Descriptions of two new cavernicolous species of *Chinapotamon* Dai & Naiyanetr, 1994 (Crustacea: Brachyura: Potamidae) from China

Peter K. L. Ng

**Abstract.**—Two new species of potamid freshwater crabs of the genus *Chinapotamon* Dai & Naiyanetr, 1994, are described from caves in Guangxi, southwestern China. Although obtained inside caves, *C. dashiwei* n. sp. does not show any cave-adapted morphological features, differing from congeners in the form of the carapace, structure of the male pleon and male first gonopods. *Chinapotamon clarkei* n. sp., on the other hand, has lost much of its body pigmentation, has conspicuously long ambulatory legs and the eyes are reduced with the cornea small. In these aspects, *C. clarkei* differs from all other *Chinapotamon* species and is the most stygobitic potamid currently known from China.

**Key words:** Guangxi, China, cavernicole, Potamidae, new species, taxonomy

**Introduction**

In the early 2000s, a joint speleological team from China, Great Britain and Australia explored a number of cave systems in Guangxi, southwestern China (Figs. 1, 5; Clarke, 2001a–c, 2002a, b, 2004, 2006). As part of their surveys, various biological samples were obtained, which included several decapod crustacean specimens which were passed to the author for study in 2003. These included a species of palaemonid shrimp of the genus *Macrobrachium* Spence Bate, 1868, and two new species of the potamid genus *Chinapotamon* Dai & Naiyanetr, 1994. The palaemonid was described as a new species, *Macrobrachium lingyunense*, by Li et al. (2006), and was the first stygobitic shrimp known from China. The paper describing the two new *Chinapotamon* species, however, was delayed by other projects and not completed until now.

The wholly Chinese potamid genus *China-potamon* Dai & Naiyanetr, 1994, was established for six species: *C. anglongense* Dai & Naiyanetr, 1994; *C. depressum* (Dai, Song, Li & Liang, 1980) (type species); *C. glabrum* (Dai, Song, Li & Liang, 1980); *C. longlinense* Dai & Naiyanetr, 1994; *C. pusillum* (Song, 1984) and *C. xingrenense* Dai & Naiyanetr, 1994 (Dai, 1999; Ng et al., 2008). All species occur in southern and southwestern China, in the provinces of Guangdong, Guangxi and Guizhou. “*Chinapotamon tiankengense*” was described by Chen & Chang (2002) from a cave in Guangxi but this name is not available under the current rules of nomenclature (see below).

In this study, the two new species of *Chinapotamon* are described with a suite of morpho-
logical characters. Specimens are deposited in the Zoological Reference Collection (ZRC) of the Lee Kong Chian Natural History Museum, National University of Singapore. The terminology used mostly follows that by Ng (1988). Measurements (in millimetres) are of the maximum carapace width and length, respectively. The abbreviations are used: asl = above sea level; coll. = collected by; G1 = male first gonopod; G2 = male second gonopod.

**Taxonomy**

Family Potamidae Ortmann, 1896

Subfamily Potamiscinae Bott, 1970, 
sensu Yeo & Ng, 2004

*Chinapotamon* Dai & Naiyanetr, 1994

*Chinapotamon dashiwei* n. sp. 
(Figs. 2–4, 8A–D, 9A)

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*Chinapotamon tiankengense* G.-X. Chen & C.-K. Chang, 2002 (nomen nudum).

**Material examined**

Holotype: male (27.1 × 21.2 mm) (ZRC 2015.315), Tiankeng Cave, Dashiwei, Leye, 200 m into cave from entrance, 815 m asl, 24° 48′31.6730″N, 106°26′34.0413″E, Baise Prefecture, Guangxi, China, coll. B. Bensley, 16 March 2002. Paratype: 1 young female (18.7 × 13.7 mm) (ZRC 2015.316), same data as holotype.

**Diagnosis**

Frontal margin divided into 2 broad, low lobes, separated by broad, very shallow concavity; margin of each lobe gently convex (Figs. 2A–C, 4A); external orbital tooth low, uneven, demarcated from rest of anterolateral margin by small, shallow notch; epibranchial tooth very low, barely discernible (Figs. 2A, B, 4A); eye filling orbit, ocular peduncle relatively slender, longer; cornea large (Fig. 2A–C); third maxilliped ischium subrectangular, length to width ratio 1.4 (Fig. 2D); ambulatory legs not elongated (Figs. 2A, 3D); length to width ratio of fourth ambulatory merus 3.1; length to width ratio of fourth ambulatory propodus 2.2 (Figs. 2A, 3D); male telson width to length ratio 1.5; pleonal somite 6 broadly rectangular, width to length ratio 2.0; G1 with subterminal segment relatively stouter; terminal segment relatively shorter, stouter in ventral view, bent at about 30° outwards, gently curving upwards, (Fig. 8A–C); G2 with ratio of basal segment to distal segment 2.6 (Fig. 8D); vulvae round (Fig. 4B).

**Description**

Carapace transversely ovate, wider than long; dorsal surface gently convex, finely pitted (Figs. 2A–C, 4A). Frontal region smooth; lateral parts of anterolateral and branchial regions covered with short striae and small flattened granules; mesogastric, urogastric, cardiac and intestinal regions almost smooth except for pits; orbital regions smooth; suborbital and pterygostomial regions uneven to almost smooth, regions separated by low ridge (Fig. 2C). Epigastric cristae low, rounded, distinct, separated by broad, shallow Y-shaped furrow; postorbital cristae very low, almost undiscernible (Figs. 2A–C, 4A). Cervical grooves shallow, just visible; H-shaped median gastric groove shallow (Figs. 2A, B, 4A). Frontal margin divided into 2 broad, low lobes, separated by broad, very shallow concavity; margin of each lobe gently convex, confluent with supraorbital margin (Figs. 2A–C, 4A). External orbital tooth low, uneven, may appear weakly bidentate, demarcated from rest of anterolateral margin by small, shallow notch, lined with very low granules; epibranchial tooth very low, small, barely discernible (Figs. 2A, B, 4A). Anterolateral margins strongly convex, cristate, lined with low granules (Figs. 2A, B, 4A). Pos-
Fig. 2. *Chinapotamon dashiwei* n. sp. Holotype male (27.1 × 21.2 mm) (ZRC 2015.315), Leye. A, overall habitus; B, dorsal view of carapace; C, frontal view of cephalothorax; D, left third maxilliped.
Fig. 3. *Chinapotamon dashiwei* n. sp. Holotype male (27.1 × 21.2 mm) (ZRC 2015.315), Leye. A, B, anterior thoracic sternum, telson and male pleonal somites 4–6; C, posterior thoracic sternum, telson and male pleonal somites 1–6; D, right fourth ambulatory leg; E, outer view of chelipeds.
DESCRIPTIONS OF TWO NEW CAVERNICOLOUS SPECIES OF *CHINAPOTAMON*

terolateral margin gently concave, strongly converging towards gently convex posterior carapace margin (Figs. 2A, B, 4A). Orbits subovate; eye filling space; ocular peduncle relatively slender, longer; cornea large, ovate, pigmented (Fig. 2A–C). Supraorbital margin gently sinuous, entire, lined with small flattened granules (Fig. 2A–C). Suborbital (= infraorbital) margin concave, complete, lined with small granules (Fig. 2C). Antennae very short, not reaching cornea of eyes; antennules short, folding transversely in narrow fossa (Fig. 2C). Posterior margin of epistome with distinct broad median triangle, each lateral margin with 2 concavities (Fig. 2C). Mandibular palp distinctly 3-segmented; terminal article as single lobe.

Mandibular palp 3-segmented; terminal article as single lobe. Third maxillipeds covering almost entire buccal cavity when closed; ischiu subrectangular, length to width ratio 1.4, smooth, with distinct median oblique groove; merus subquadrate, as wide as long, surface smooth, anteroexternal angle rounded, not expanded; exopod slender, reaching to one-third length of merus, flagellum distinct, as long as

Fig. 4. *Chinapotamon dashiwei* n. sp. Paratype female (18.7 x 13.7 mm) (ZRC 2015.316), Leye. A, overall habitus; B, thoracic sternum showing vulvae.
Cheliped asymmetrical (Figs. 2A, 3E). Anterior margin of basis-ischium almost smooth; margins of merus granulated (Fig. 2A). Outer surface of carpus gently rugose, upper surface with broad, shallow longitudinal furrow, inner distal angle with distinct sharp tooth, with smaller tooth basally (Fig. 2A). Outer surfaces of chelae with numerous pits, otherwise smooth; major chela stouter, shorter than minor chela (Figs. 2A, 3E). Fingers of major chela, stout, gently curved, longer than palm, outer surface lined with 3 rows of pits; cutting edges of both fingers with small teeth on distal half, forming narrow gape when fingers closed (Fig. 3E). Fingers of minor chela slender, otherwise similar to condition of major chela (Fig. 3E).

Ambulatory legs not elongated; second pair longest, last pair shortest (Figs. 2A, 3D, 4A). Outer surface of merus slightly rugose, dorsal margin weakly serrated, with low subdistal tooth, length to width ratio of fourth merus 3.1; carpus smooth, outer surface with low submedian crista on first to third legs, smooth on fourth leg; propodus subrectangular, length to width ratio of fourth propodus 2.2; dactylus gently curved, margins with short, sharp pectinate spines (Figs. 2A, 3D, 4A).

Thoracic sternum relatively narrow transversely, surface distinctly pitted (Fig. 3A, B). Sternites 1, 2 completely fused to form broadly triangular plate; separated from sternite 3 by prominent complete suture; sternites 3, 4 completely fused, with separation demarcated by shallow oblique concavity; sternopleonal cavity reaching to imaginary line connecting bases of cheliped coxae (Fig. 3A, B). Male pleonal locking tubercle just behind median part of sternite 5. Vulvae round (Fig. 4B).

Male pleon triangular, all somites and telson free; telson relatively broad, lateral margins sinuous, width to length ratio 1.5; somite 6 broadly rectangular, width to length ratio 2.0; somites 3–5 trapezoidal, gradually decreasing in width; somite 2 trapezoidal, reaching to bases of coxae of fourth ambulatory legs, thoracic sternite 8 not visible when pleon closed; sternite 1 broadly subrectangular (Fig. 3A–C). Female pleon ovate, covering most of thoracic sternum.

G1 with terminal and subterminal segments clearly demarcated; subterminal segment relatively stout; terminal segment relatively shorter, stouter in ventral view, bent at about 30° outwards, gently curving upwards, tip subtruncate (Fig. 8A–C). G2 longer than G1, distal segment long, ratio of basal segment to distal segment 2.6 (Fig. 8D).

**Colour**

In life, the dorsal surfaces are purplish-brown, being brighter on the chelae; the ventral surfaces are white (Fig. 9A).

**Etymology**

The species is named after the Dashiwei Tiankeng. The name is used as a noun in apposition.

**Remarks**

Compared to congeners, *Chinapotamon dashiwei* n. sp. can easily be separated by its relatively longer last ambulatory propodus (length to width ratio 2.2) (1.5–1.8 in the known congeners; longer only the new species, *C. clarkei*), as well as a combination of characters: shallow cleft between the external orbital and epibranchial teeth, relatively shorter third maxilliped ischium, low rugosity on the anterolateral regions, broadly rectangular male pleonal somite 6, relatively shorter male telson and round vulva (Table 1).

*Chinapotamon dashiwei* n. sp. is probably the same species as "*Chinapotamon tiankengense* Chen & Chang, 2002" because all the material is from the same area—the Tiankeng Caves of Leye County in Guangxi Region, China. The name "*Chinapotamon tiankengense*" was first used by Chen & Chang (2002: 20) in a published abstract of a meeting of the
### Table 1. Differences between *Chinapotamon* species.

|                          | *C. depressum* | *C. glabrum* | *C. anlongense* | *C. xingrenense* | *C. longinense* | *C. pusillum* | *C. dashivei* | *C. clarkei* |
|--------------------------|----------------|--------------|----------------|------------------|----------------|--------------|--------------|--------------|
| Epigastric and postfrontal cristae | Distinct       | Low          | Low            | Low              | Low            | Relatively distinct | Low         | Low         |
| Cleft between external orbital and epibranchial teeth | Deep          | Shallow      | Shallow        | Low              | Deep           | Deep         | Shallow      | Indistinct   |
| Anterolateral crista     | Distinct       | Low          | Distinct       | Distinct         | Distinct       | Distinct      | Distinct     | Distinct     |
| Anterolateral regions    | Distinctly rugose | Smooth       | Gently rugose  | Distinctly rugose | Distinctly rugose | Gently rugose | Gently rugose | Gently rugose |
| Concavity between frontal margin lobes | Broad, shallow | Broad, shallow | Broad, shallow | Broad, shallow  | Broad, shallow | Broad, shallow | Broad, shallow | Deep C-shaped |
| Eye                      | Peduncle long, eye filling orbit, cornea normal, fully pigmented | Peduncle long, eye filling orbit, cornea normal, fully pigmented | Peduncle long, eye filling orbit, cornea normal, fully pigmented | Peduncle long, eye filling orbit, cornea normal, fully pigmented | Peduncle long, eye filling orbit, cornea normal, fully pigmented | Peduncle long, eye filling orbit, cornea normal, fully pigmented | Peduncle long, eye filling orbit, cornea normal, fully pigmented | Peduncle long, eye filling orbit, cornea normal, fully pigmented |
| Third maxilliped ischium | Length to width ratio 1.5 | Length to width ratio 1.2 | Length to width ratio 1.5 | Length to width ratio 1.5 | Length to width ratio 1.5 | Length to width ratio 1.6 | Length to width ratio 1.4 | Length to width ratio 1.3 |
| Last ambulatory merus    | Length to width ratio 3.3 | Length to width ratio 3.6 | Length to width ratio 3.1 | Length to width ratio 3.4 | Length to width ratio not known | Length to width ratio 3.1 | Length to width ratio 3.1 | Length to width ratio 4.0 |
| Last ambulatory propodus | Length to width ratio 1.7 | Length to width ratio 1.8 | Length to width ratio 1.5 | Length to width ratio 1.6 | Length to width ratio 1.6 | Length to width ratio 1.6 | Length to width ratio 2.2 | Length to width ratio 2.4 |
| Male pleonal somite 6    | Relatively quadrate, width to length ratio 1.8 | Relatively quadrate, width to length ratio 2.2 | Relatively quadrate, width to length ratio 1.8 | Relatively quadrate, width to length ratio 1.9 | Quadrate, width to length ratio 1.6 | Broadly rectangular, width to length ratio 2.0 | Broadly rectangular, width to length ratio 2.1 | Broadly rectangular, width to length ratio 2.1 |
| Male telson              | Width to length ratio 1.3 | Width to length ratio 1.4 | Width to length ratio 1.3 | Width to length ratio 1.2 | Width to length ratio 1.3 | Width to length ratio 1.5 | Width to length ratio 1.4 | Width to length ratio 1.4 |
| G1 (in ventral view)     | Subterminal segment relatively slender; terminal segment relatively more slender, bent at about 30° outwards | Subterminal segment relatively slender; terminal segment relatively more slender, bent at about 30° outwards | Subterminal segment relatively very slender; terminal segment relatively very slender, bent at about 20° outwards | Subterminal segment relatively stout; terminal segment relatively very slender; bent at about 45° outwards | Subterminal segment relatively stout; terminal segment relatively very slender, bent at about 30° outwards | Subterminal segment relatively stout; terminal segment relatively more slender, bent at about 30° outwards | Subterminal segment relatively stout; terminal segment relatively more slender, bent at about 30° outwards |
| G2                       | Basal segment to distal segment ratio 2.3 | Basal segment to distal segment ratio 2.2 | Basal segment to distal segment ratio 2.1 | Basal segment to distal segment ratio 2.2 | Basal segment to distal segment ratio 2.0 | Basal segment to distal segment ratio 2.6 | Basal segment to distal segment ratio 2.6 | Basal segment to distal segment ratio 2.6 |
| Vulva                    | Ovate          | Ovate        | Subovate       | Ovate            | Round          | Round        | Round        | Not known    |

Chinese Crustacean Society. Translated, the text reads “In Spring 2001, the China Academy of Science and the China Cave Society formed a joint study team to the world’s largest group of caves at Guangxi province, Leye county, Tiankeng caves for scientific explorations."
Some cave animals were discovered in Tiankeng’s deepest part—600 m at the bottom of a rock formation. Taxonomical and ecological research was conducted on 4 potamids by the author, and the animals were found to be a new species of *Chinapotamon* Dai et Naiyanetr, 1994, here named as *Chinapotamon tiankengense* sp. nov. The new species is closest to *Chinapotamon depressum* (Dai et al., 1980), but has distinct differences such as the first [male] pleopod being short and stout versus slender and long of the latter; the length of the first section of the second [male] pleopod is 1.7 times that of the last section, not 1.9 times; the closed fingers of big claw have a relatively smaller gap compared to the latter; propodus and merus of the last pair of walking legs are roughly 2.2 times and 3.1 times of its width, respectively, and not 1.9 times and 2.8 times; the width of the pleonal telsons of males are about 1.5 times that of the length, and not 1.8 times; and the female vulvae are half-moon shaped compared to elongate-ovate shape of the latter. This species lives in the subterranean river a hundred metres deep at the base of ‘melted rock funnel’ of ‘Kesite Dashiwei’ at an altitude of 1000–1500 m above sea level. The cave is completely lightless, water flow is gentle in the non-rainy season, width of river more than 5 m, depth 0.5–1.0 m, fine gravel bottom, clear waters, with the beam from a flashlight penetrating to the bottom; water rises quickly during the rainy season, fast flowing, depth can reach more than 10 m. Other aquatic animals include shrimps and fish, and on the walls and crevices of the cave are spiders, myriapods and many other insects.

“*Chinapotamon tiankengense* Chen & Chang, 2002”, however, is not an available name. Article 16.4.1 of the ICZN (1999) Code states that there must be an explicit fixation of a holotype, or syntypes, for the nominal taxon; and Article 16.4.2 requires that “Where the holotype or syntypes are extant specimens, by a statement of intent that they will be (or are) deposited in a collection and a statement indicating the name and location of that collection.” As the conditions for both articles are not fulfilled, the name is not available for nomenclatural purposes.

The present specimens of *C. dashiwei* agree with most of the characters documented by Chen & Chang (2002) with regards to the proportions of the ambulatory legs and telson as well as shape of the female vulva. The ratios of the length of the basal to distal segments of the G2 given by Chen & Chang (2002)—1.6 for “*C. tiankengense*” and 1.9 for *C. depressum* are difficult to understand and we are not sure how they measured the structure. Dai & Naiyanetr (1994: 56, 68) and Dai (1999: 94) both give 2.3 times as the ratio between the G2 basal and distal segments for *C. depressum*; and their figures support this proportion. In the present male, the ratio of the length of the basal to distal segments of *C. dashiwei* is 2.6, i.e. longer than that of *C. depressum*. The G2 basal segment of *C. depressum* is clearly relatively shorter than that of *C. dashiwei* (Fig. 8D) which accounts for the different ratios. The character of whether the fingers of the chela are gaping is not a good character as that is normally associated with size; with large males possessing more curved fingers and usually a more pronounced gape. Chen & Chang (2002) described the vulvae of their new species as “half-moon shaped” in contrast to the “elongate-ovate shape” condition of *C. depressum*; and that of *C. dashiwei* is clearly rounded (Fig. 3B) rather than the ovate condition in *C. depressum* (cf. Dai & Naiyanetr, 1994: fig. 5–8).

**Ecology**

The type specimens of *Chinapotamon dashiwei* were collected near the entrance bivouac of Dashiwei Tiankeng (= Big Stone Cave), approximately 200 m into the cave where the main stream flows further into the this subterranean system (Fig. 1). It was obtained in the slack water close to the muddy bank; the cave
winters were clear at the time of collection, even though the stream bed's substrate rocks and stones were covered with fine sediment. These specimens are all fully pigmented, with the eyes fully developed (Fig. 9A).

Although the types were found from inside a hypogean habitat, i.e., the stream cave system of the Dashiwei tiankeng, C. dashiwei does not possess any of the key characters associated with an obligate stygobite: prominently elongated pereopods, reduction in size of the eye and loss of pigmentation (including that in the cornea), so the species, is at best a stygophile (Shih & Ng, 2012: 9; Ng, 2013: 95). It is likely the species will be found in epigean habitats in the future.

The loach *Triplophysa cf. nandanensis* Lan, Yang & Chen, 1995 (Balitoridae) and catfish *Pterocryptis gilberti* (Hora, 1938) (Siluridae) were also found in the Dashiwei cave (Clarke, 2004: 74, 76).

**Chinapotamon clarkei** n. sp. (Figs. 6, 7, 8E–H, 9B) urn:lsid:zoobank.org:act:56809F77-6EEA-4AAA-B262-D83C4A589975

**Material examined**

Holotype: male (30.8 × 23.5 mm) (ZRC 2015.317), Yanliu Suidao (Yan Liu Dong hydropower station tunnel), on way to base of Yan Liu Dong (Rock Flow Cave), 138 km south of Leye (35–36 km north of Baise), south of Lingyun town, Lingyun County, Baise Prefecture, northwestern Guangxi, China, 200 m from surface, 1.2 km inside cave, 432 m asl, ca. 24°12.2′N, 106°40.11′E, coll. A. Clarke, 4 April 2002.

**Diagnosis**

Frontal margin divided into 2 broad lobes, separated by deep C-shaped concavity; margin of each lobe conspicuously convex (Fig. 6A, B); external orbital tooth low, not clearly demarcated from rest of anterolateral margin; epibranchial tooth not discernible (Fig. 6A, B); eye not filling orbit, ocular peduncle shortened, cornea reduced (Fig. 6A–C); third maxilliped ischiium subrectangular, length to width ratio 1.3 (Fig. 6D); ambulatory legs relatively elongated (Fig. 6A); length to width ratio of fourth ambulatory merus 4.0; length to width ratio of fourth ambulatory propodus 2.4 (Figs. 6A, 7D); male telson relatively broad, width to length ratio 1.4; male pleonal somite 6 broadly rectanglar, width to length ratio 2.1 (Fig. 7A–C); G1 with subterminal segment relatively stout; terminal segment relatively longer, more slender in ventral view, bent at about 30° outwards, gently curving upwards (Fig. 8A–C); G2 with ratio of basal segment to distal segment 2.6 (Fig. 8D); vulva structure not known.

Fig. 5. Type locality of *Chinapotamon clarkei* n. sp., A, area of Yan Liudong (Rock Flow Cave), western Guangxi, China; B, Yan Liudong: note concrete support wall beside main road on top of slope above cave entrance; C, cave entrance showing mud banks beside swirling underground waters of Chengbi River at base of Yan Liudong. Photographs by Arthur Clarke, 3 October 2000.
Fig. 6. *Chinapotamon clarkei* n. sp. Holotype male (30.8 × 23.5 mm) (ZRC 2015.317), Lingyun. A, overall habitus; B, dorsal view of carapace; C, frontal view of cephalothorax; D, left third maxilliped.
Description

Carapace transversely ovate, wider than long; dorsal surface gently convex, finely pitted (Fig. 6A–C). Frontal region smooth; lateral parts of anterolateral and branchial regions covered with short striae and small granules; mesogastric, urogastric, cardiac and intestinal regions almost smooth except for pits; orbital regions smooth; suborbital and pterygostomial regions uneven to almost smooth, regions separated by low ridge (Fig. 6C). Epigastric cristae low, rounded, distinct, separated by broad, shallow Y-shaped furrow; postorbital cristae very low, almost undiscernible (Fig. 6A–C).

Cervical grooves shallow, just visible; H-shaped median gastric groove shallow (Fig. 6A, B). Frontal margin divided into 2 broad lobes, separated by deep C-shaped concavity; margin of each lobe conspicuously convex, confluent with supraorbital margin (Fig. 6A). External orbital tooth low, not clearly demarcated from rest of anterolateral margin; epi-branchial tooth not discernible (Fig. 6A, B). Anterolateral margins strongly convex, cristate, lined with low granules (Fig. 6A, B). Postero-lateral margin gently concave, strongly converging towards gently convex posterior carapace margin (Fig. 6A, B). Orbits subovate; ocular peduncle shortened, eye not filling orbit; cornea reduced but pigmented (Fig. 6A–C). Supraorbital margin gently concave, entire, lined with small flattened granules (Fig. 6A–C). Suborbital (= infraorbital) margin concave, complete, lined with small granules (Fig. 6C). Antennae very short, not reaching cornea of eyes; antennules short, folding transversely in narrow fossa (Fig. 6C). Posterior margin of epistome with distinct broad median triangle, each lateral margin with 2 concavities (Fig. 6C). Mandibular palp distinctly 3-segmented; terminal article as single lobe.

Third maxillipeds covering almost entire buccal cavity when closed; ischium subrectangular, length to width ratio 1.3, smooth, with distinct median oblique groove; merus sub-quadrature, as wide as long, surface smooth, anteroexternal angle rounded, not expanded; exopod slender, reaching to one-third length of merus, flagellum distinct, as long as width of merus (Fig. 6D).

Chelipeds asymmetrical (Fig. 6A). Anterior margin of basis-ischium almost smooth; margins of merus granulated (Fig. 6A). Outer surface of carpus gently rugose, upper surface with broad, prominent longitudinal furrow, inner distal angle with large sharp tooth, with smaller tooth basally (Fig. 6A). Outer surfaces of chelae with numerous pits, otherwise smooth; major chela stouter, shorter than minor chela (Figs. 6A, 7E). Fingers of major chela, stout, curved, longer than palm, outer surface lined with 3 distinct rows of pits; cutting edges of both fingers with smaller teeth on distal half, strong teeth on proximal part, forming prominent gape when fingers closed (Fig. 7E). Fingers of minor chela slender, cutting edges uniformly lined with small teeth (Fig. 7E).

Ambulatory legs relatively elongated; second pair longest, last pair shortest (Figs. 6A, 7D). Outer surface of merus slightly rugose, dorsal margin very weakly serrated, with very low subdistal tooth, almost undiscernible, length to width ratio of fourth merus 4.0; carpus smooth, outer surface with low submedian crista on first to third legs, smooth on fourth leg; propodus subrectangular, length to width ratio of fourth propodus 2.4; dactylus gently curved, margins with short, sharp pectinate spines (Figs. 6A, 7D).

Thoracic sternum relatively narrow transversely, surface distinctly pitted (Fig. 7A, B). Sternites 1, 2 completely fused to form broadly triangular plate; separated from sternite 3 by prominent complete suture; sternites 3, 4 completely fused, with separation demarcated by very shallow oblique concavity; sternopleonal cavity reaching to imaginary line connecting bases of cheliped coxae (Fig. 7A, B). Male pleonal locking tubercle just behind median part of sternite 5.
Male pleon triangular, all somites and telson free; telson relatively broad, lateral margins sinuous, width to length ratio 1.4; somite 6 broadly rectangular, width to length ratio 2.1; somites 3–5 trapezoidal, gradually decreasing in width; somite 2 trapezoidal, reaching to bases of coxae of fourth ambulatory legs, thoracic sternite 8 not visible when pleon closed; sternite 1 broadly subrectangular (Fig. 7A–C).

G1 with terminal and subterminal segments...
clearly demarcated; subterminal segment relatively stout; terminal segment relatively longer, more slender in ventral view, bent at about 30° outwards, gently curving upwards, tip subtruncate (Fig. 8A–C). G2 longer than G1, distal segment long, ratio of basal segment to distal segment 2.6 (Fig. 8D).

**Colour**
In life, the overall colour is yellowish-white (Fig. 9B).

**Etymology**
The species is named after Dr Arthur Clarke, a remarkable Australian biospeleologist, whose exploration of Asian and Australian cave systems over many decades has greatly expanded our knowledge and understanding of the subterranean fauna.

**Remarks**
For differences with *C. dashiwei* n. sp. and allied taxa, see remarks for that species (see...
also Table 1). The G1 structures of *C. dashiwei* and *C. clarkei* n. sp. are very similar and not very useful to separate the two taxa. From the ventral view, however, the G1 terminal segment of *C. dashiwei* (Fig. 8A, B) is somewhat shorter and stouter compared to that of *C. clarkei* (Fig. 8E, F).

*Chinapotamon clarkei* was collected south of Lingyun, at Yanliu Suidao (Yan Liu Dong power station tunnel), located 138 km south of Leye (35–36 km north of Baise) (Fig. 5). Arthur Clarke commented: “...walked through the Yanliu Suidao tunnel to the base of Yan Liu Dong, plus collected a white crab with very tiny eyes and several fish including a subterranean ecotype of *Pterocryptis gilberti*—depigmented, tiny eye dots and long antennae-like ‘feelers’, known as barbels. We also saw several longer (15–20 cm), more elusive specimens of this same species.” (pers. comm. to first author). Clarke (2004: 75, 76) reported that the epigean loach *Garra orientalis* Hamilton, 1822 (Cyprinidae), carp *Rectoris posehensis* Lin, 1935 (Cyprinidae) and *Pterocryptis gilberti* (Hora, 1938) (Siluridae) were found.

**General Discussion**

Two other species of freshwater crabs have previously been reported from caves in China: *Daipotamon minos* Ng & Trontelj, 1996, from Guizhou; and *Sinopotamon baiyanense* N. K. Ng & Dai, 1997, from Hunan; neither of which have the characters associated with obligate hypogean stygobites. In this respect, they are like *Chinapotamon dashiwei* n. sp. described in this paper. It is possible they have entered the cave habitat relatively recently, and while completely or primarily cavernicolous in habits, they have not evolved the attributes of more typical stygobites (Ng & Trontelj, 1996; N. K. Ng & Dai, 1997). All three species have been reported only from caves thus far, although it is possible they may occur in non-cave habitats once more detailed collections are done in their respective type localities.

*Chinapotamon clarkei* n. sp. is different. It has already several characters associated with a true stygoglotype: a reduced body colour (yellowish-white), reduced eyes with a reduced cornea and pigmentation, and relatively more elongate ambulatory legs. As it stands, it is the most cave-adapted crab now known from China.

It is noteworthy that while *C. dashiwei* and *C. clarkei* are from geographically close locations in neighbouring counties in northwestern Guangxi region (ca. 70 km apart), the geological and probable hydrological history of these two sites are quite different. The geology of this part of Guangxi is complex and there are many isolated or separated blocks of karst, each with their distinct and separate hydrological regimes.
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**Address**

(PKLN) Lee Kong Chian Natural History Museum, National University of Singapore, 2 Conservatory Drive, Singapore 117377, Republic of Singapore.

**E-mail address of corresponding author:** peterng@nus.edu.sg