

**A new species of freshwater
crab of the genus *Strengeriana* from Colombia
(Crustacea: Decapoda: Pseudothelphusidae)**

Martha R. Campos

Universidad Nacional de Colombia, Instituto de Ciencias Naturales,
Apartado Aéreo 53416, 114 Bogotá 2, Colombia

Abstract.—A new species of the genus *Strengeriana* Pretzmann, 1971, *S. florenciae*, from the Central Cordillera of Colombia is described. The new species closely resembles *Strengeriana bolivarensis* Rodríguez & Campos, 1989, but can be easily distinguished by the shorter and bilobed mesial process and by the absence of a proximal spine at the lateral lobe of the first male gonopod.

The genus *Strengeriana* Pretzmann, 1971, comprises a group of small and primitive pseudothelphusid crabs that inhabit mountain streams. Including the new species, the genus now comprises 14 species, distributed in the Sierra Nevada de Santa Marta, and the Western, Central, and Eastern Cordilleras of the Colombian Andes, at altitudes ranging from 700 to 1800 m above sea level.

The systematics and biogeography of the genus were reviewed by Rodríguez & Campos (1989), and three new species of *Strengeriana* have been recently described by Campos & Rodríguez (1993). Explorations of the Central Cordillera of Colombia have revealed the presence of an additional new species described herein.

The terminology used in the description of the first gonopod is according to the criteria established by Smalley (1964), and Rodríguez (1982). The material is deposited at the Museo de Historia Natural, Instituto de Ciencias Naturales, Universidad Nacional de Colombia, Bogotá (ICN-MHN). The abbreviations cb and cl are used for carapace breadth and carapace length, respectively.

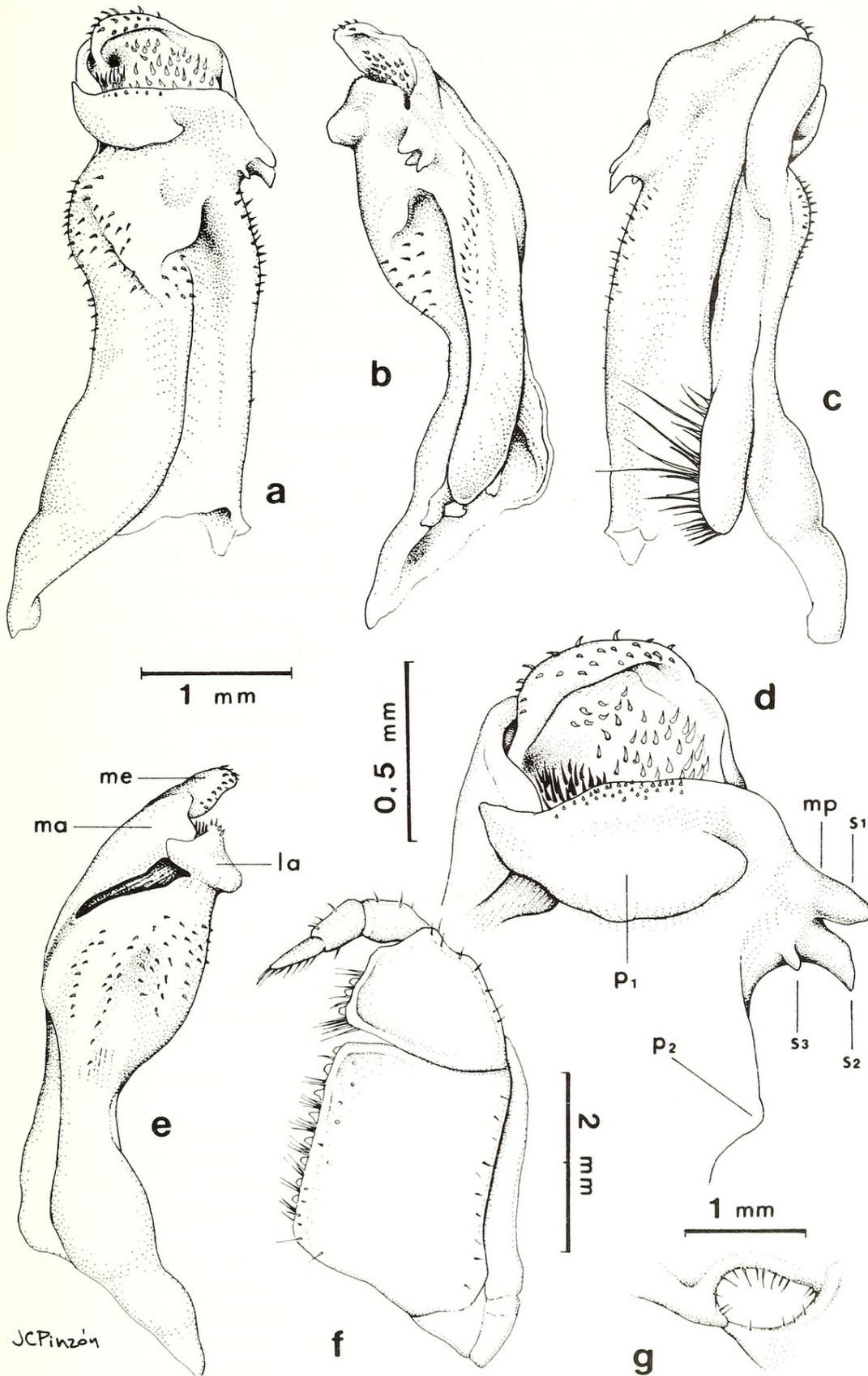
Family Pseudothelphusidae Rathbun, 1893
Tribe Strengerianini Rodríguez, 1982
Genus *Strengeriana* Pretzmann, 1971

Strengeriana florenciae, new species
Fig. 1

Material examined.—Bosque de Florencia, Corregimiento Florencia, Municipio Samaná, Caldas Department, 1800 m alt., 10 Nov 1993, J. V. Rueda: 1 male holotype, cb 19.2 mm, cl 11.5 mm; (ICN-MHN-CR 1347); 1 male paratype, cb 15.0 mm, cl 9.6 mm; (ICN-MHN-CR 1348). Vereda El Dorado, Corregimiento Florencia, Municipio Samaná, Caldas Department, 1700 m alt., 28 Jul 1994, M. R. Campos: 7 males, cb 22.8, 22.0, 21.5, 19.4, 18.2, 15.5, 13.0 mm, cl 13.8, 13.1, 12.6, 11.9, 11.4, 9.8, 8.5 mm; 5 females, cb 19.3, 18.3, 17.1, 16.2, 12.7 mm, cl 12.2, 11.3, 10.7, 10.3, 8.1 mm; (ICN-MHN-CR 1351).

Diagnosis.—Male first gonopod with short, inwardly turned, bilobed mesial process and lateral lobe with 2 processes, one semicircular, distal, and the other rudimentary, proximal.

Description.—Carapace narrow (cb/cl = 1.67). Cervical grooves straight and deep, reaching lateral margins. Anterolateral margin with depression behind orbits, followed by 7 papillae and second shallow depression at level of cervical groove; rest of margins with approximately 11 papillae, regularly spaced. Postfrontal lobes are small, ovaly



JCPinzón

Fig. 1. *Strengeriana florenciae*, new species, holotype, first left gonopod: a, total view, cephalic; b, same, mesial view; c, same, caudal view; d, same, detail of apex, cephalic view; e, same, lateral view; f, third maxilliped, left; g, aperture of efferent channel, left. la, lateral lobe; ma, marginal lobe; me, mesial lobe; mp, mesial process; p₁, p₂, lateral processes; s₁, s₂, distal spines of the mesial process; s₃, lateral spine of the mesial process.

shaped and low. Median groove absent. Surface of carapace between front and post-frontal lobes inclined anteriorly and towards mid-line. Upper border of front bilobed in dorsal view, with conspicuous tubercles. Lower margin strongly sinuous in frontal view, with tubercles. Surface of front between upper and lower borders high. Lower orbital margins each with row of tubercles. Surface of carapace smooth, covered by small papillae; the limit between the regions is indistinct.

Palm of larger chela (left) strongly inflated; fingers not gaping. Walking legs slender, but not unusually elongated, the largest being those of second and third pairs, which are of similar length (total length 1.31 times the breadth of carapace); merus in third pair 3.5 times longer than wide. Dactylus with 5 rows of large spines, diminishing in size proximally; arrangement of spines on dactylus of third left pereopod as follows: anterolateral and anteroventral rows with 5 spines plus 2 proximal papillae, external row with 5 spines plus 2 papillae and 1 pair of proximal papillae, posteroventral and posterolateral rows with 4 spines. Exognath of third maxilliped overreaches lateral margin of ischium of endognath; merus of third maxilliped shows acute angle on distal half of external margin (Fig. 1f). Orifice of efferent branchial channel closed by spine at jugal angle and by extension of lateral lobe of epistome (Fig. 1g).

Male first gonopods short, slightly arched in caudo-cephalic plane (Fig. 1b). Apex formed by 3 distinct lobes: mesial (Fig. 1e, me), marginal (caudal) (Fig. 1e, ma) and lateral (Fig. 1e, la); mesial and marginal lobes rounded, cup-shaped, with borders strongly demarcated; border of mesial lobe strongly bent at cephalic and caudal ends. Mesial lobe with short, inwardly turned, bilobed mesial process (Fig. 1d, mp), ending in 2 conical spines (Fig. 1d, S₁, S₂), and another spine located near basis of the lateral surface of process (Fig. 1c, S₃); mesial lobe forms

with lateral lobe a long slit where the genital pore is located (Fig. 1c, d). Lateral lobe forming an inflated protuberance covered with spinules (Fig. 1a, c), and 2 lateral processes, one semicircular, distal, and the other rudimentary, proximal (Fig. 1d, p₁, p₂). Internal cavity of mesial lobe densely covered by spines; with strong, dark spines near genital pore, and small spinules over distal border of lateral lobe (Fig. 1d). In addition to strong caudal setae, gonopod bears tiny setae on mesial and lateral sides (Fig. 1a, b, c).

Etymology. — The name of the species refers to the Corregimiento of Florencia, where the type was collected.

Remarks. — This species resembles *Strengeriana bolivarensis* Rodríguez & Campos, 1989, in the shape of the first male gonopod, but differs in the shape of the mesial lobe. The mesial process is longer and entire in *S. bolivarensis*; while shorter and bilobed in *S. florenciae*. *Strengeriana bolivarensis* has a proximal spine at the lateral lobe, whereas *S. florenciae* lacks this spine.

Acknowledgments

I thank J. V. Rueda for collecting the specimens. I am also very grateful to Dr. Rafael Lemaitre and the referees for their constructive comments. The illustrations were prepared by J. C. Pinzón.

Literature Cited

- Campos, M. R., & G. Rodríguez. 1993. Three new species of *Strengeriana* from Colombia (Crustacea, Decapoda, Pseudothelphusidae). — Proceedings of the Biological Society of Washington 106:508–513.
- Pretzmann, G. 1971. Fortschritte in der Klassifizierung der Pseudothelphusidae. — Anzeiger der Österreichischen Akademie der Wissenschaften Mathematische Naturwissenschaftliche Klasse 179(1/4):14–24.
- Rathbun, M. 1893. Descriptions of new species of American freshwater crabs. — Proceedings of the United States National Museum 16(959):649–661, pl. 73–77.

Rodríguez, G. 1982. Les Crabes d'eau douce d'Amérique. Famille des Pseudothelphusidae. — Faune Tropicale, ORSTOM 22:1–223.

———, & M. R. Campos. 1989. Cladistic Relationships of fresh-water crabs of the tribe Strengerianini (Decapoda: Pseudothelphusidae) from the

northern Andes, with comments on their biogeography and descriptions of new species. — Journal of Crustacean Biology 9(1):141–156.

Smalley, A. 1964. A terminology for the gonopods of the American river crabs. — Systematic Zoology 13:28–31.



Campos, Martha R. 1995. "A New Species Of Fresh-Water Crab Of The Genus Strengeriana From Colombia (Crustacea, Decapoda, Pseudothelphusidae)." *Proceedings of the Biological Society of Washington* 108, 98–101.

View This Item Online: <https://www.biodiversitylibrary.org/item/107534>

Permalink: <https://www.biodiversitylibrary.org/partpdf/44814>

Holding Institution

Smithsonian Libraries and Archives

Sponsored by

Biodiversity Heritage Library

Copyright & Reuse

Copyright Status: In copyright. Digitized with the permission of the rights holder.

Rights Holder: Biological Society of Washington

License: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Rights: <https://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.