

REVIEW OF THE CHINESE FRESHWATER CRABS
PREVIOUSLY PLACED IN THE GENUS *MALAYOPOTAMON*
BOTT, 1968 (CRUSTACEA: DECAPODA: BRACHYURA:
POTAMIDAE)

Michael Türkay and Dai Ai Yun

ABSTRACT. - The potamid freshwater crab genus *Malayopotamon* Bott, 1968, is restricted to Sumatran and Javanese species. Species of *Malayopotamon* described from China are heterogeneous in composition, and three new genera are established to accommodate them - *Botapotamon*, *Heterochelamon* and *Mediapotamon*. One new species of *Botapotamon* and two new species of *Heterochelamon* are also described.

KEY WORDS. - China, new genus, new species, Brachyura, Potamidae, taxonomy.

INTRODUCTION

To date, eight species are recognised in the Sumatran-Javanese potamid genus *Malayopotamon* Bott, 1968, viz. *M. sumatrense* (Miers, 1880), *M. granulatum* (De Man, 1892), *M. gestroi* (Nobili, 1900), *M. brevimarginatum* (De Man, 1902), *M. granulosum* (Balss, 1937), *M. javanense* (Bott, 1968), *M. tobaense* (Bott, 1968) and *M. hatak* Ng & Wowor, 1991 (see Ng & Wowor, 1991).

Four species from China had been previously assigned to *Malayopotamon*, viz. *M. fukienense* Dai, Chen, Song, Fan, Lin & Zeng, 1979, *M. purpureomaculata* (Wu, 1934), *M. gracilipa* Dai & Song, 1982, and *M. yonganense* Cheng, Lin & Luo, 1993. Recent reappraisals of the genus, however, indicate that these Chinese species differ substantially from the Javan and Sumatran species. The major differences are that in the Chinese *Malayopotamon* species, the median longitudinal groove between sternites 7 and 8 is short, whereas it is long in *Malayopotamon* s. str. The suture between sternites 7 and 8 is also medially interrupted but is complete in *Malayopotamon* s. str. The male first pleopods of the Chinese *Malayopotamon* species have a proportionately longer terminal segment and the groove on the male first pleopod for the second male pleopod is on the mesial or lateral side of the terminal and subterminal segments. In *Malayopotamon* s. str., however, the terminal segment is

Michael Türkay - Forschungsinstitut Senckenberg, Frankfurt am Main, Germany. Dai, A. Y. - Institute of Zoology, Academia Sinica, Zhongguancun Lu, Beijing 100080, China.

proportionately shorter and the groove on the male first pleopod is on the dorsal side of the terminal segment only. The female genital pore of the Chinese *Malayopotamon* species open inwards whereas it opens outwards in species of *Malayopotamon* s. str.

While the four known Chinese "*Malayopotamon*" species do not belong to the genus, they are also heterogeneous in composition, and cannot be placed in one genus. Three new genera are established for these four (as well as three new) Chinese species, viz. *Bottapotamon*, *Heterochelamon* and *Mediapotamon*. The new species are *Bottapotamon lingchuanense*, *Heterochelamon guangxiense* and *Heterochelamon yangshuoense*. The present paper serves to diagnose these new genera and provide basic comparisons.

The specimens utilized in the present study are deposited in the Institute of Zoology, Academia Sinica (AS) in Beijing, China. Voucher specimens will be deposited in the Senckenberg Museum (SMF) (Frankfurt am Main) and Zoological Reference Collection (National University of Singapore). The author citation for the Chinese species follows that suggested by Ng (1994).

TAXONOMY

Bottapotamon, new genus

Parapotamon Bott, 1970: 191 (part) (not *Parapotamon* De Man, 1907).

Type species. - *Parapotamon engelhardi* Bott, 1967, by present designation.

Diagnosis. - Small to medium sized species (carapace width 16-27 mm). Third maxilliped exopod flagellum slender. Median longitudinal thoracic groove moderately broad. Longitudinal suture of sternites 7 and 8 short. Suture between sternites 7 and 8 not reaching longitudinal suture. Male first pleopod terminal segment elongate, subquadriateral, groove on mesial side of terminal and subterminal segments; gonopodal opening terminal. Female genital pore ovate, opens inwards towards median part of sternum.

Etymology. - The name is in memory of the late Dr. Richard Bott, in combination with the genus name *Potamon*. Gender neuter.

Remarks. - *Bottapotamon* can be distinguished from *Malayopotamon* Bott, 1968, s. str. in having a short longitudinal suture of sternites 7 and 8; the suture between sternites 7 and 8 not reaching the median longitudinal suture; the male first pleopod has a longer terminal segment; the groove for the male second pleopod is on the mesial side of the terminal and subterminal segments of the male first pleopod; and the female genital pore opens inwards.

Distribution. - Fujian Province and Guangxi Zhuang Autonomous Region.

Key to species of *Bottapotamon*

1. Terminal segment of male first pleopod swollen subdistally, distal end relatively acute in appearance *B. fukienense*
2. Terminal segment of male first pleopod gradually tapering towards truncate tip 2

2. Terminal segment of male first pleopod broadened medially, tapering in both directions
 *B. lingchuanense*
 - Terminal segment of male first pleopod gently curved, median part not dilated
 *B. engelhardti*

Bottapotamon engelhardti (Bott, 1967)

(Pl. I: 1; Fig. 1)

Parapotamon engelhardti Bott, 1967: 206, pl. 7, Fig. 2, Fig. 3; Bott, 1970: 184, pl. 40, Fig. 67, pl. 54, Fig. 68.

Material examined. - Holotype, male (SMF 2837), Fou Chou, China.

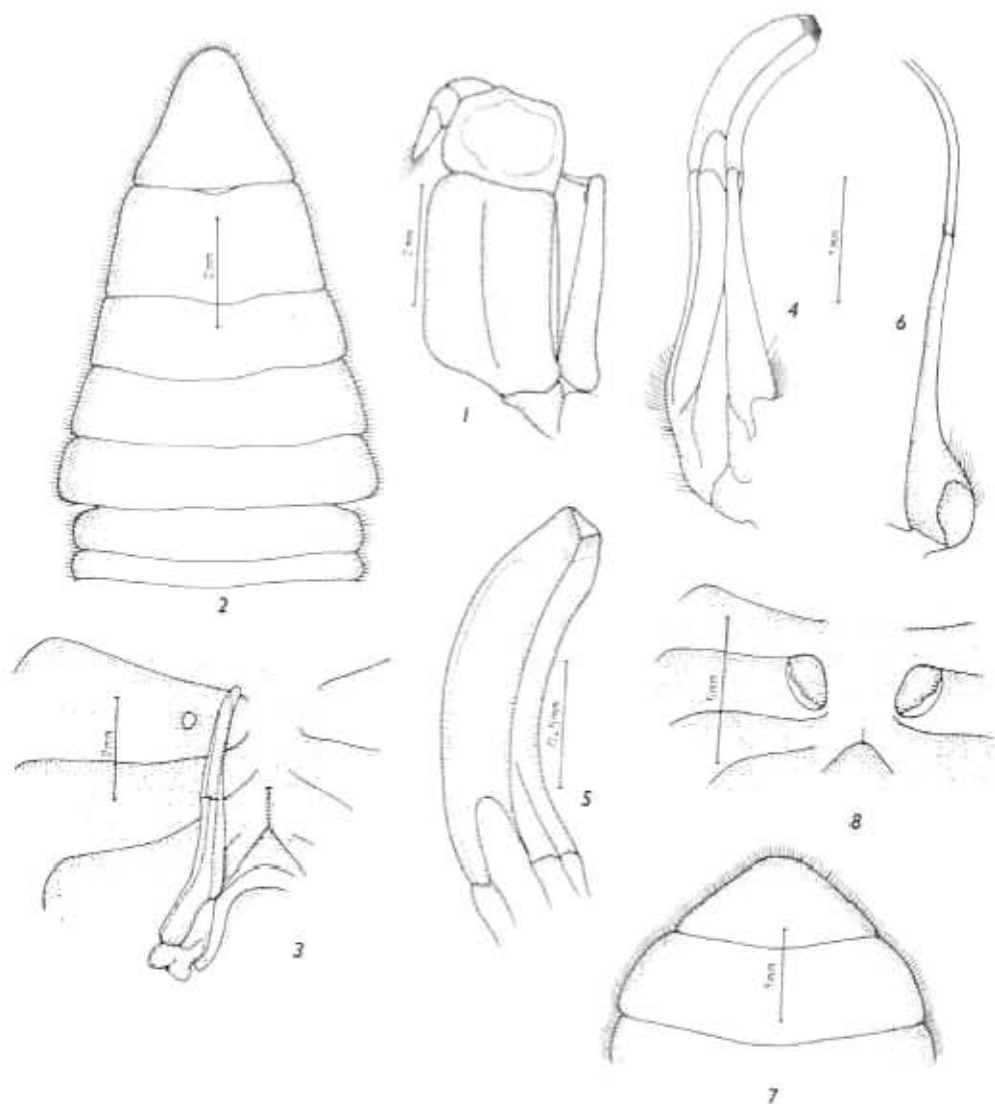


Fig. 1. *Bottapotamon engelhardti*. (Bott 1967). 1-6, male; 7-8 female. 1. Third maxilliped; 2. Male abdomen; 3. Male first pleopod, in situ; 4. Male first pleopod; 5. Male first pleopod, distal segment; 6. Male second pleopod; 7. Female abdomen; 8. Female genital pore.

Paratypes - 2 females (SMF 2837a), Foutschau, China.

Others - 1 male, Shanwù County, Fujian Province, China, coll. Dec. 1974.

Diagnosis. - Male first pleopod with terminal segment cylindrical, strongly arched inwards. Female genital pore reaching suture between sternites 5 and 6. Female abdomen telson broadly triangular.

Description. - Carapace slightly convex fore and aft. Surface glabrous, punctated under magnification. Only epibranchial region with short rugae. Cervical groove shallow, not clearly visible. H-shaped groove distinct in anterior portion. Postfrontal lobe and postorbital crest obtusely rounded. Exorbital tooth blunt, continuous with ventral orbital border. Epibranchial tooth obtuse. Anterolateral margin with fine granules. Suborbital region well delimited through curved granular crest, surface pitted, with few fine, low tubercles. Third maxilliped ischium about 1.5 times as long as broad, with submedian groove. Merus about 1.2 times as broad as long, median surface depressed. Exopod reaching proximal one third of merus, flagellum moderately short.

Chelipeds unequal; carpus with fine pits and rugae on upper surface, inner border with blunt spine, small low tubercle at its base. Manus finely pitted, rugose, larger about 1.4 times as long as high, about 1.2 times as long as the movable finger. Ambulatory legs slender, last leg with propodus about 1.8 times as long as broad, slightly shorter than dactylus.

Male abdomen triangular, sixth segment about 2.2 times as broad as long. Median groove of thoracic sternum moderately deep, narrow. Longitudinal suture of sternites 7 and 8 short.

Male first pleopod slender, reaching well beyond abdomen-locking tubercle of fifth sternite; subterminal segment about 1.5 times as long as terminal segment; terminal segment evenly broad; groove for male second pleopod on mesial side of terminal and subterminal segments of male first pleopod; gonopodal opening terminal. Male second pleopod with subdistal segment about 1.6 times distal segment.

Female abdomen ovate, sixth segment about 3.1 times as broad as long, telson broadly triangular in shape, about 2 times as broad as long. Female genital pore reaching suture between sternites 5 and 6, opens inwards.

Carapace length of male 13.5 mm, width 16.7 mm; of female, length 15-19.6 mm, width 20-25.2 mm.

Distribution. - Fujian Province.

***Bottapotamon fukienense* (Dai, Chen, Song, Fan, Lin & Zeng, 1979)**

(Pl. I: 2; Fig. 2)

Malayopotamon fukienense Dai, Chen, Song, Fan, Lin & Zeng, 1979: 125, pl. 1:3, Fig. 3; Dai et al., 1984: 74, Fig. 38.

Material examined. - Holotype, 1 male (AS)(FK7679015), Fujian Province, Jian'ou County, coll. Dec. 1975.

Paratypes - Allotype, 1 female (AS), 2 male, 1 female (AS), same data as holotype. — 1 male (AS), Fujian Province, Jian'ou, County, coll. Jun.1976.

Others - 1 male, 1 female (AS), Fujian Province, Jian'ou County, coll. 1979.

Diagnosis. - Male first pleopod with subterminal segment slightly bent dorsally and with slight constriction subdistally. Female genital pore occupying two thirds length of sixth sternite.

Description. - Carapace slightly convex anteriorly. Surface generally smooth, anterior branchial region, postfrontal lobes and postorbital crests with fine rugae. Cervical groove shallow, not distinct; H-shaped groove distinct; postfrontal lobes distinct but low; postorbital crest blunt; frontal margin with a rounded median emargination. Exorbital tooth obtuse, connected with ventral orbital border. Epibranchial region granular. Anterolateral border granulated. Suborbital region well delimited with a granular crest, surface almost smooth, only few fine rugae. Third maxilliped with ischium about 1.5 times as long as broad with a

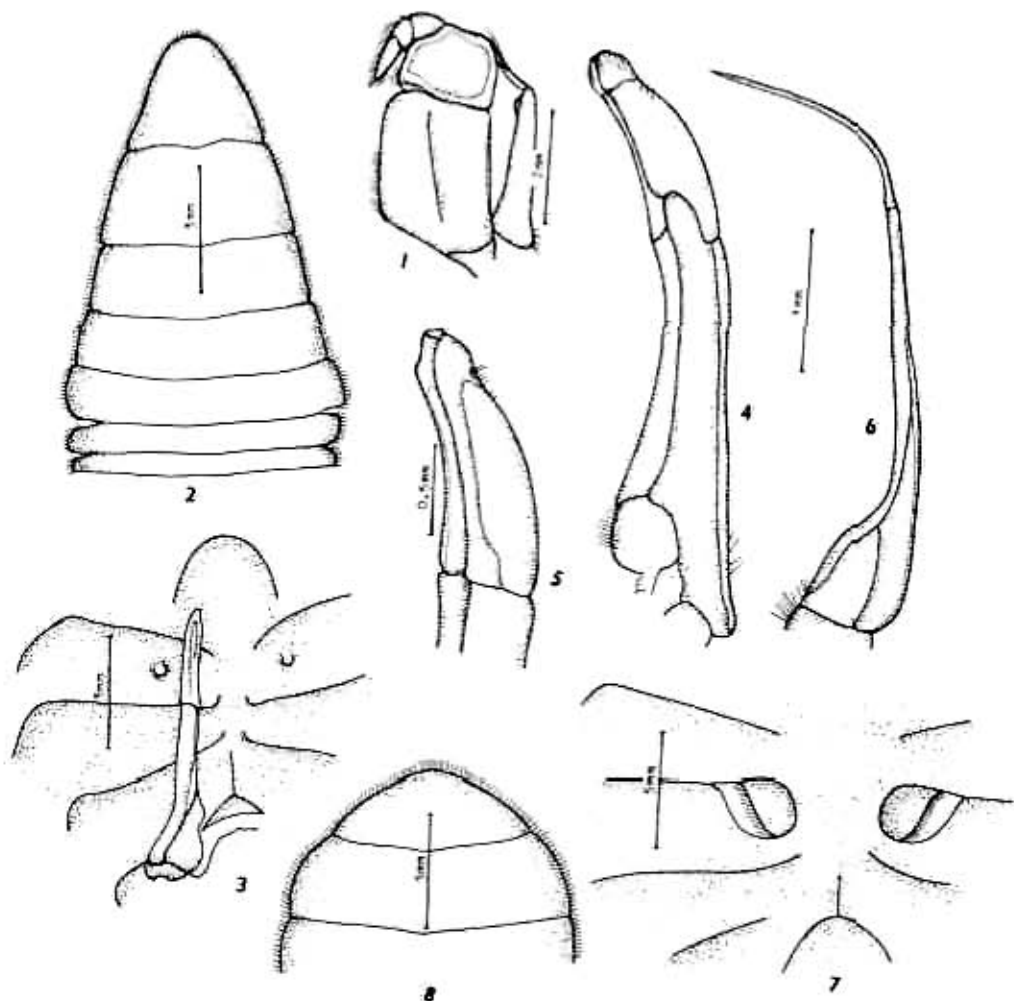


Fig. 2. *Bottapotamon fukienense* (Dai et al., 1979). 1-6, male; 7-8 female. 1. Third maxilliped; 2. Male abdomen; 3. Male first pleopod, in situ; 4. Male first pleopod; 5. Male first pleopod, distal segment; 6. Male second pleopod; 7. Female abdomen; 8. Female genital pore.

submedian groove. Merus about 1.3 times as broad as long, median surface depressed, exopod reaching proximal one third of merus, with moderately long flagellum.

Chelipeds unequal. Carpus with upper surface pitted, inner border with blunt tooth and small tubercle just below it. Manus almost smooth, larger one about 1.3 times as long as high, about 1.4 times as long as movable finger. Fingers stout, with blunt teeth. Gape moderately narrow between fingers when closed. Ambulatory legs slender, with alternating grayish-black and brown colour rings.

Male abdomen triangular in shape, sixth segment about 2.1 times as broad as long, telson about 1.5 times as broad as long. Median groove of thoracic sternum moderately narrow. Longitudinal suture of sternites 7 and 8 short.

Male first pleopod slender, reaching well beyond tubercle of abdominal locking tubercle of fifth sternite; subterminal segment about 2 times as long as terminal segment. Terminal segment with slight constriction subdistally. Groove for male second pleopod on median side of terminal and subterminal segments of male first pleopod. Gonopodal pore terminal. Male second pleopod with subdistal segment about 1.8 times as long as distal segment.

Female abdomen ovate, sixth segment about 3.3 times as broad as long, telson about 2.5 times as broad as long. Female genital pore occupying two thirds length of fifth sternite, opens inwards and upwards.

Carapace length of male 11.6-14.5 mm, width 14.7-17.9 mm; of female, length 15.9-17.1 mm, width 19.4-22 mm.

Distribution. - Fujian Province.

Bottapotamon lingchuanense, new species

(Pl. 1: 3; Fig. 3)

Material examined. - Holotype, male (AS)(GX7694185A), Lingchuan county, Guangxi Auhuang Autonomous Region, coll. May 1976.

Paratypes - Allotype (AS)(GX7694185B), Guangxi Zhuang Autonomous Region, Lingchuan County, coll. 1977. — 1 male, 1 female (AS), Guangxi Zhuang Autonomous Region, Lingchuan county, coll. 1977.

Diagnosis. - Lateral border of exorbital tooth comparatively longer about half length of antero-lateral margin. Male first pleopod with subterminal segment broadened medially, slightly bent dorsally.

Description. - Carapace glabrous, finely pitted. Only anterior branchial region near antero-lateral border with short rugae, more fine rugae applies to frontal region and postorbital crest. Cervical groove visible only posteriorly. H-shaped groove distinct only in anterior portion, outer portion almost flat. Frontal margin with rounded median emargination. Exorbital tooth broadly triangular in shape, lateral margin nearly smooth, with crested beads, about half length of antero-lateral border, which is shorter than postero-lateral border, with granules, last part turning dorsally. Suborbital region well delimited by curved granular crest, outer half shallow, surface finely pitted with fine rugae.

Chelipeds clearly unequal, surface finely rugulose. Carpus with short spine on inner distal angle, small bifurcated spine below it. Larger manus about 1.4 times as long as high about 1.2 times as long as movable finger. Inner border of fingers with larger rounded teeth, gap narrow when closed. Ambulatory legs slender, smooth.

Male abdomen triangular in shape, sixth segment about 2.1 times as broad as long, telson about 1.2 times as broad as long. Median groove of thoracic sternum moderately narrow, deep. Longitudinal suture of sternites 7 and 8 short.

Male first pleopod with subterminal segment about 1.6 times as long as terminal segment, slightly bent dorsally. Groove for male second on median side of terminal and subterminal segments of male first pleopod. Gonopodal pore terminal.

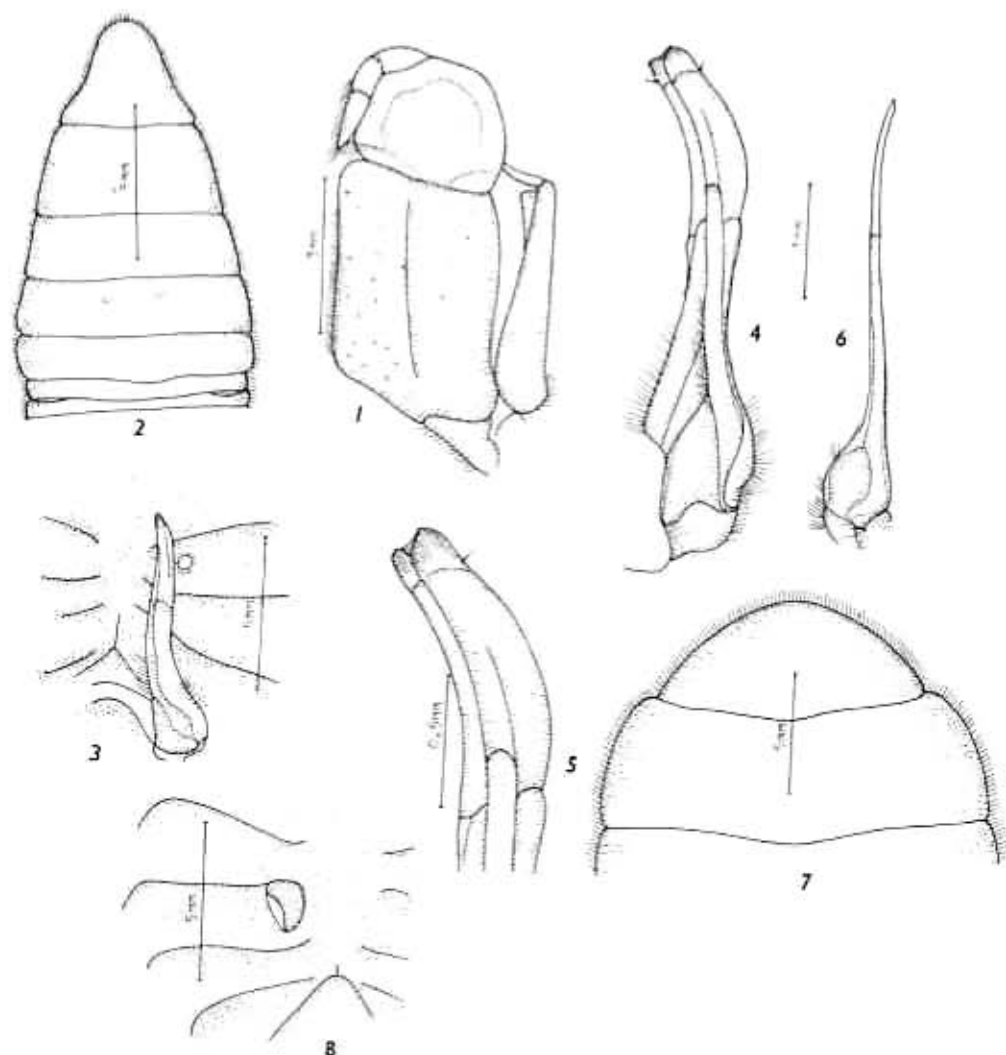


Fig. 3. *Bottapotamon lingchuanense*, new species. 1-6, holotype male (GX7594185A), carapace length 19.8 mm, breath 26.2 mm; 7-8, allotype female (GX759415B), carapace length 23.8 mm, breath 31.0 mm. 1. Third maxilliped; 2. Male abdomen; 3. Male first pleopod, in situ; 4. Male first pleopod; 5. Male first pleopod, distal segment; 6. Male second pleopod; 7. Female abdomen; 8. Female genital pore.

Female abdomen ovate rounded, sixth segment 3.1 times as broad as long, telson about 2.2 times as broad as long, slightly shorter than sixth segment. Female genital pore not reaching suture of sternites 5 and 6, opens inwards.

Carapace length of male 11.3-19.8 mm, width 21.2-26.2 mm; of female, length 17.8-23.8 mm, breadth 21.8-51 mm.

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

Remarks. - This new species is very similar to *B. fukienense* but differs from the latter by the lateral border of exorbital angle being comparatively longer; the flagellum of third maxilliped is comparatively more slender; the male first pleopod has the subterminal segment narrower medially, and the subterminal portion of the terminal last segment is without a constriction.

Bottapotamon yonganense (Cheng, Lin & Luo, 1993)

(Pl. I: 4)

Malayopotamon yonganense Cheng, Lin & Luo, 1993: 412, figs. 1-8.

Materials examined. - 2 males (1 juv.) (AS), Yongan, Fujian Province, coll. Sep. 1989.

Description. - Medium sized species. Carapace convex, regions distinct. Surface with fine pits, epibranchial region with fine rugae. Cervical groove and H-shaped groove between gastric and cardiac regions deep. Postfrontal lobe slightly prominent, postorbital crest bluntly rounded. Front deflexed, anterior border emarginated medially. Dorsal orbital border ridged, smooth, exorbital angle triangular, outer lateral border without distinct serrated teeth. Epibranchial teeth not prominent, antero-lateral border crested, last part turning backwards, lined with blunt teeth. Branchial region slightly swollen. Third maxilliped with merus about 1.1 times as broad as long, with ischium about 1.4 times as long as broad, exopod reaching beyond proximal 1/4 of merus, with a flagellum.

Chelipeds clearly unequal, carpus with anterior border swollen, surface with reticular rugae, inner-distal angle with stout spine, with small prominence; larger manus about 1.7 times as long as high, about 1.3 times as long as movable finger; fingers with blunt teeth on inner border, with narrow gap when closed. Ambulatory legs slender, last leg with propodus about 1.6 times as long as broad, slightly shorter or equal to dactylus.

Male abdomen elongated triangular, sixth segment about 1.9 times as broad as long; telson elongated and oval in shape, about 1.5 times as broad as long. Median groove of thoracic sternum moderately deep, interruption between sutures of sternites 4/5, 5/6, 6/7 slightly broad, median longitudinal suture of sternite 7 and 8 moderately long.

Male first pleopod reaching tubercle of abdominal lock, with subterminal segment about 1.5 times as long as terminal segment, terminal segment depressed, arched, about 3.7 times as long as broad. Male second pleopod with subdistal segment about 1.8 times as long as distal segment.

Carapace length of male 29.2 mm, breadth 38.5 mm.

Habitat. - Living under stones in streams with shallow water, about 600-700 meters above sea level.

Distribution. - Fujian (Yongan).

***Heterochelamon*, new genus**

Type species. - *Potamon (Geothelphusa) purpureoanalis* Wu, 1934, by present designation.

Diagnosis. - Medium sized members (21-30 mm carapace width). Epibranchial, tooth sharp, prominent. Male chelipeds extremely unequal. Exopod of third maxilliped with relatively long flagellum. Male first pleopod with rounded distal end; groove for male second pleopod on median side.

Etymology. - According to the extreme heterocheily of the male chelipeds. Gender neuter.

Distribution. - China: Guangxi Zhuang Autonomous Region.

Remarks. - This new genus is related to *Bottapotamon* but differs from the latter by the following characters: the epibranchial tooth is more prominent, the chelipeds are extremely unequal in males; and the male first pleopod has a prominent and rounded distal end.

Key to species of *Heterochelamon*

1. Large cheliped of adult male with fingers strongly gaping; male first pleopod with terminal segment extremely dilated at tip, flap-like, gonopodal opening subdistal *H. yangshuoense*
- Large cheliped of adult male with fingers slightly gaping; male first pleopod with terminal segment slightly dilated near tip, gonopodal opening distal 2
2. Terminal segment of male first pleopod with distinctly rounded subdistal 'shoulder', slightly bent with respect to subterminal segment *H. guangxiense*
- Terminal segment of male first pleopod with smaller 'shoulder', straight with respect to subterminal segment *H. purpureoanalis*

***Heterochelamon purpureoanalis* (Wu, 1934)**

(Pl. I: 5; Fig. 4)

Potamon (Geothelphusa) purpureoanalis Wu, 1934: 343, Fig. 2.

Malayapotamon purpureoanalis, Dai et al., 1979: 126.

Material examined. - 20 males (1 juv.), 23 females (5 juv.)(AS), Guangxi Zhuang Autonomous Region, Xiushui County, coll. 1938.

Diagnosis. - Chelipeds strongly unequal. Epibranchial tooth prominent. Male first pleopod with subterminal portion slightly expended dorsally.

Description. - Carapace slightly convex fore and aft. Surface pitted. Epibranchial region near anterolateral border with fine rugae. Cervical groove shallow, hardly visible anteriorly.

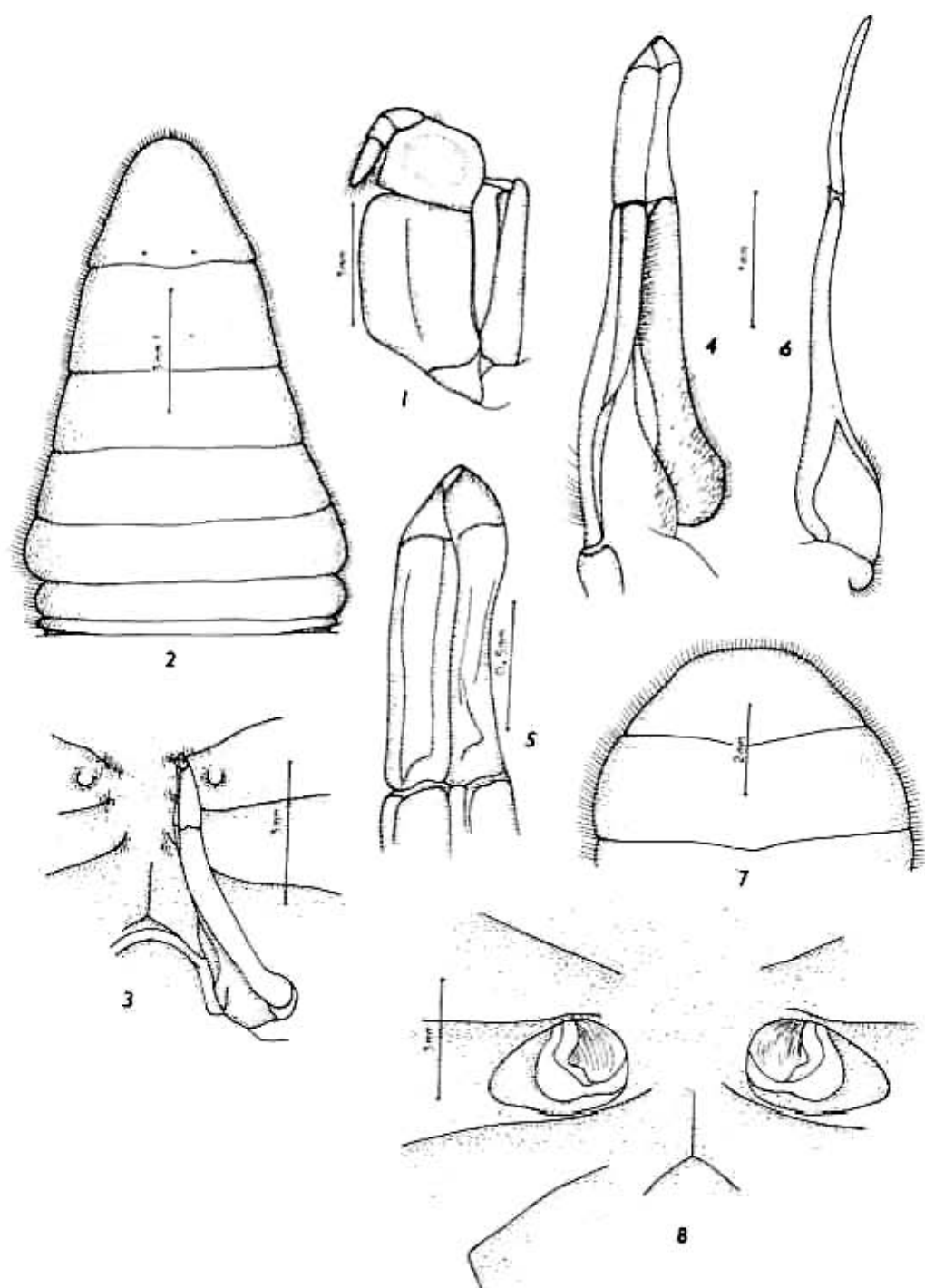


Fig. 4. *Heterochelamon purpureomanealis* (Wu, 1934). 1-6, male; 7-8 female. 1. Third maxilliped; 2. Male abdomen; 3. Male first pleopod, in situ; 4. Male first pleopod; 5. Male first pleopod, distal segment; 6. Male second pleopod; 7. Female abdomen; 8. Female genital pore.

H-shaped groove distinct anteriorly. Postfrontal lobes slightly prominent, postorbital crest blunt. Frontal margin with a shallow rounded median emargination. Exorbital tooth triangular in shape, lateral border long, about half length of anterolateral border. Epibranchial tooth slightly lobe-like. Anterolateral border granular, slightly backwards, suborbital region well delimited through a curved crest, outer half slightly keeled, surface finely pitted with few fine rugae. Third maxilliped with ischium about 1.5 times as long as broad, with a deep submedian groove. Merus about 1.3 times as broad as long, median surface depressed. Exopod reaching middle of merus, with long flagellum.

Chelipeds strongly unequal. Carpus with upper surface finely rugolose, inner border with blunt tooth and small tubercle at base. Manus almost smooth, only upper-outer surface with very fine rugae; larger one about 1.2 times as long as movable finger. Fingers strong, movable finger with a strong tooth at the base, immovable finger with very produced median tooth. Larger chela with broad gap between fingers when closed. Ambulatory legs slender.

Male abdomen triangular in shape, 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 broad. Longitudinal suture of sternites 7 and 8 slightly long.

Male first pleopod reaching abdominal locking tubercle of fifth sternite portion; subterminal segment about 2 times as long as terminal segment, terminal segment with subterminal portion slightly expanded dorsally. Groove for male second pleopod on median side of terminal and subterminal segments of male first pleopod. Gonopodal pore terminal. Male second pleopod with subdistal segment about 2 times as long as distal segment.

Female abdomen ovate rounded, sixth segment about 3 times as broad as long, telson more or less truncated at median portion of distal border, about 2.5 times as broad as long. Female genital pore subcircular, opens inwards and upwards.

Carapace length of male 16.5 mm, width 20.8 mm; of female, length 18.5 mm, breadth 22.8 mm

Distribution. - Guangxi Zhuang Autonomous Region.

***Heterochelamon guangxiense*, new species**

(Pl. I: 6; Fig. 5)

Material examined. - Holotype, male (AS), Guangxi Zhuang Autonomous Region, coll. May 1974.

Diagnosis. - Carapace with a strong acute epibranchial tooth. Male first pleopod with subterminal portion more expended dorsally.

Description. - Carapace slightly convex anteriorly. Surface glabrous, only frontal and postorbital regions with very fine rugae, near posterolateral portion with oblique striae. Cervical groove almostly indiscernible except for median part which has very shallow depression. H-shape groove distinct anteriorly. Postfrontal lobes slightly prominent. Postorbital crest obsolete. Front faintly emarginated medially. Dorsal orbital border with very fine granules under magnification. Exorbital teeth lobe-like, separated with ventral orbital

border by shallow notch and separated with epibranchial tooth by U-shaped sinuous. Epibranchial tooth acute, strong. Anterolateral border finely serrated backwards. Suborbital region well delimited by a crest, inner portion without granules, surface with some granules. Third maxilliped with ischium about 1.4 times as long as broad, with a fine and deep submedian groove. Merus about 1.5 times as broad as long, median surface depressed. Exopod about reaching middle of merus, with flagellum.

Chelipeds clearly unequal. Carpus with fine rugae on upper surface, inner-distal angle with sharp spine and small spine just below it. Manus almost smooth, larger one about 1.3 times as long as high, about 1.2 times as long as movable finger. Fingers strong, with big blunt teeth. Gap narrow between fingers when closed. Ambulatory legs slender.

Male abdomen triangular in shape, sixth segment about 1.6 times as broad as long; telson about 1.1 times as broad as long. Median groove of thoracic sternum moderately narrow. Longitudinal suture of sternites 7 and 8 slightly long. Sutures between sternites 7 and 8 interrupted medially.

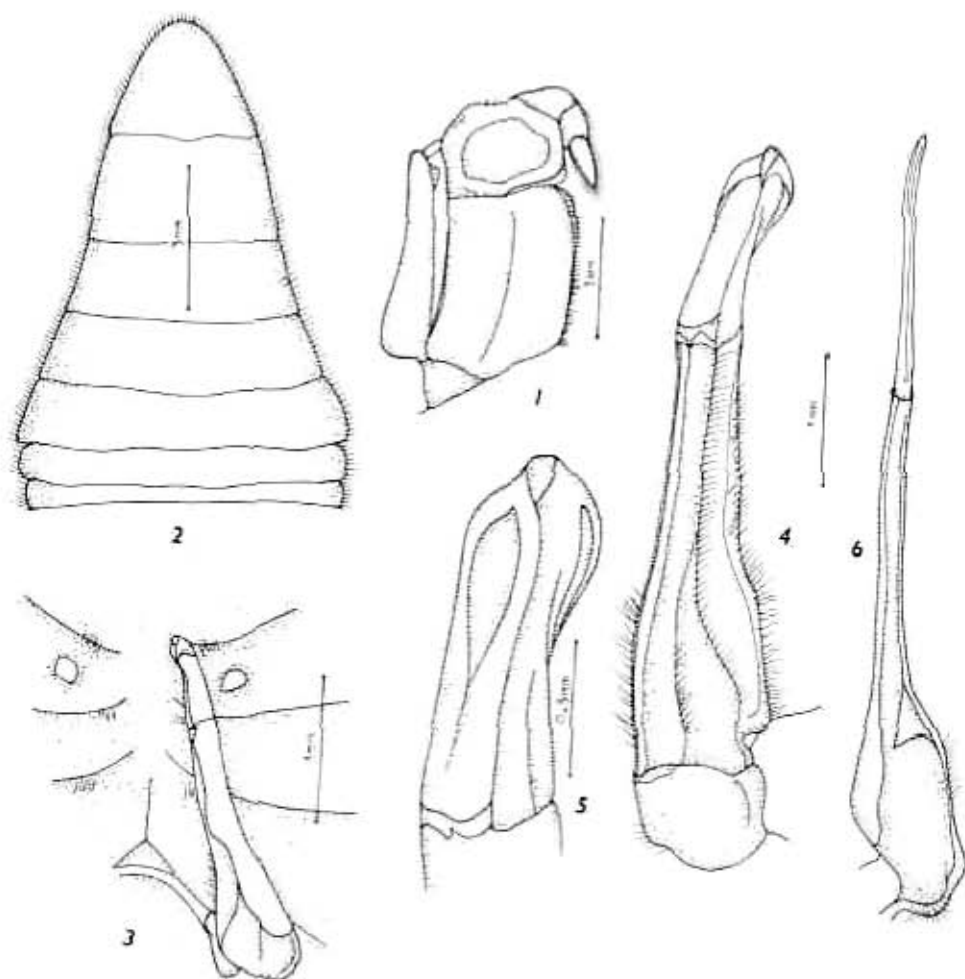


Fig. 5. *Heterochelamon guangxiense*, new species. 1-6, holotype male (GX8950090), carapace length 18.6 mm, breadth 21.8 mm. 1. Third maxilliped; 2. Male abdomen; 3. Male first pleopod, in situ; 4. Male first pleopod; 5. Male first pleopod, distal segment; 6. Male second pleopod.

Male first pleopod reaching well beyond abdominal locking tubercle of fifth sternite. Subterminal segment about 2.1 times as long as terminal segment. Terminal segment with subterminal portion more expanded dorsally. Groove for male second pleopod on median side of terminal and subterminal segments of male first pleopod. Male second pleopod with subdistal segment about 1.9 times as long as distal segment.

Carapace length of male 18.6 mm, width 21.8 mm.

Etymology. - This species is named after the type locality.

Remarks. - This new species is closed to *H. purpureomaculata* but the epibranchial teeth is more acute; the fingers of the larger chela have a narrower gap when closed; and the male first pleopod has the terminal segment more distinctly expanded.

Heterochelamon yangshuoense, new species

(Pl. 1: 7; Fig. 6)

Material examined. - Holotype, male (AS)(GX8950090), Yangshuo county, Guangxi Zhuangxi Autonomous Region, coll. 5 May 1975.

Diagnosis. - Carapace distinctly broader than long. Frontal margin sinuous. Epibranchial tooth very prominent and acute, separated from exorbital angle by deep cleft. Cheliped extremely heterochelous. Terminal segment of male first pleopod extremely dilated terminally.

Description. - Carapace moderately convex, regions well defined. Surface finely pitted, glabrous; postfrontal lobe and postorbital crest with fine rugae. Cervical groove comparatively deep, distinct. H-shaped groove distinct. Postfrontal lobe prominent, Postorbital crest prominent. Frontal margin sinuous. Exorbital tooth triangular, exorbital angle with small granular teeth, separated with epibranchial tooth by deep cleft. Epibranchial tooth prominent, acute, spine-like. Anterolateral border short, serrated, with 5 teeth, curving inwards posteriorly. Suborbital region well delimited by groove, surface almost smooth, with fine rugae. Third maxilliped with ischium about 1.7 times as long as broad, with deep submedian groove, merus pentagonal, about 1.1 times as broad as long, median surface depressed. Exopod with flagellum, reaching middle of merus.

Chelipeds extremely heterochelous. Dorsal and anterior borders tuberculated. Upper surface with a submedian depression; inner border with strong spine, with 2 small spines below it. Manus almost smooth, larger broad distally, about 1.2 times as long as high, almost as long as movable finger. Both fingers arched, with blunt teeth. Gap between fingers large when closed. Ambulatory legs long, slender.

Male abdomen triangular in shape, sixth segment about 2.1 times as long as broad, telson about 1.4 time as long as broad. Median groove of thoracic sternum comparatively broad. Longitudinal suture of sternite 7 and 8 short.

Male first pleopod reaching beyond abdominal locking tubercle of fifth sternite. Subterminal segment about 2.5 times as long as terminal segment, terminal portion rounded, strongly expanded. Groove for male second pleopod on median side of terminal and subterminal segments of male first pleopod. Gonopodal pore terminal. Male second pleopod with subdistal segment about 1.9 times as long as distal segment.

Carapace length of male 24 mm, width 29.4 mm.

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

Remarks. - This new species is the most distinctive species in this genus. It is related to *H. guangxiense*, except that the frontal margin of *H. yangshuoense* is very sinuous (only gently sinuous in *H. guangxiense*). In addition, the anterolateral margin border is lined with five to six spinules; the larger chela has a wider gap between the fingers when closed; and the male first pleopod with has an extremely expanded tip.

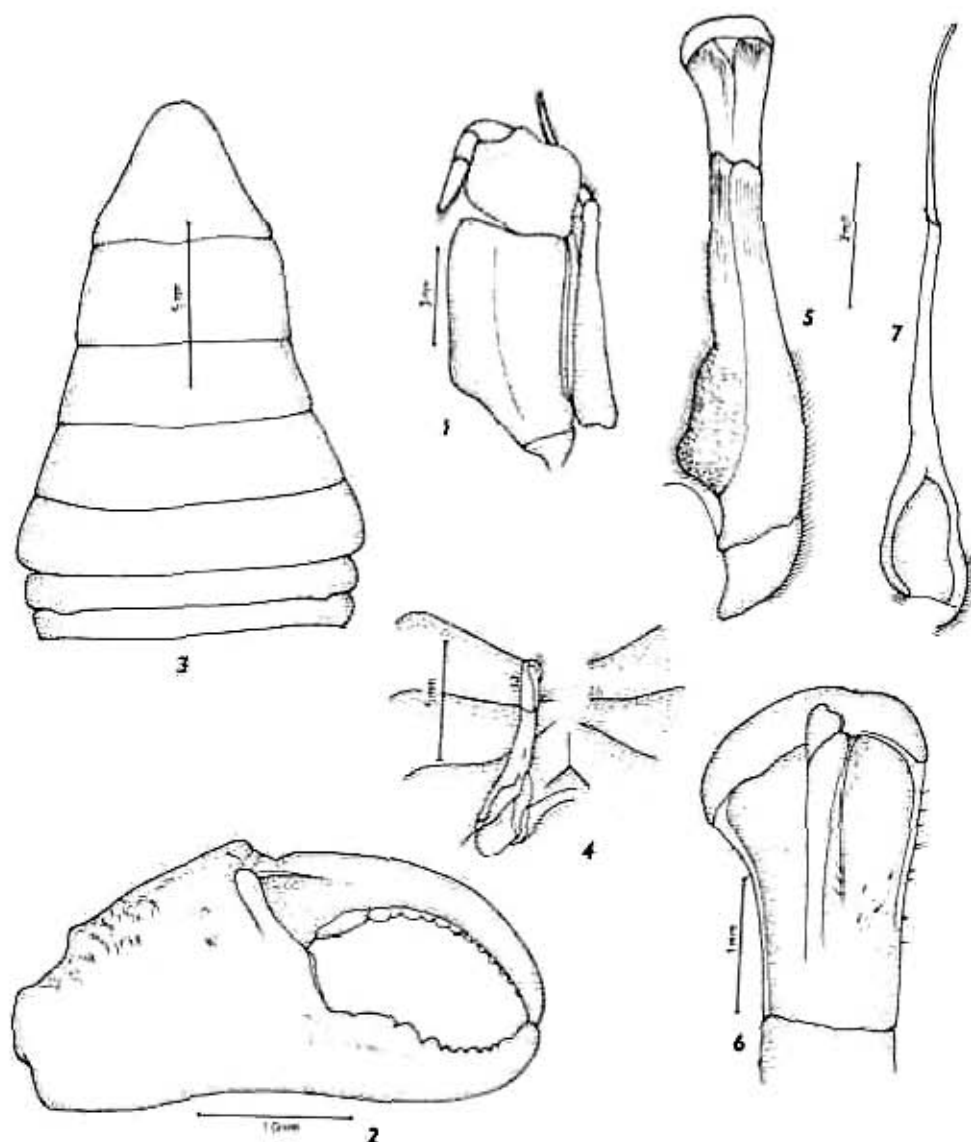


Fig. 6. *Heterochelamon yangshuoense*, new species. 1-7, holotype male (GX8950090), carapace length 24.0 mm, breadth 29.4 mm. 1. Third maxilliped; 2. Outer view of right chela; 3. Male abdomen; 4. Male first pleopod, in situ; 5. Male first pleopod; 6. Male first pleopod, distal segment; 7. Male second pleopod.

Mediapotamon, new genus

Type species. - *Malayopotamon angustipodum* Dai & Song, 1982, by present designation.

Diagnosis. - Small sized (19 mm carapace width). Anterolateral border short. Male first pleopod with terminal segment distinctly shorter than half length of subterminal segment, terminal segment without any protrusion, narrowing towards tip, groove for second pleopod on lateral side of both segments.

Etymology. - The name alludes to the intermediate position of this new taxon, which is between *Bottapotamon* and *Tenuilapotamon*.

Distribution. - Guangxi Zhuang Autonomous Region.

Remarks. - This monotypic genus seems to be allied to *Bottapotamon* and *Tenuilapotamon*. The male first pleopod terminal segment of this genus is not protruding, which is similar to the condition in *Bottapotamon*. The groove for the male second pleopod on the male first pleopod is on the lateral side of both segments, which mirrors the condition in *Tenuilapotamon*.

Mediapotamon angustipedum (Dai & Song, 1982)

(Pl. 1: 8; Fig. 7)

Malayopotamon angustipodum Dai & Song, 1982: 372, Figs. 1-6.

Material examined. - Holotype, 1 male (AS)(GX780045), Guangxi Zhuang Autonomous Region, Jianxi County, coll. 7 Oct. 1978.

Paratypes - Allotype: 1 female (AS); 9 males, 4 females (AS)(GF780046), same data as holotype.

Diagnosis. - Carapace rugose anteriorly. Epibranchial tooth distinct. Male first pleopod with distal segment lacking any protrusion, narrowing towards tip, end rounded, groove for second pleopod on median side of terminal and subterminal segments of male first pleopod. Gonopodal pore terminal.

Description. - Carapace slightly convex. Surface rugose anteriorly. Cervical groove shallow, indistinct. H-shaped groove deep laterally. Postfrontal lobes moderately prominent. Postorbital crest bluntly convex. Frontal border with shallow median immargination. Exorbital teeth triangular in shape, connected with ventral orbital border. Epibranchial tooth distinct. Anterolateral border short, with granules, turning backwards. Suborbital region well delimited by curved, finely granular crest, surface with some rugae. Third maxilliped with ischium about 1.4 times as long as broad, with a shallow submedian groove. Merus about 1.4 times as broad as long, median surface depressed. Exopod about reaching proximal one third of merus, flagellum present, moderately long.

Chelipeds clearly unequal, carpus with upper surface rugolous, inner border with conical spine and small prominence beneath it. Outer surface of manus with fine rugae and short setae on upper portion, larger one about 1.3 times as long as high, about 1.2 times as long as movable finger. Fingers with blunt teeth, without gap when closed. Ambulatory legs slender, long.

Male abdomen triangular in shape, sixth segment about 2 times as broad as long, telson about 1.2 times as broad as long. Median groove of thoracic sternum moderately broad. Longitudinal suture of sternites 7 and 8 moderately long.

Male first pleopod almost reaching abdominal locking tubercle of fifth sternite. Subterminal segment about 2.1 times as long as terminal segment, terminal segment narrowing towards tip, with rounded end. Groove for second pleopod on lateral side of terminal and subterminal segments of male first pleopod. Gonopodal pore terminal. Male second pleopod with subdistal segments about 2.5 times as long as distal segment.

Female abdomen ovate, sixth segment about 2.3 times as broad as long. Female genital pore opens inwards.

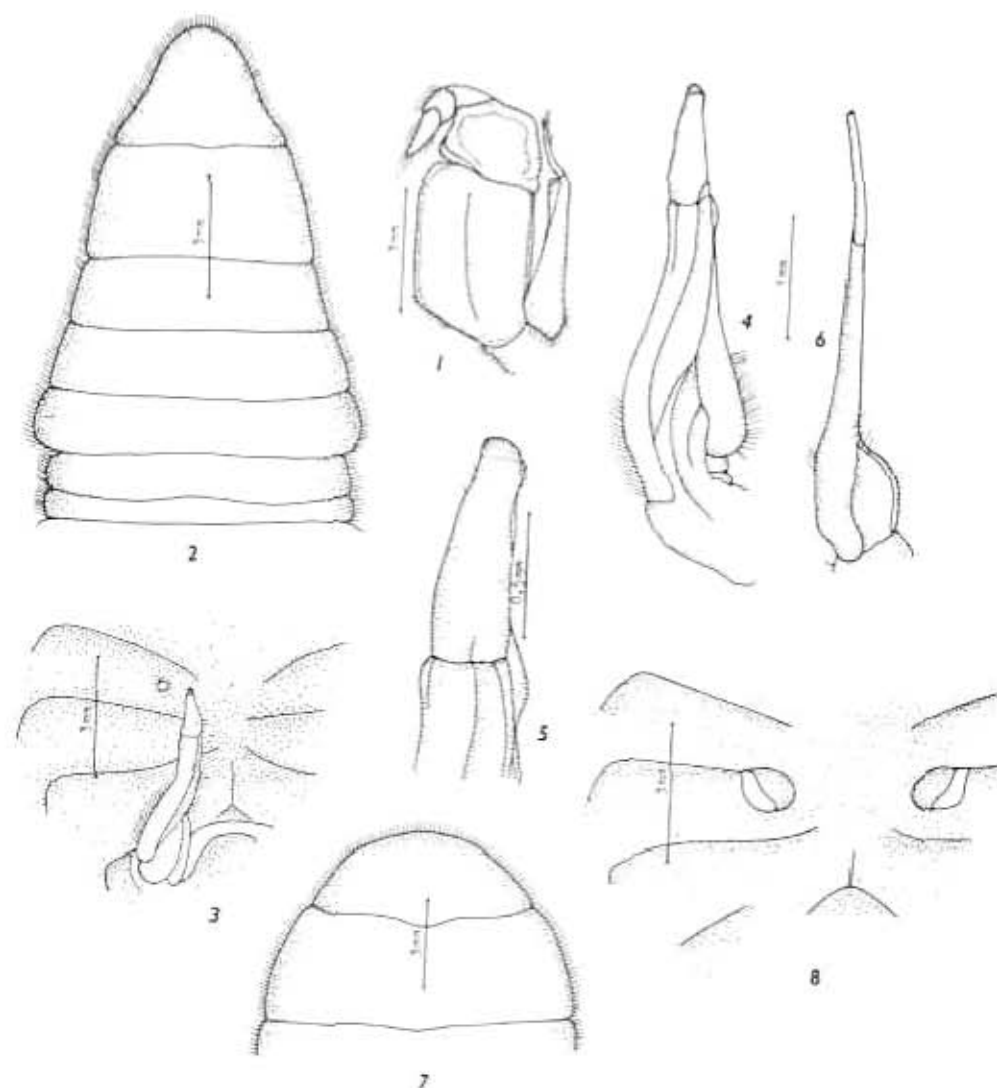
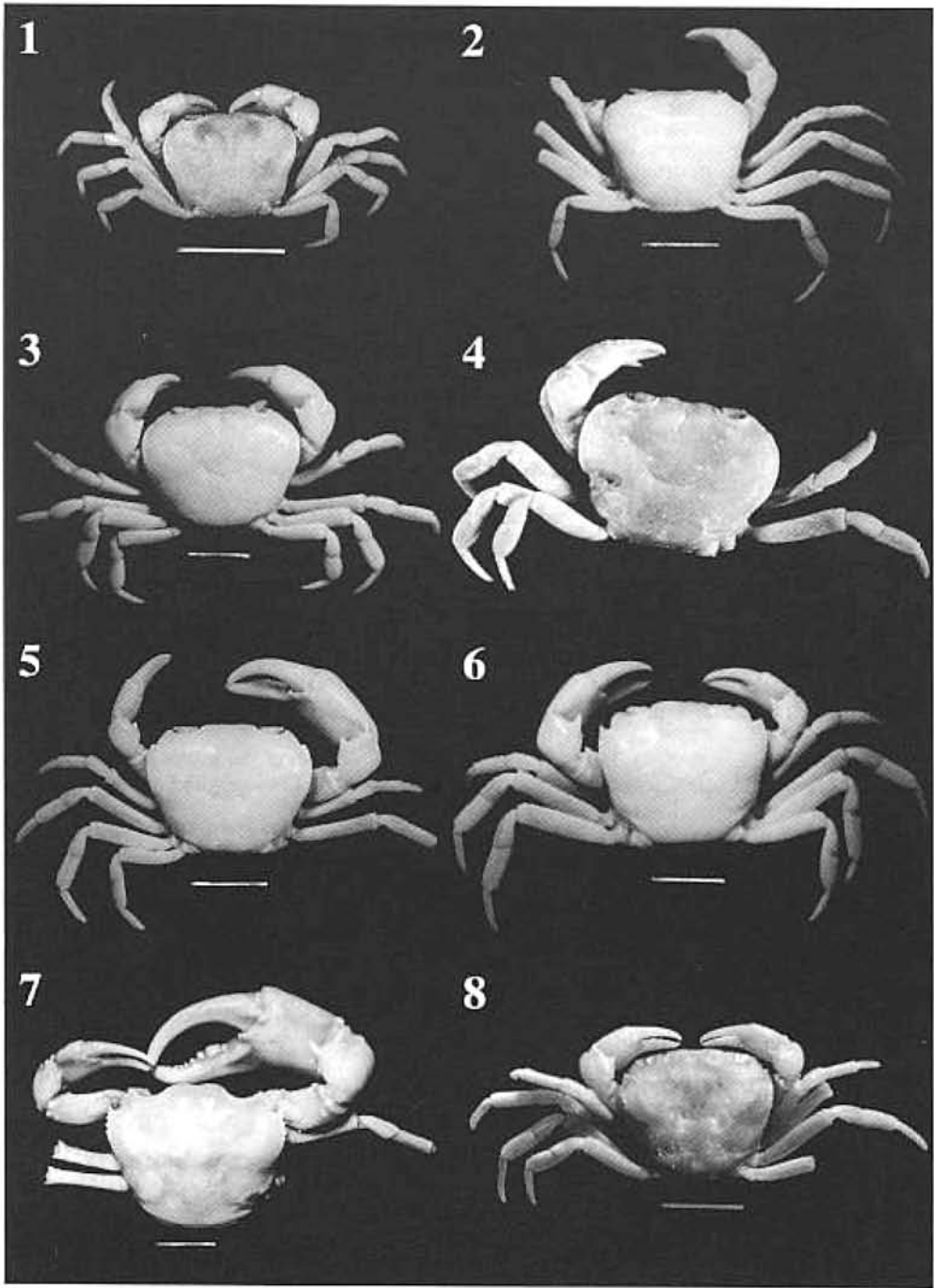


Fig. 7. *Mediapotamon angustipedum* (Dai & Song, 1982). 1-6, male; 7-8 female. 1. Third maxilliped; 2. Male abdomen; 3. Male first pleopod, in situ; 4. Male first pleopod; 5. Male first pleopod, distal segment; 6. Male second pleopod; 7. Female abdomen, 8. Female genital pore.



Pl. I. 1. *Bottapotamon engelhardti*; 2. *Bottapotamon fukienense*; 3. *Bottapotamon lingchuanense*; 4. *Bottapotamon yonganense*; 5. *Heterochelamon purpureomannualis*; 6. *Heterochelamon guangxiense*; 7. *Heterochelamon yangshuoense*; 8. *Mediapotamon augustipedum*. The scale bar represents 10 mm.

Carapace length of male 16.2 mm, width 18.8 mm; of female, length 16.3 mm, width 19.5 mm.

Distribution. - Guangxi Zhuang Autonomous Region.

ACKNOWLEDGMENTS

This project is supported by the National Natural Science Foundation of China and Senckenberg Museum, Frankfurt, Germany. The authors are grateful to Dr. Peter K. L. Ng for editing and help with the manuscript, and seeing it to publication. Mr. Tan Swee Hee and Mr. Cai Yixiong helped with the manuscript in various key aspects.

LITERATURE CITED

- Balss, H., 1937. Potamoniden (Dekapoda Brachyura) der Philippinen und des Malayischen Archipels. *Intern. Rev. Hydrobiol. u. Hydrogr.*, **34**(3-5): 143-187, Figs. 1-36.
- Bott, R., 1967. Potamidae aus Ost-Asien (*Parapotamon* de Man, *Sinopotamon* N. gen., *Candidopotamon* n. gen., *Geothelphusa* Stimpson)(Crustacea, Decapoda). *Senckenbergiana biol.*, Frankfurt, **48**(3): 203-220, pls. 7-10, Figs. 1-13.
- Bott, R., 1968. Potamiden aus Süd-Asien (Crustacea, Decapoda). *Senckenbergiana biol.*, Frankfurt, **49**: 119-130, 5 pls.
- Bott, R., 1970. Die Süßwasserkrabben von Europa, Asien, Australien und ihre Stammesgeschichte. Eine Revision der Potamoidea und Parathelphusoidea (Crustacea, Decapoda). *Abhand. Sencken. Naturf. Ges.*, Frankfurt, **526**: 1-338, pls. 1-58.
- Cheng, Y. Z., J. X. Lin & X. Q. Luo, 1993. A new species of crab of the genus *Malayopotamon* (Decapoda: Isolapotamidae). *Acta Zootax. Sinica*, **18**(4): 412-416, (in Chinese with English summary).
- Dai, A. Y., G. X. Chen, Y. Z. Song, P. F. Fan, Y. G. Lin & Y. Q. Zeng, 1979. On New Species of Freshwater Crabs Harboring Metacercariae of Lung Flukes. *Acta Zootax. Sinica*, **4**(2): 122-121, 1 pl. (in Chinese with English summary).
- Dai, A. Y., Y. Z. Song, L. L. Li & P. X. Liang, 1980. New Species and New Record Of Freshwater Crabs from Guangxi. *Acta Zootax. Sinica*, **5**(4): 368-376, 1 pl. (in Chinese with English summary).
- Dai, A. Y. & Y. Z. Song, 1982. A New Species of *Malayopotamon* (Crustacea: Decapoda) from Guangxi. *Acta Zootax. Sinica*, **7**(4): 372-373 (in Chinese with English summary).
- Man, J. G., De, 1892. Decapoden des Indischen Archipels. *Zool. Ergeb. Reise Nieder-land. Ost-Indien*, **2**: 265-527.
- Man, J. G. De, 1902. Die von Herrn Professor Kükenthal in Indischen Archipel gesammelten Dekapoden und Stomatopoden. In: W. Kükenthal, Ergebnisse einer zoologischen Forschungsreise in den Molukken und Borneo. *Abh. Senckenberg. Naturforsch. Gesell.*, **25**: 467-929, pls. 19-27.
- Man, J. G., De, 1907. On a Collection of Crustacea, Decapoda and Stomatopoda chiefly from the Inland Sea of Japan, with Descriptions of New Species. *Trans. Linn. Soc. Lond., Zool.*, (2)**9**: 387-453, pls. 31-33.
- Miers, E. J., 1880. On a Collection of Crustacea from the Malayan Region. Part. II. Telpheusea, Catometopa and Oxystemata. *Ann. Mag. Nat. Hist.*, **5**: 304-317, pl. 14.

Ng, P. K. L., 1994. The citation of species names and the role of the author's name. *Raffles Bull. Zool.*, 42(3): 509-513.

Ng, P. K. L. & D. Wowor, 1991. A New Species of *Malayopotamon* Bott, 1938 (Crustacea: Decapoda: Brachyura: Potamidae) from Northern Sumatra. *Treubia*, 30(2): 165-170.

Nobili, G., 1900. Decapodi e Stomatopodi Indo-Malesi. *Ann. Mus. civ. Stor. nat. Genova*, 20: 473-523.

Wu, H. W., 1934. Enumeration of the River Crabs (Potamonidae) of China, with Descriptions of Three New Species. *Sinensia*, 4: 338-352.

Received 15 Jul 1996
Accepted 10 Oct 1997