove of thoracic sternum deep, fifth sternite)(-shaped groove, longitudinal groove of sternites 6 and 7 interrupted. First male pleopod with distal 1/2 equal in length to basal 1/2 distinctly, bent laterally outwards, distal end truncate, outer margin with fine, longer spinules. Second male pleopod slender, last segment short. Female abdomen ovate, sixth segment about 2.9 times as broad as long; last segment about 2.9 times as broad as long, distinctly shorter than sixth segment. Female genital pore nearly rounded.

Etymology. - The species name is derived from its type locality.

Remarks. - This species is closely related to *S. huananensis*, new species, but its antero-lateral teeth are comparatively larger, the notch between them comparatively deeper; the subfrontal triangular region is about 2.8 (not 3.4) times as broad as long; the last segment of the male abdomen is about 1.2 (not 1.5) times as broad as long and shorter (not longer) than the sixth segment. The first male pleopod also has the distal half almost equal to (not longer) than the basal half.

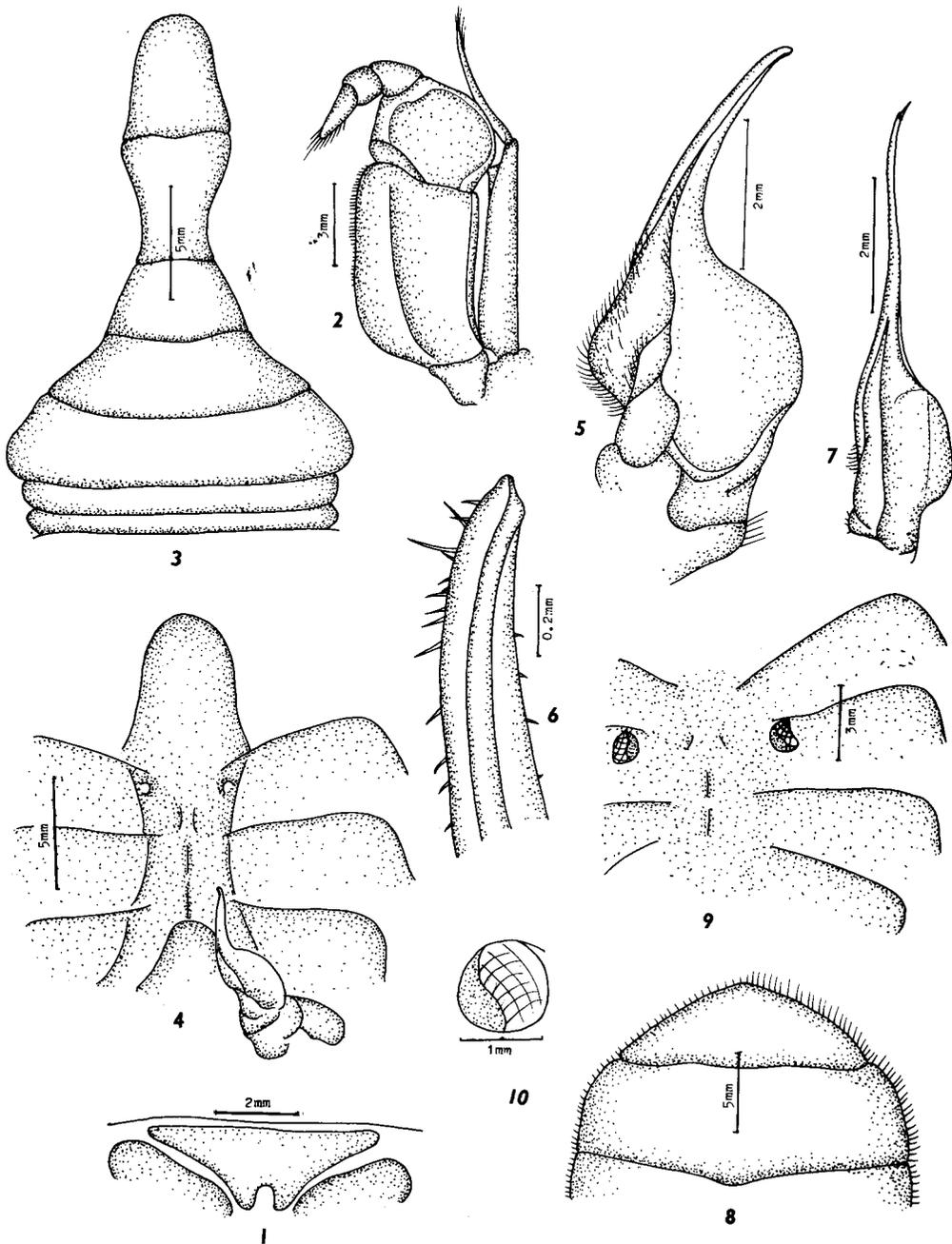
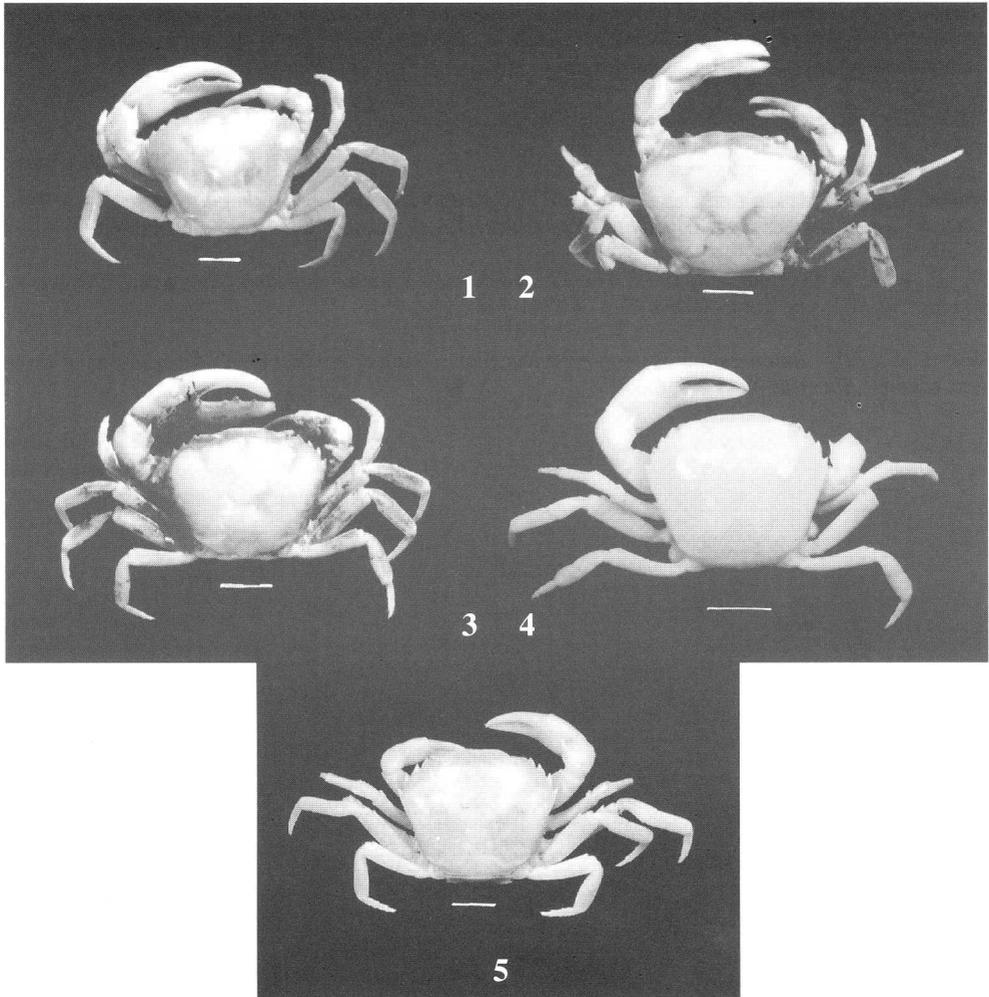


Fig. 11. *Somanniathelphusa amoyensis*, new species. 1-7. holotype male (FJ3091140A), carapace length 29.7 mm, breadth 38.1 mm; 8-10. allotype female (FJ3091140B), carapace length 26.1 mm, breadth 34.2 mm. 1. subfrontal triangular region; 2. third maxilliped; 3. abdomen; 4. sternum; 5 first male pleopod; 6. distal end of first male pleopod; 7. second male pleopod; 8. female abdomen; 9. sternum; 10. female genital pore.



Pl. II. 1: *Somanniathelphusa zhapoensis*, holotype; 2: *S. yangshanensis*, holotype; 3: *S. zhangpuensis*, holotype; 4: *S. huaanensis*, holotype; 5: *S. amoyensis*, holotype. The scale presents 10mm

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