

Two new species of freshwater crabs of the genus *Hypolobocera* from Colombia (Crustacea: Decapoda: Pseudothelphusidae)

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Abstract.—Two new species of the genus *Hypolobocera* Ortmann, 1897, *H. kamsarum* and *H. emberarum*, from the Colombian Andes mountains, are described. The presence of a mesial lobe on the first gonopod of *H. kamsarum*, and a large triangular lateral lobe on the first gonopod of *H. emberarum*, distinguish these species from all others in the genus.

The genus *Hypolobocera* Ortmann, 1897, comprises a group of 28 species of freshwater crabs that inhabit a vast territory in Colombia, Venezuela, Ecuador and Perú. This is by far the most extended distribution in all the pseudothelphusid genera. The systematics and biogeography of the genus has been reviewed by Rodríguez (1982, 1992), and corrections to the diagnosis of several species have been published recently by Rodríguez (1994).

The morphology of the first male gonopod, a basic character for the diagnosis of the species, displays considerable variability in this group. To facilitate species identification, Rodríguez (1982) proposed the division of the genus into six groups, based on morphological and biogeographical characters. However, several transitional or aberrant species are still difficult to assign with complete certainty to any group. This is the case with one of the two new species described herein, *Hypolobocera kamsarum*, obtained during recent explorations of the Andean mountains of Colombia.

In the description of these two new species we have used the terminology established by Smalley (1964) for the different processes of the male first gonopods. The material is deposited at the Museo de Historia Natural, Instituto de Ciencias Natura-

les, Universidad Nacional de Colombia, Bogotá (ICN-MHN). The abbreviations cb and cl are used for carapace breadth and carapace length, respectively.

Family Pseudothelphusidae Rathbun, 1893
Tribe Hypolobocerini Pretzmann, 1971
Genus *Hypolobocera* Ortmann, 1897
Hypolobocera kamsarum, new species
Figs. 1, 2

Material examined.—Vereda Alto Campucana, Municipio Mocoa, Putumayo Department, Colombia, 1350 m alt., 2 Jun 1994, leg. O. V. Castaño: 1 male holotype, cl 14.0 mm, cb 23.7 mm (ICN-MHN-CR 1349); 1 male paratype, cl 13.4 mm, cb 21.8 mm, 1 female paratype, cl 14.6 mm, cb 24.8 mm (ICN-MHN-CR 1350).

Diagnosis.—First gonopod apex oval, with field of spines, mesial border strongly projected proximally, forming strong triangular mesial lobe; caudal ridge straight, strongly concave proximally in lateral view; lateral lobe small, transverse, evenly rounded in lateral view, ending far from apex of gonopod. Exognath of third maxilliped relatively long, approximately 0.6 length of ischium of third maxilliped.

Description of holotype.—Carapace narrow (cb/cl = 1.7). Cervical groove almost

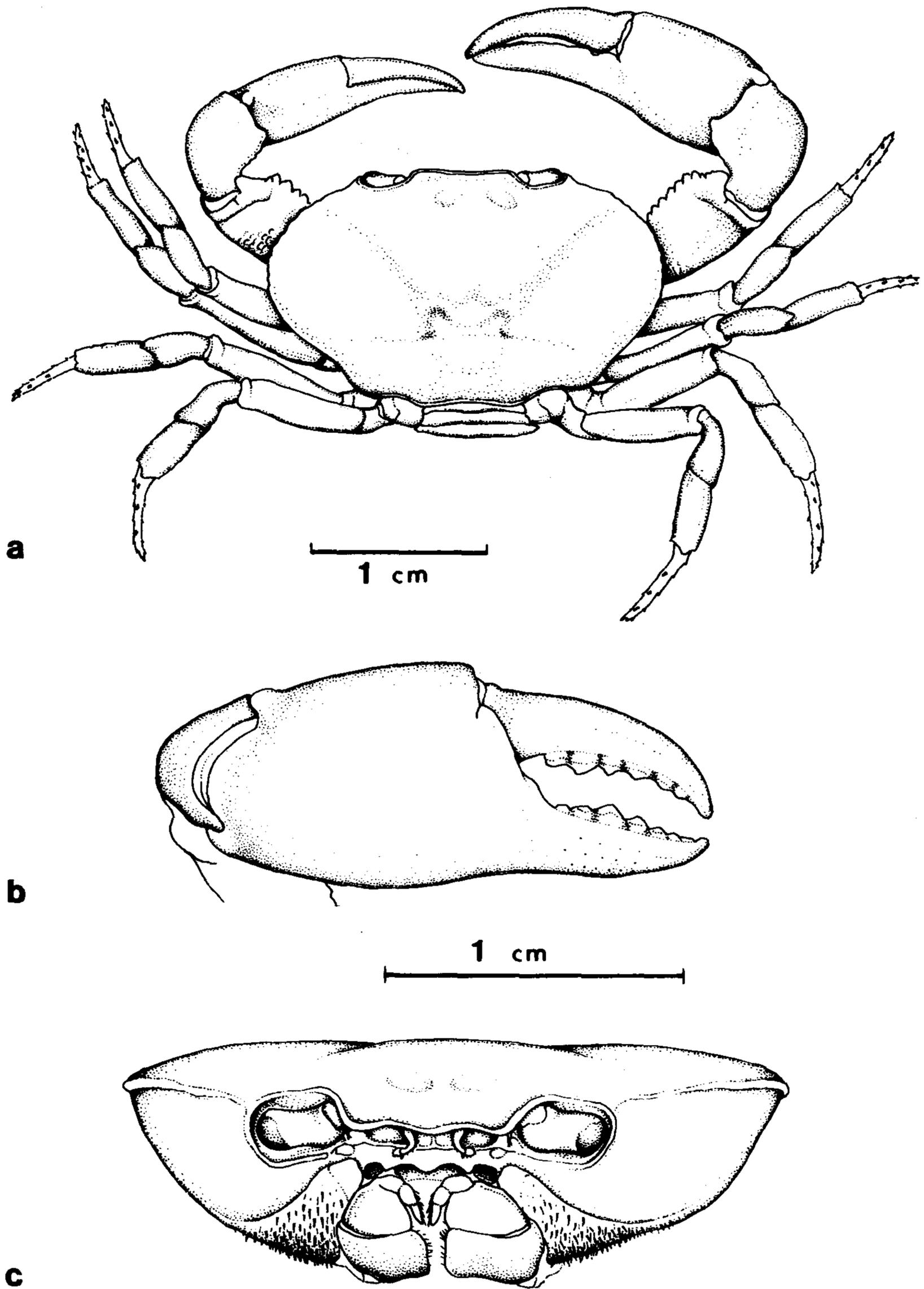


Fig. 1. *Hypolobocera kamsarum*, new species, holotype: a, dorsal view of carapace and pereiopods; b, chela of largest cheliped, external view; c, frontal view of carapace.

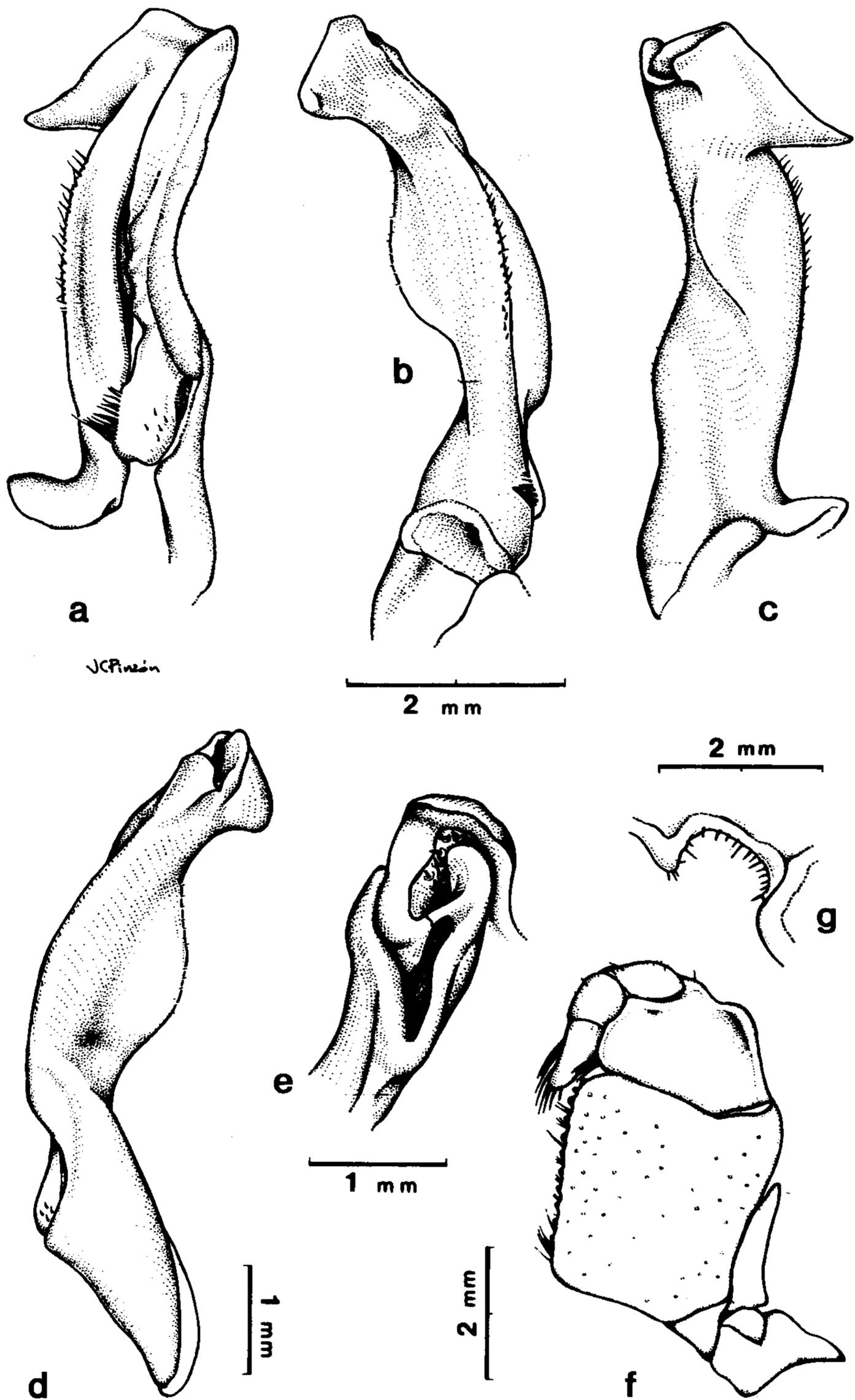


Fig. 2. *Hypolobocera kamsarum*, new species, holotype, left first gonopod: a, whole gonopod, caudal view; b, whole gonopod, mesial view; c, whole gonopod, cephalic view; d, distal portion of lateral view; e, detail of apex, cephalic view; f, left third maxilliped; g, aperture of left efferent channel, frontal view.

straight and deep, ending far from lateral margin. Anterolateral margin with papillae not well defined; posterior half smooth. Postfrontal lobes small, ovals shaped, low. Median groove absent. Surface of carapace between front and postfrontal lobes inclined anteriorly and towards mid-line. Upper border of front bilobed in dorsal view, without tubercles; lower margin strongly sinuous in frontal view; front between upper and lower margin low, vertical. Lower orbital margins each with row of tubercles. Surface of carapace smooth, covered by small papillae; limit between regions indistinct (Fig. 1a, c).

Palm of larger chela (right) strongly swollen, without proximal tubercle on fingers, fingers not gaping when closed (Fig. 1b). Palm of smaller chela moderately swollen, fingers not gaping when closed. Walking legs (pereiopods 2–5) slender, but not unusually elongated; pereiopods 2 and 3 longest of similar in length (length 1.16 times breadth of carapace). Dactylus of pereiopods 2–5 each with 5 rows of spines diminishing in size proximally; arrangement of spines on dactylus of left third pereiopod as follows: anterolateral row with 4 spines, anteroventral row with 5 spines plus 1 proximal papilla, external row with 4 spines plus 2 intercalated papillae and 1 pair of proximal papillae, posteroventral row with 3 spines, and posterolateral row with 3 spines plus 1 proximal papilla. Exognath of third maxilliped relatively long, approximately 0.6 length of ischium of third maxilliped; merus of third maxilliped with acute angle on distal half of external margin (Fig. 2f). Efferent branchial channel open (Fig. 2g).

First gonopod with caudal ridge straight, strongly concave proximally (lateral view); lateral lobe small, transverse, evenly rounded (lateral view), ending far from apex of gonopod (Fig. 2a, b, d); apex oval, with mesial border strongly projected proximally, forming strong triangular mesial lobe (Fig. 2e).

Color.—Specimens preserved in alcohol: carapace overall chestnut mottled with or-

ange. Walking legs lighter than carapace with scattered orange specks.

Etymology.—The species is named for the Kamsá Indians, in whose territory the species was found.

Remarks.—Although the hypoloboceran traits are quite distorted in this species by the development of a triangular apical mesial lobe of the first gonopod, the lateral lobe is still characteristic of the genus. Based on Rodríguez (1982), *Hypolobocera kamsarum* can be considered a transitional species as mentioned in the introduction.

Hypolobocera emberarum, new species
Figs. 3, 4

Material examined.—Vereda El Veinte, Municipio El Carmen, near the Atrato River, Chocó Department, Colombia, 2800 m alt., 30 May 1994, leg. I. D. Vélez: 1 male holotype, cl 14.2 mm, cb 23.8 mm (ICN-MHN CR-1358); 2 male paratypes, cl 13.1 and 13.0 mm, cb 22.0 and 21.8 mm, 3 female paratypes cl 13.4, 13.2 and 12.7 mm, cb 22.6, 22.3 and 21.4 mm (ICN-MHN CR-1359). Valle de Pérdidas, Municipio Urrao, Antioquia Department, Colombia, 1800 m alt., 3 Sep 1994, leg P. Duque: 3 males, cl 14.1, 11.4 and 10.9 mm, cb 23.8, 19.1 and 18.3 mm, 3 females, cl 14.0, 12.8 and 12.7 mm, cb 23.5, 21.5 and 21.4 mm (ICN-MHN CR-1383).

Diagnosis.—First gonopod with caudal ridge long, straight; lateral lobe prominent, subtriangular, hatchet-shaped, wider proximally, spinulated, extending near apex of gonopod and forming deep notch distally, with longitudinal ridge at base; apex with oval field of spines, with cephalic side rounded, projected cephalad. Exognath of third maxilliped strongly reduced, approximately 0.20 length of ischium of endognath. Lateral sides of carapace conspicuously hairy in largest specimens.

Description of holotype.—Carapace narrow (cb/cl = 1.7). Cervical groove deep, wide, slightly sinuous, ending far from lateral margin. Anterolateral margin smooth.

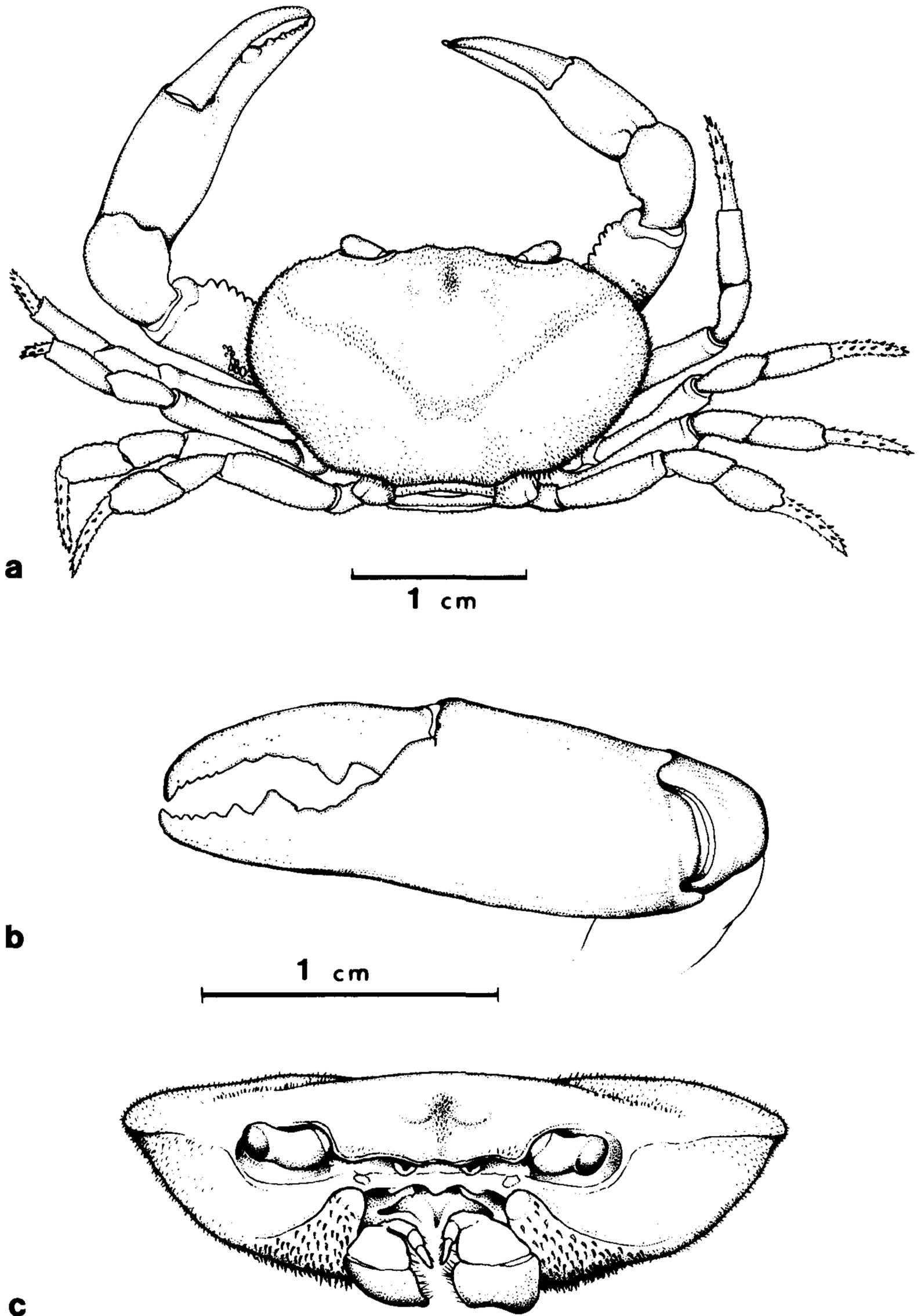


Fig. 3. *Hypolobocera emberarum*, new species, holotype: a, dorsal view of carapace and pereiopods; b, chela of largest cheliped, external view; c, frontal view of carapace.

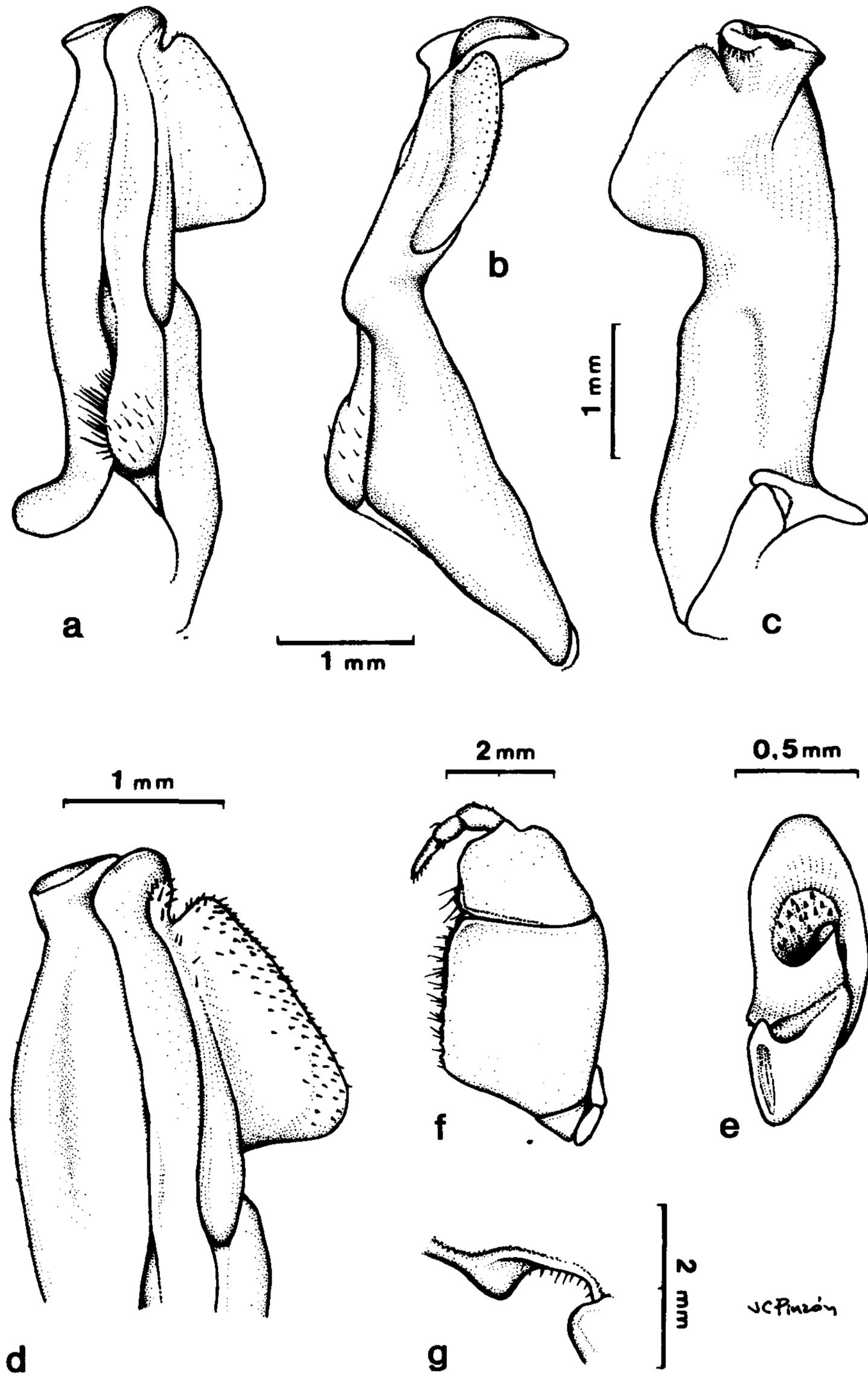


Fig. 4. *Hypolobocera emberarum*, new species, holotype, left first gonopod: a, whole gonopod, caudal view; b, whole gonopod, lateral view; c, whole gonopod, cephalic view; d, detail of apex, caudal view; e, detail of apex, superior view; f, left third maxilliped; g, aperture of left efferent channel, frontal view.

Postfrontal lobes ovals shaped, low. Median groove deep, narrow. Surface of carapace between front and postfrontal lobes inclined anteriorly. Upper border of front bilobed in dorsal view; lower margin sinuous in frontal view, with small tubercles. Surface of carapace smooth, covered by small papillae. Lateral sides of carapace conspicuously hairy in largest specimens (Fig. 3a, c).

Palm of larger chela (left) elongated, swollen, without proximal tubercle on fingers; fingers slender, slightly gaping when closed (Fig. 3b). Palm of smaller chela moderately swollen, fingers not gaping when closed, with tips crossing. Walking legs (pereiopods 2–5) slender, dactylus of pereiopods each with 5 rows of spines diminishing in size proximally; arrangement of spines on dactylus of right third pereiopod as follows: anterolateral row with 6 spines plus 3 proximal papillae, anteroventral row with 5 spines plus 3 proximal papillae, external row with 5 spines plus 2 papillae intercalated and 1 pair of proximal papillae, posteroventral and posterolateral rows with 4 spines. Exognath of third maxilliped 0.2 as long as ischium of third maxilliped; merus of third maxilliped with acute angle on distal half of external margin (Fig. 4f). Efferent branchial channel open (Fig. 4g).

First gonopod strongly bent in middle, caudal ridge long, straight, reaching to apex of gonopod; lateral lobe prominent, subtriangular, hatchet-shaped, wider proximally, extending near apex of gonopod and forming deep notch distally, caudal face covered with spinules (Fig. 4a, c, d); apex oval, with cephalic side rounded, projected cephalad (Fig. 4e).

Remarks.—This species resembles *Hypolobocera chocoensis* Rodríguez, 1980, in the shape of the lateral lobe of the first gonopod. However, the lateral lobe of *H. chocoensis* does not extend near the apex, and lacks a distal notch. Based on Rodríguez (1982), and on the general morphology and biogeography of *H. emberarum*, this species can be considered to belong to group IV.

Color.—Specimens preserved in alcohol: carapace and chelipeds overall dark brown-olive. Walking legs slightly lighter than carapace.

Etymology.—The species is named for the Embera Indians, in whose territory the species was found.

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