

ON SEVEN NEW SPECIES OF FRESHWATER CRABS
OF THE GENUS *HUANANPOTAMON* DAI & NG, 1994
(CRUSTACEA: DECAPODA: BRACHYURA: POTAMIDAE)
FROM JIANGXI PROVINCE, SOUTHERN CHINA

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ABSTRACT. - Seven new species of freshwater crabs of the genus *Huananpotamon* Dai & Ng, 1994, from Jiangxi Province in southern China are described: *H. yiyangense*, *H. guixiense*, *H. lichuanense*, *H. nanchengense*, *H. chongrenense*, *H. medium* and *H. ruijinense*. These potamid crabs are differentiated primarily on the basis of their different first male pleopods.

INTRODUCTION

The genus *Nanhaipotamon* Bott, 1968 (Potamidae) has been treated and revised several times in recent years (Dai et al., 1979; Dai & Chen, 1987a, b; Ng & Dudgeon, 1992; Ng & Takeda, 1992; Ng & Shokita, 1995). Most recently, Dai & Ng (1994) established a new genus for the southern Chinese species previously referred to *Nanhaipotamon*. In this paper, seven new species of *Huananpotamon* are described from the Wuyi montane area east of Jiangxi, in Jiangxi Province, southern China. The descriptions of these new species form the text of the present paper. All types are deposited in the Institute of Zoology, Academia Sinica in Beijing.

TAXONOMY

POTAMIDAE

Huananpotamon Dai & Ng, 1994

Huananpotamon yiyangense, new species

(Pl. 1:A; Fig. 1)

Material examined. - Holotype - male, carapace length 15.6 mm, breadth 18.6 mm (JX 9191098A), Yiyang (28.4°N, 117.4°E), Jiangxi Province, coll. 25 Nov. 1991.

Paratypes - Allotype - female, carapace length 18.2 mm, breadth 22.9 mm (JX 9191098B); 1 male, 1 female, same data as holotype.

Description. - Carapace convex fore and aft. Dorsal surface covered with fine pits, epibranchial region finely rugose. Cervical groove shallow, inconspicuous; H-shaped groove between gastric and cardiac regions narrow and deep. Postfrontal lobe prominent, blunt. Postorbital crest convex, postorbital region concave. Front deflexed, slightly sinuous medially. Exorbital angle acutely sharp, epibranchial tooth very prominent, anterolateral border crested, with 22-24 granular teeth. Merus of third maxilliped about as broad as long, ischium about 1.5 times as long as broad, exopod stout, reaching proximal one-third of merus, with slender flagellum.

Chelipeds unequal; merus with dorso-outer surface finely rugose, slightly depressed medio-dorsally, with short inner-distal spine and spinule at base; larger chela with manus about 1.2 times as long as high, slightly longer than dactylus, almost no gap between closed fingers. Ambulatory legs slender, covered with scattered short setae, last leg with propodus about 1.8 times as long as broad, shorter than dactylus.

Male abdomen triangular, sixth segment about 2 times as broad as long, telson triangular, about 1.4 times as broad as long. Median groove of thoracic sternum moderately deep, interrupted between sutures of sternites 4/5, 5/6, 6/7, median line of sternites 7 and 8 moderately long.

First pleopod reaching beyond abdominal lock tubercle, to suture between sternites 4/5, subdistal segment about 1.5 times as long as distal segment, with inner-distal angle prominently subrounded to squarish, outer-distal angle elongated, directed upwards; S-shaped in lateral view, inner-distal angle invisible, suture marking sperm channel on median side of both segments, distal pore terminal. Second pleopod with subdistal segment about 1.4 times as long as distal segment.

Female abdomen ovate, sixth segment about 2.8 times as broad as long, telson with distal margin about 2 times as broad as long, slightly shorter than sixth segment. Interrupted between sutures of sternites 4/5, 5/6, 6/7, genital pore elliptical in shape.

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

Remarks. - *Huananpotamon yiyangense*, new species, is closely related to *H. angulatum* (Dai et al., 1979), but the male abdomen is comparatively broader; the first male pleopod has the inner-distal angle rounded to squarish and the outer-distal angle is somewhat narrow and directed upwards (vs. male abdomen comparatively narrow and elongated, first pleopod has the inner-distal angle more prominently rounded and the outer-distal angle is slightly broader and directed upwards and outwards).

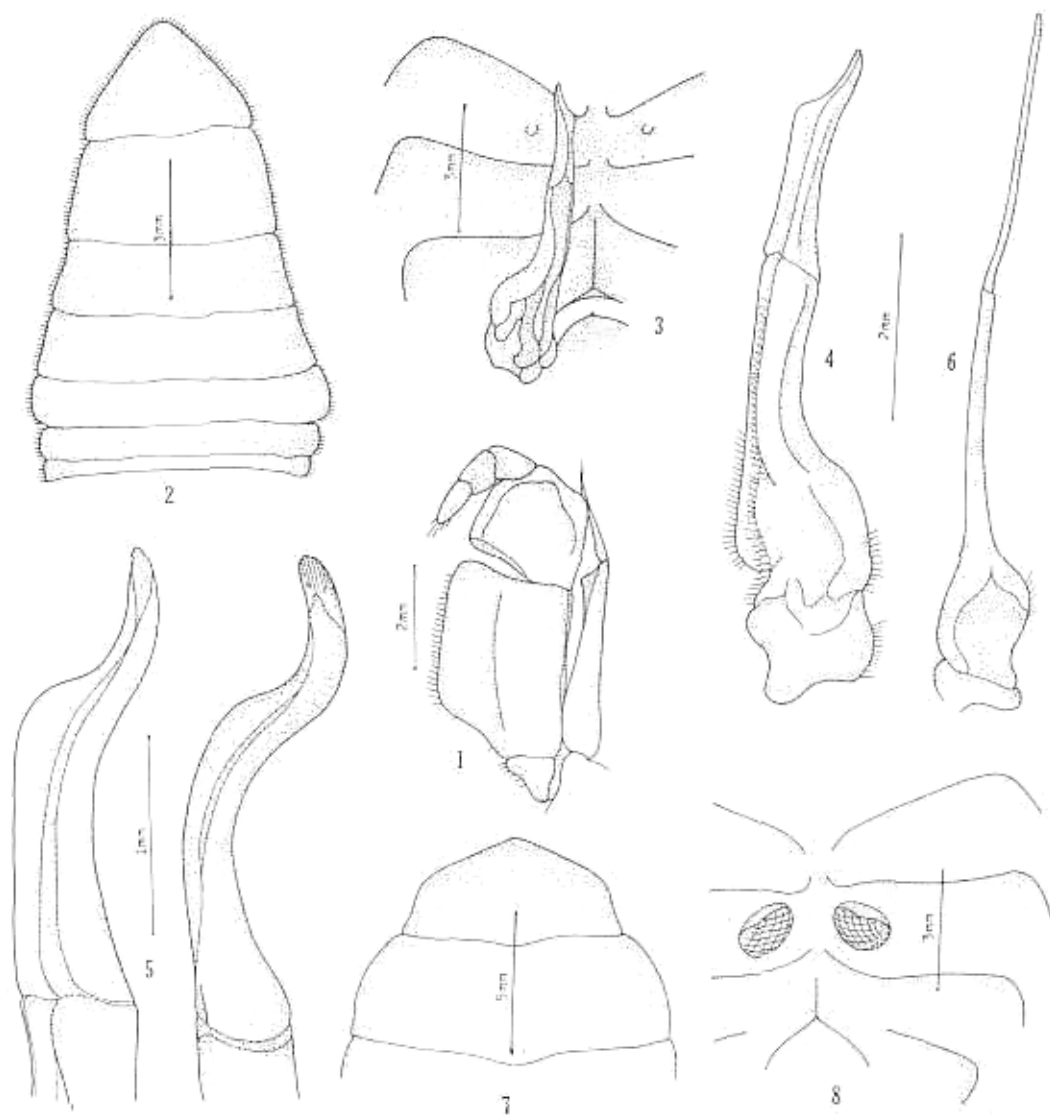


Fig. 1. *Huananpotamon yiyangense*, new species. 1-6, holotype male, carapace length 15.6 mm, breadth 18.6 mm (JX 9191098A); 7, 8, allotype female, carapace length 18.2 mm, breadth 22.9 mm (JX 9191098B). 1, third maxilliped; 2, abdomen; 3, first pleopod in situ; 4, first pleopod; 5, ventral and lateral view of last segment of first pleopod; 6, second pleopod; 7, female abdomen; 8, genital pore.

Huananpotamon guixiense, new species

(Pl. 1:B; Fig. 2)

Material examined. - Holotype - male, carapace length 18.4 mm, breadth 23.0 mm (JX 891099), Guixi (28.3°N, 117.2°E), Jiangxi Province, coll. Oct.1989.

Paratype - 1 male, same data as holotype.

Description. - Carapace slightly convex fore and aft. Postero-gastric region slightly depressed; dorsal surface finely pitted; epibranchial region covered with fine rugae. Cervical groove slightly broad, shallow; H-shaped groove between gastric and cardiac regions narrow, deep. Postfrontal lobes prominent. Postorbital crest convex. Postorbital region smooth, concave. Front deflexed, anterior border sinous, dorsal orbital border ridged, exorbital angle sharp, outer border smooth. Epibranchial teeth prominent, anterolateral border with 17-18 granular teeth. Merus of third maxilliped about 1.1 times as broad as long, ischium about 1.6 times as long as broad, exopod reaching one-third of merus, with short flagellum.

Chelipeds unequal, merus with dorso-outer surface granulated. Carpus covered with fine rugae dorsally, with inner distal acute spine and small spine at base; larger chela with manus about 1.3 times as long as high, slightly longer than movable finger; inner border of fingers with blunt rounded teeth, almost no gap between them when closed. Ambulatory legs slender, covered with short setae, with propodus about 2 times as long as broad, slightly shorter than dactylus.

Male abdomen triangular, sixth segment about 2.2 times as broad as long, telson about 1.3 times as broad as long. Median groove of thoracic sternum comparatively shallow, interrupted between sutures of sternites 4/5, 5/6, 6/7, median suture of sternites 7 and 8 moderately long.

First male pleopod reaching beyond abdominal lock tubercle, subdistal segment about 1.7 times as long as distal segment, distal segment slender, inner-distal angle slightly convex, distal portion tapering, wave-like in lateral view, suture marking sperm channel on median side, distal pore terminal. Second pleopod distinctly longer than first pleopod, subdistal segment about 1.3 times as long as distal segment.

Females not known.

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

Remarks. - *Huananpotamon guixiense*, new species, has the most slender first male pleopod in the genus, with the tip reaching the tubercle of the abdominal lock but not to the suture between sternites 4 and 5. It seems to be closest to *H. yiyangense*, new species, but the first male pleopod has the inner-distal angle shoulder-shaped (not rounded to squarish), and the outer-distal angle is directed upwards and outwards (not directed upwards).

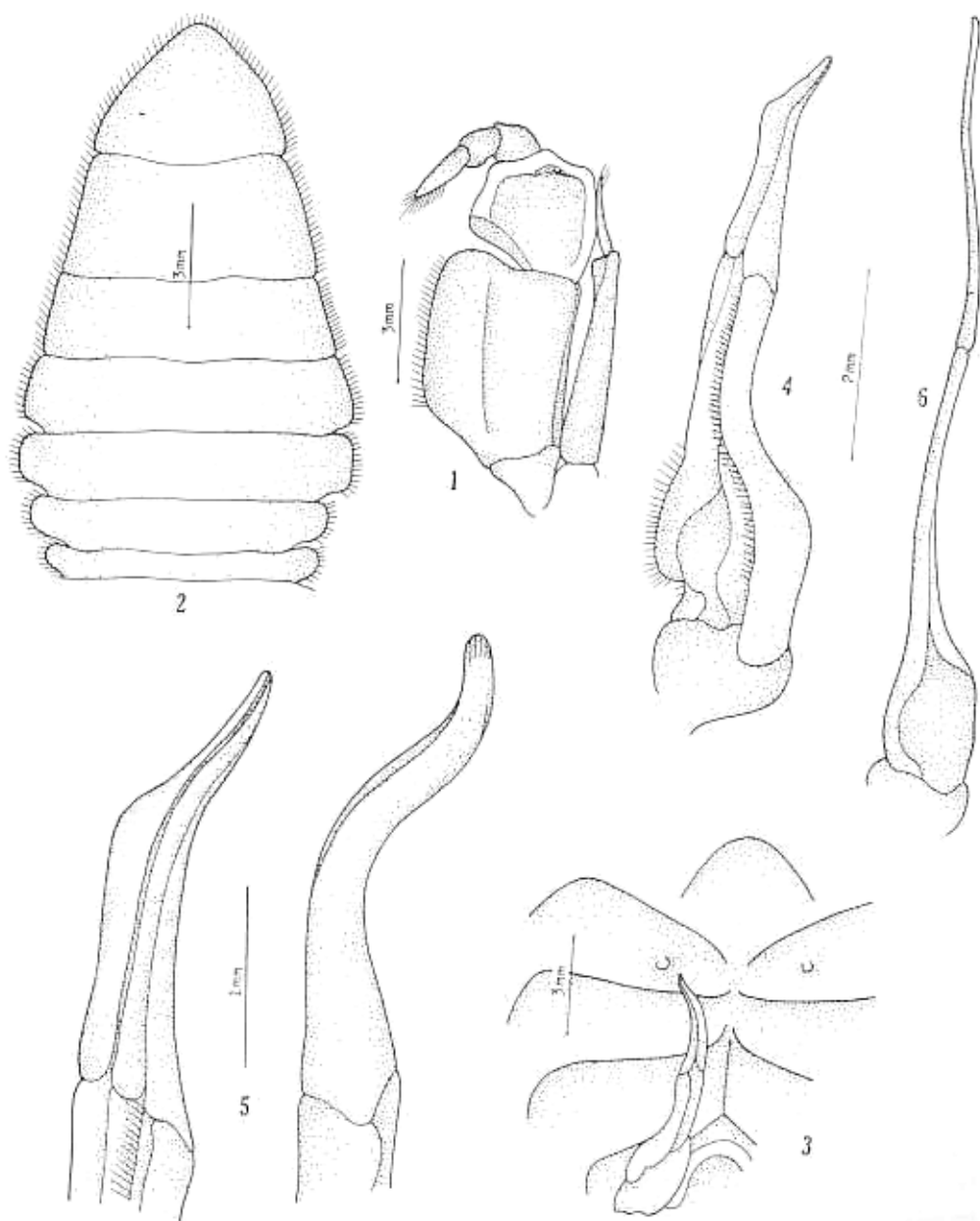


Fig. 2. *Huananpotamon guixiense*, new species. Holotype male, carapace length 18.4 mm, breadth 23.0 mm (JX 891099). 1, third maxilliped; 2, abdomen; 3, first pleopod in situ; 4, first pleopod; 5, ventral and lateral view of last segment of first pleopod; 6, second pleopod.

Huananpotamon lichuanense, new species

(Pl. 1:C; Fig. 3)

Material examined. - Holotype - male, carapace length 14.5 mm, breadth 16.8 mm (JX 8091100A), Lichuan (35.3°N, 112.7°E), Jiangxi Province, coll. Jul.1980.

Allotype - female, carapace length 16.0 mm, breadth 20.0 mm (JX 8091100B), same data as holotype.

Description. - Carapace convex fore and aft. Dorsal surface covered with fine pits, epibranchial region rugose and granulated. Cervical groove depressed medially; H-shaped groove between gastric and cardiac regions narrow, posterior portion deep, distinct. Post-frontal lobe convex. Postorbital crest slightly ridged. Postorbital region smooth, concave. Front deflexed, sinuous medially. Exorbital angle acutely sharp, epibranchial teeth conspicuous; anterolateral border ridged, with 20-22 fine granular teeth. Merus of third maxilliped about 1.1 times as broad as long, ischium about 1.6 times as long as broad, exopod reaching proximal one-third of merus, with slender flagellum.

Chelipeds distinctly unequal, merus granulated dorsally. Carpus with depressed groove dorso-medially, with inner-distal short spine and prominent tooth at its base; larger chela with manus about 1.2 times as long as high, slightly longer than dactylus, almost no gap between closed fingers. Ambulatory slender, nearly smooth.

Male abdomen triangular, sixth segment about 1.7 times as broad as long, telson about 1.5 times as broad as long. Median groove of thoracic sternum slightly shallow, interrupted between sutures of sternites 4/5, 5/6, 6/7, median suture of sternites 7 and 8 somewhat short.

First male pleopod reaching beyond abdominal lock tubercle, to suture between sternites 4/5, subdistal segment about 1.4 times as long as distal segment, distal segment with inner-distal angle somewhat blunt, outer-distal angle narrowly elongated, directed upwards, suture marking sperm channel on mesial side, distal pore terminal. Second pleopod with subdistal segment about 1.3 times as long as distal segment.

Female abdomen ovate, sixth segment about 2.8 times as broad as long, telson with distal margin about 2 times as broad as long. Interrupted between sutures of sternites 4/5, 5/6, 6/7, genital pore elliptical in shape.

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

Remarks. - *Huananpotamon lichuanense*, new species, is related to *H. guixiense*, new species, but the sixth segment of the male abdomen is comparatively more narrow and elongate, being about 1.7 times as broad as long (vs. sixth male abdominal segment comparatively broad and short, about 2.2 times as broad as long), the first male pleopod has the inner-distal angle more prominent, S-shaped in lateral view, with the distal half comparatively long (vs. more arched in lateral view, with the distal half comparatively shorter).

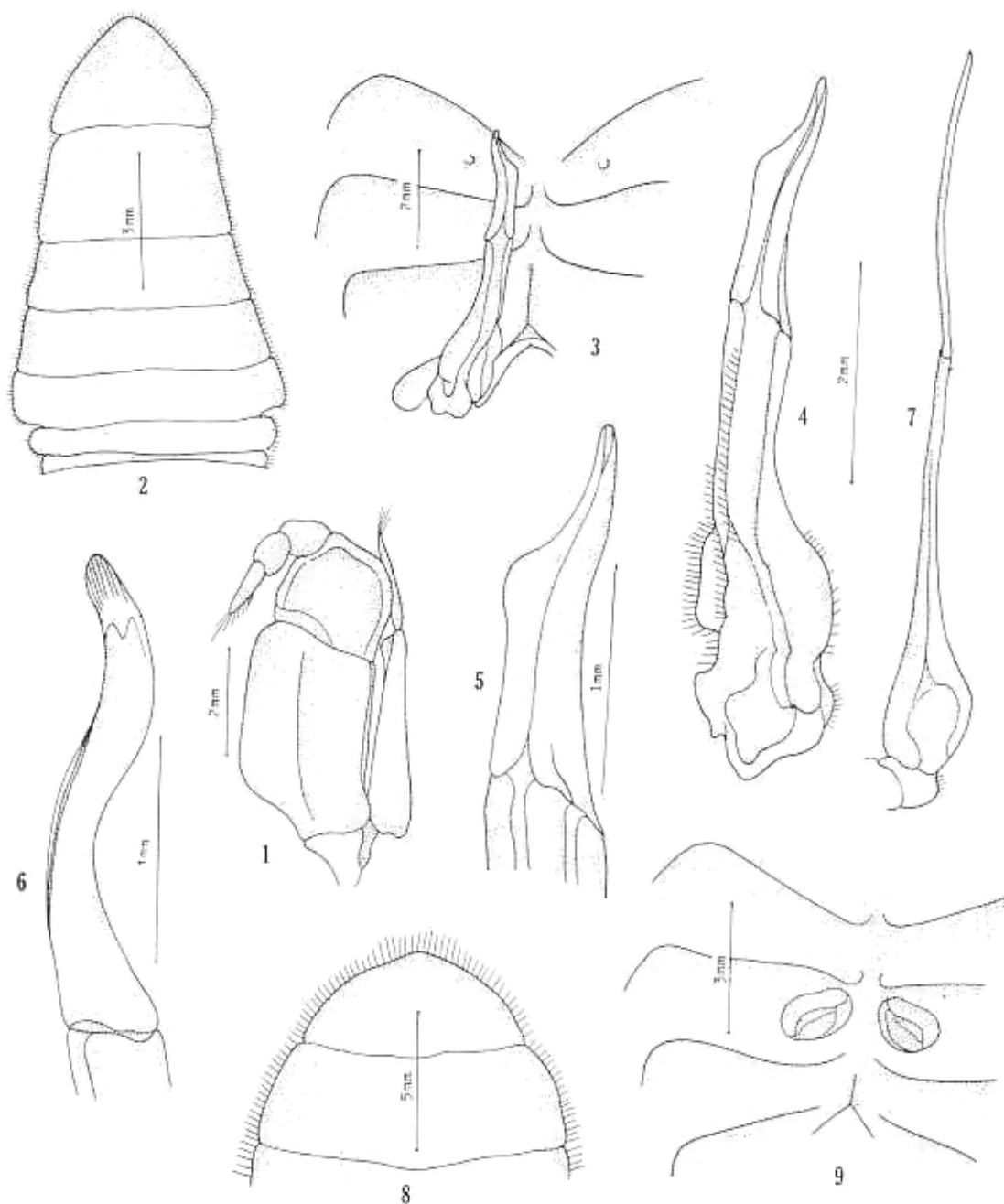


Fig. 3. *Huananpotamon lichuanense*, new species. 1-7, holotype male, carapace length 14.5 mm, breadth 16.8 mm (JX 8091100A); 8, 9, allotype female, carapace length 16.0 mm, breadth 20.0 mm (JX 8091100B). 1, third maxilliped; 2, abdomen; 3, first pleopod in situ; 4, first pleopod; 5, 6, ventral and lateral view of last segment of first pleopod; 7, second pleopod; 8, female abdomen; 9, genital pore.

Huananpotamon nanchengense, new species

(Pl. 1:D; Fig. 4)

Material examined. - Holotype - male, carapace length 15.1 mm, breadth 18.6 mm (JX 8991126), Nancheng (27.5°N, 116.6°E), Jiangxi Province, coll. Oct.1989.

Description. - Carapace slightly convex fore and aft. Surface finely pitted, epibranchial region covered with granules. Cervical groove broad, shallow; H-shaped groove between gastric and cardiac regions narrow, deep. Postfrontal lobes bluntly rounded. Postorbital crest blunt. Postorbital region concave. Front deflexed, sinuous. Dorsal orbital margin ridged, exorbital angle acutely sharp. Epibranchial teeth rounded, prominent; antero-lateral border ridged, with 20-22 granular teeth. Merus of third maxilliped about 1.1 times as broad as long, ischium about 1.5 times as long as broad, exopod reaching proximal one-third of merus, with flagellum.

Chelipeds clearly unequal, merus with dorso-outer surface granulated. Carpus with longitudinal depression medially, with inner-distal stout spine, and spinules at its base; larger chela with manus about 1.3 times as long as high, longer than dactylus, inner border of fingers with rounded, blunt teeth, almost no gap between closed fingers. Ambulatory legs slender, covered with scattered short setae, last leg with propodus about 1.8 times as long as broad, slightly shorter than dactylus.

Male abdomen triangular in shape, sixth segment about 1.9 times as broad as long, telson about 1.4 times as broad as long, median groove of thoracic sternum shallow, interrupted between sutures of sternites 4/5, 5/6, 6/7, median line of sternites 7 and 8 segments comparatively short.

First male pleopod reaching beyond abdominal lock tubercle, to suture between sternites 4/5, distal segment with inner-distal angle rounded to squarish, outer-distal angle elongated narrowly, upper-directed, suture marking sperm channel on median side, distal pore terminal. Second pleopod with subdistal segment about 1.2 times as long as distal segment.

Females not known.

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

Remarks. - *Huananpotamon nanchengense*, new species, is close to *H. angulatum* (Dai et al., 1979) and *H. yiyangense*, new species, but its first male pleopod has the inner-distal angle more prominent than those of the two species. The first male pleopod of *H. nanchengense* also has the distal half (lateral view) bent almost at right angles, in the other two species, they are S-shaped.

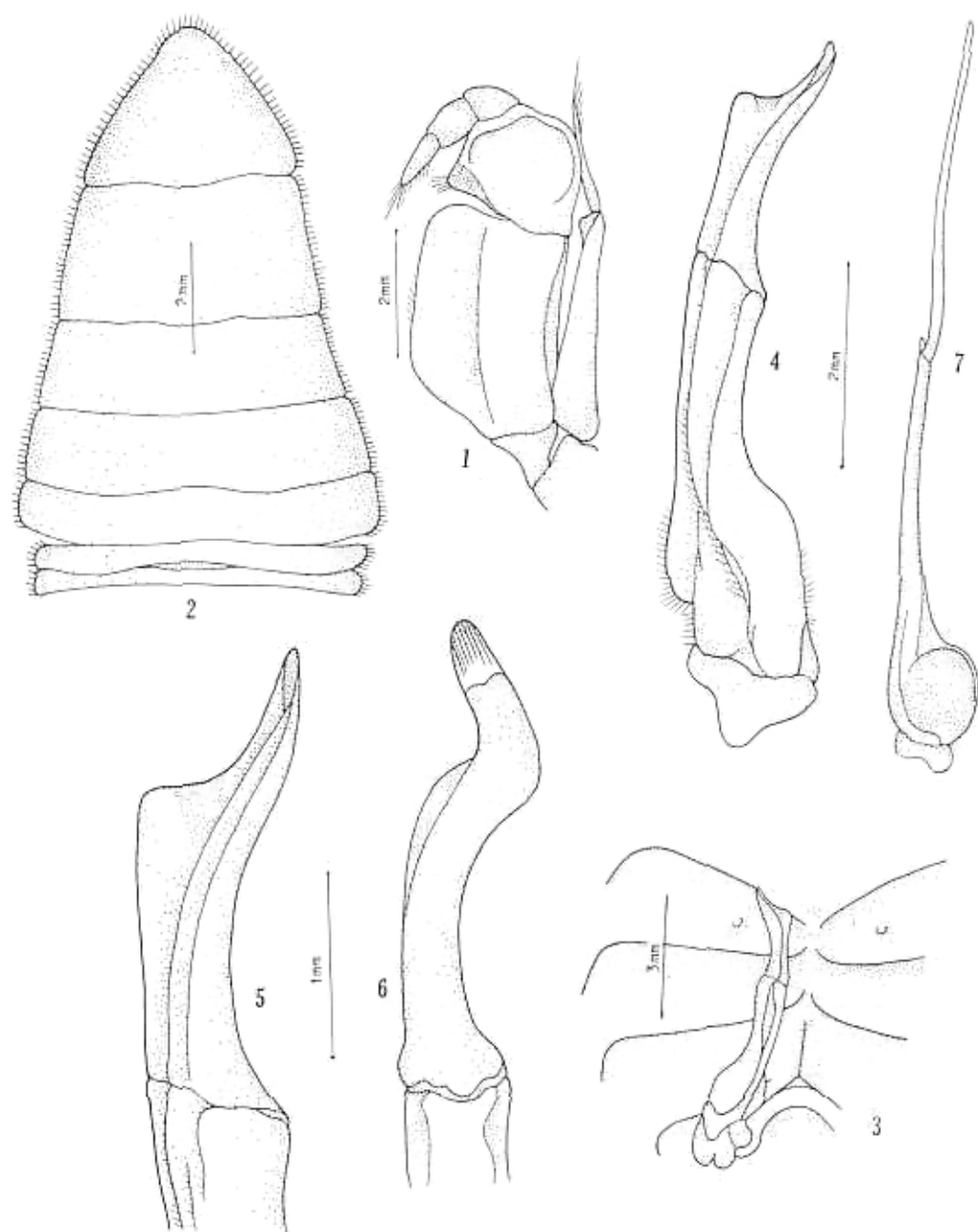


Fig. 4. *Huananpotamon nanchengense*, new species. Holotype male, carapace length 15.1 mm, breadth 18.6 mm (JX 8991126). 1, third maxilliped; 2, abdomen; 3, first pleopod in situ; 4, first pleopod; 5, 6, ventral and lateral view of last segment of first pleopod; 7, second pleopod.

Huananpotamon chongrenense, new species
(Pl. 1:E; Fig. 5)

Material examined. - Holotype - male, carapace length 16.2 mm, breadth 20.1 mm (JX 8991127), Chongren (27.7°N, 116.0°E), Jiangxi Province, coll. Oct.1989.

Paratypes - 3 males, same data as holotype.

Description. - Carapace convex fore and aft. Dorsal surface finely pitted, epibranchial region with fine rugae. Cervical groove broad, shallow; H-shaped groove between gastric and cardiac regions comparatively deep. Postfrontal lobe convex. Postorbital crest prominent. Postorbital region concave. Front deflexed, sinous medially, dorso-orbital margin ridged; exorbital angle sharp; epibranchial teeth distinct; anterolateral border ridged with 23-25 granular teeth. Merus of third maxilliped about 1.1 times as broad as long, with ischium about 1.4 times as long as broad, exopod reaching proximal one-third of merus, with flagellum.

Chelipeds clearly unequal, merus with granules and rugae on outer dorsal face. Carpus with squamous prominences and rugae, with inner-distal spine and spinule at base; larger chela with manus about 1.3 times as long as high, about as long as movable finger, inner border of fingers with unequal sized, triangular teeth, almost no gap between them when closed. Ambulatory legs slender, with scattered short setae, last leg with propodus about 2 times as long as broad, slightly shorter than dactylus.

Male abdomen triangular, somewhat broad, sixth segment about 1.9 times as broad as long, telson about 1.4 times as broad as long. Median groove of thoracic sternum shallow, interrupted between sutures of sternites 4/5, 5/6, 6/7, median line of sternites 7 and 8, slightly short.

First male pleopod reaching beyond abdominal lock tubercle, to suture between sternites 4/5, subdistal segment about 1.4 times as long as distal segment, distal segment with inner-distal angle prominent, globular in shape, outer-distal angle elongated horn-shaped, directed upwards; S-shaped in lateral view, inner-distal angle prominent. Suture marking sperm channel on median side, distal pore terminal. Second pleopod with subdistal segment about 1.3 times as long as distal segment.

Females not known.

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

Remarks. - *Huananpotamon chongrenense*, new species, is most closely related to *H. nanchengense*, new species, but the first male pleopod has the inner-distal angle more prominent and globular (not rounded-squarish). In its lateral view, the inner-distal angle is also rounded to squarish rather than not semicircular in shape.

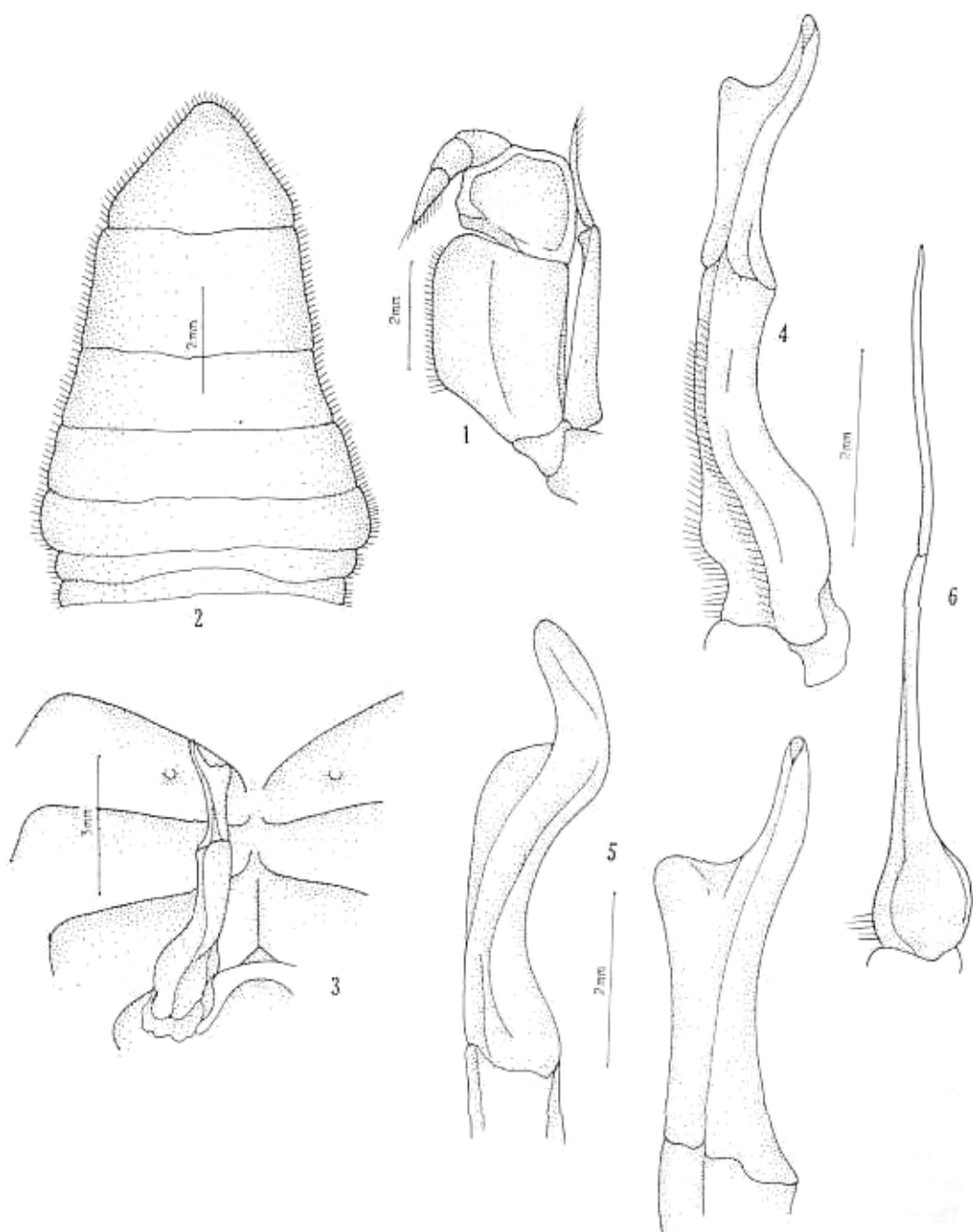


Fig. 5. *Huananpotamon chongrenense*, new species. Holotype male, carapace length 16.2 mm, breadth 20.1 mm (JX 8991127). 1, third maxilliped; 2, abdomen; 3, first pleopod in situ; 4, first pleopod; 5, ventral and lateral view of last segment of first pleopod; 6, second pleopod.

Huananpotamon medium, new species

(Pl. 1:F; Fig. 6)

Material examined. - Holotype - male, carapace length 15.4 mm, breadth 18.4 mm (JX 9191129), Nancheng (27.5°N, 116.6°E), Jiangxi Province, coll. Aug.1991.

Description. - Carapace convex fore and aft. Dorsal surface covered with pits, epibranchial region with fine rugae. Cervical groove broad, comparatively deep posteriorly; H-shaped groove between gastric and cardiac regions narrow, deep. Postfrontal lobe convex. Postorbital crest bluntly rounded. Front deflexed, emarginated medially. Dorsal orbital border ridged. Exorbital angle steeply acute, slightly bent inwards; anterolateral border crested, with 18-20 teeth; epibranchial teeth lobiform, tip rounded, not acutely produced. Merus of third maxilliped about as broad as long, ischium about 1.7 times as long as broad, exopod reaching proximal one-third of merus, with flagellum.

Chelipeds unequal, merus covered with granules and rugae on outer dorsal face. Carpus with shallow depression medially, surface covered with fine rugae, inner-distal angle with short spine, with 1-2 small tubercles at base; larger manus about 1.2 times as long as high, slightly longer than dactylus, almost no gap between closed fingers. Ambulatory legs slender, smooth, covered with scattered short setae, last leg with propodus about 1.8 times as long as broad, conspicuously shorter than dactylus.

Male abdomen triangular, sixth segment about 1.9 times as broad as long, telson about 1.3 times as broad as long. Median groove of thoracic sternum moderately deep, median suture of sternites 7 and 8 moderately long.

First male pleopod reaching beyond suture of sternites 4/5, subdistal segment about 1.5 times as long as distal segment, inner-distal angle squarish to rounded, outer-distal angle elongated narrowly, directed upwards, inner-distal angle produced in lateral view, suture marking sperm channel on mesial side, distal pore terminal. Second pleopod with subdistal segment about 1.1 times as long as distal segment.

Females not known.

Etymology. - The new species name means that its morphological characters are between that of *H. nanchengense*, new species, and *H. chongrenense*, new species. Used as a noun in apposition.

Remarks. - The morphological characters of *Huananpotamon medium*, new species, seem to be between those of *H. nanchengense*, new species, and *H. chongrenense*, new species. The most distinct feature of the species is the lobed epibranchial teeth with rounded tips. The first male pleopod of *H. medium* is also distinct, with the inner-distal angle moderately produced, more or less intermediate between *H. nanchengense* and *H. chongrenense*.

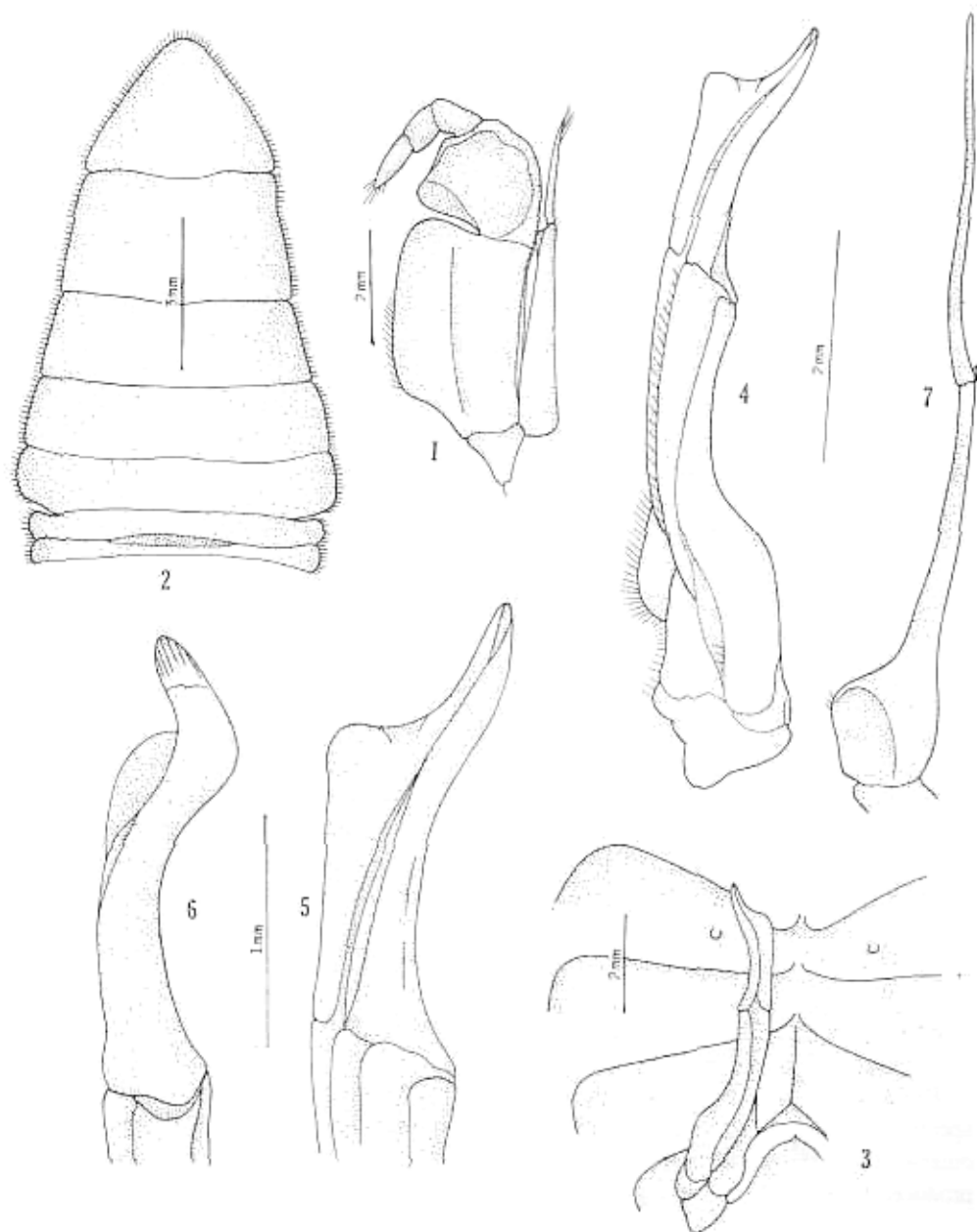


Fig. 6. *Huananpotamon medium*, new species. Holotype male, carapace length 15.4 mm, breadth 18.4 mm (JX 9191129). 1, third maxilliped; 2, abdomen; 3, first pleopod in situ; 4, first pleopod; 5, 6, ventral and lateral view of last segment of first pleopod; 7, second pleopod.

Huananpotamon ruijinense, new species

(Pl. 1:G; Fig. 7)

Material examined. - Holotype - male, carapace length 16.8 mm, breadth 21.0 mm (JX 8991127A), Ruijin (25.8°N, 116.0°E), Jiangxi Province, coll. Oct.1989.

Paratype - 1 male, same data as holotype.

Description. - Carapace convex fore and aft. Dorsal surface finely pitted. Cervical groove broad, slightly shallow, H-shaped groove between gastric and cardiac regions narrow, deep. Postfrontal lobes convex. Postorbital crest prominent, not sharp. Postorbital region concave. Front deflexed, sinous medially. Dorsal orbital ridged, exorbital angle acutely sharp. Epibranchial teeth prominent, anterolateral border ridged, with 24-26 granular teeth. Merus of third maxilliped about 1.1 times as long as broad, ischium about 1.5 times as long as broad, exopod stout, reaching to proximal one-third of merus, provided with flagellum.

Chelipeds clearly unequal, merus with squamous prominences on outer dorsal face. Carpus with depression dorsally, with inner-distal conical spine and 2-3 granular tubercles at base; larger chela with manus about 1.2 times as long as high, movable finger abnormal, immovable finger shorter than manus. Ambulatory legs slender, with comparatively dense short setae, last leg with propodus about 2.3 times as long as broad, slightly short or equal to dactylus.

Male abdomen triangular in shape, sixth segment about 1.8 times as broad as long, telson about 1.4 times as broad as long, slightly longer than sixth segment. Median groove of thoracic sternum shallow, median groove between sternal sutures narrow, median suture between sternites 7/8 somewhat short.

First pleopod reaching beyond abdominal tubercle, to suture of sternites 4/5, subdistal segment about 1.5 times as long as distal segment, distal segment with inner -distal angle globular in shape, outer-distal angle elongated directed upwards; S-shaped in lateral view, distal portion convex dorsally. Suture marking sperm channel on mesial side, genital pore terminal. Second pleopod with subdistal segment about 1.4 times as long as distal segment.

Females not known.

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

Remarks. - *Huananpotamon ruijinense*, new species, is closest to *H. chongrense*, new species, but first male pleopod has the inner-distal angle resembling a hip-bone, and the outer-distal angle is comparatively shorter and broader, with the distal portion strongly produced backwards in lateral view.

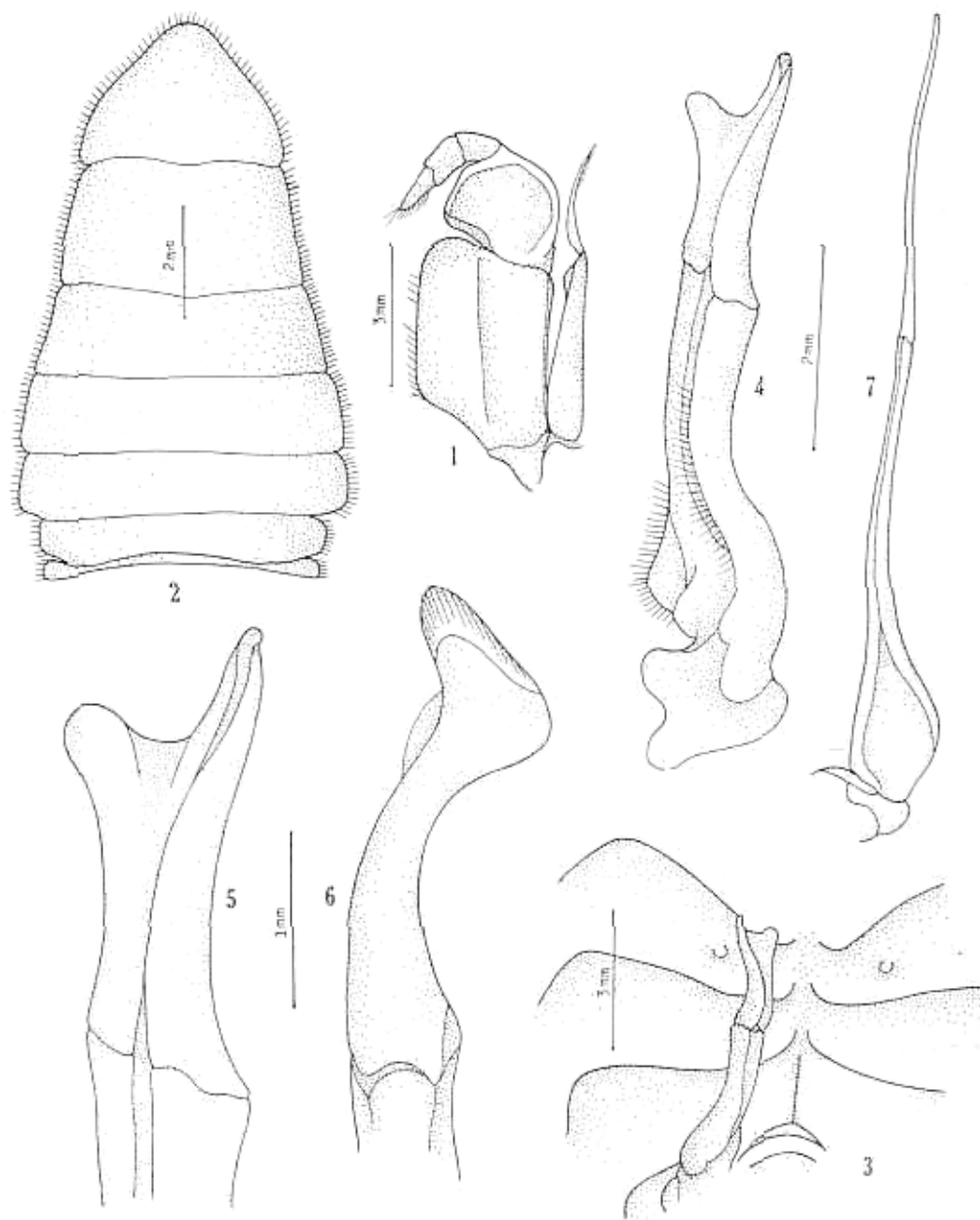
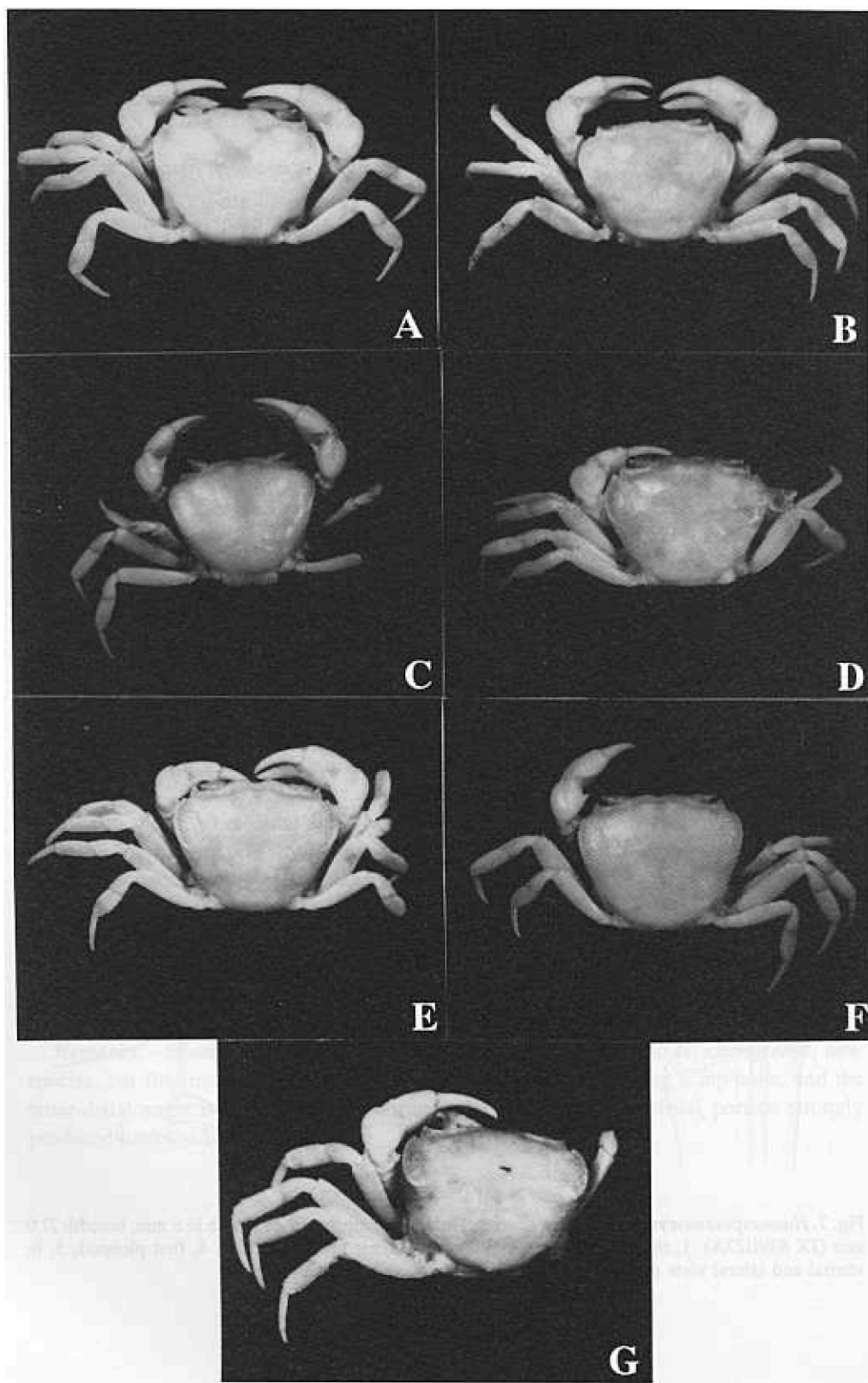


Fig. 7. *Huananpotamon ruijinense*, new species. Holotype male, carapace length 16.8 mm, breadth 21.0 mm (JX 8991127A). 1, third maxilliped; 2, abdomen; 3, first pleopod in situ; 4, first pleopod; 5, 6, ventral and lateral view of last segment of first pleopod; 7, second pleopod.



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Received 30 Jun 1994

Accepted 25 Jan 1995

← Pl. 1. Dorsal views of new *Huananpotamon* species. A, *H. yiyangense*, holotype male, carapace length 15.6 mm, breadth 18.6 mm (JX 9191098A); B, *H. guixiense*, holotype male, carapace length 18.4 mm, breadth 23.0 mm (JX 891099); C, *H. lichuanense*, holotype male, carapace length 14.5 mm, breadth 16.8 mm (JX 8091100A); D, *H. nanchengense*, holotype male, carapace length 15.1 mm, breadth 18.6 mm (JX 8991126); E, *H. chongrenense*, holotype male, carapace length 16.2 mm, breadth 20.1 mm (JX 8991127); F, *H. medium*, holotype male, carapace length 15.4 mm, breadth 18.4 mm (JX 9191129); G, *H. ruijinense*, holotype male, carapace length 16.8 mm, breadth 21.0 mm (JX 8991127A).