

***Neostrengeria binderi*, a new species of pseudothelphusid crab from the eastern Andes of Colombia (Crustacea: Decapoda: Brachyura)**

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Abstract.—A new species of freshwater crab of the genus *Neostrengeria* Pretzmann, 1965, *N. binderi*, is described from Alto de Cunday, Tolima Department, Colombia. The addition of this new species brings to 18 species and 2 subspecies the total number of taxa known in this genus endemic to the Eastern Andes of Colombia.

The genus *Neostrengeria* Pretzmann, 1965, comprising 18 species and 2 subspecies of pseudothelphusid crabs, is endemic to the Eastern Andes of Colombia. On the west slope, the genus was known as far south as Cundinamarca, but recent collections in the Cunday region of eastern Tolima have resulted in the discovery of a new species, which extends the range of the genus ca. 50 km further south. Additional explorations in the region have failed to locate this species west of the Magdalena river, confirming the association of the genus with the Eastern Andes.

The systematics of *Neostrengeria* were established by Rodríguez (1982) and have been recently reviewed by Campos (1992, 1994). The geographical distribution of the genus has been discussed by Campos & Rodríguez (1985), and Campos (1992, 1994). The general characteristics of the genus and a key for the identification of the species was presented by Campos & Lemaitre (1998).

The terminology used for the different processes of the male first gonopods is that established by Smalley (1964) and Rodríguez (1982). The material is deposited in Museo de Historia Natural, Instituto de Ciencias Naturales, Universidad Nacional de Colombia, Bogotá (ICN-MHN). The abbreviations cb and cl indicate carapace

breadth and carapace length, respectively. Color nomenclature follows Smithe (1975).

Family Pseudothelphusidae Rathbun, 1893
Tribe Strengerianini Rodríguez, 1982
Genus *Neostrengeria* Pretzmann, 1965
Neostrengeria binderi, new species
Fig. 1, 2

Holotype.—Laguna Los Catorce, Vereda Alto de Cunday, Tolima Department, Colombia, 470 m alt., 22 May 1998, leg. P. Binder: 1 male, cl 20.7 mm, cb 37.8 mm (ICN-MHN-CR 1702).

Paratypes.—Same locality data as holotype: 2 females, cl 19.1, 17.9 mm, cb 33.6–31.4 mm (ICN-MHN-CR 1703).

Type locality.—Laguna Los Catorce, Vereda Alto de Cunday, Tolima Department, Colombia, 470 m alt.

Diagnosis.—Carapace with median groove deep, reaching upper border of front. First male gonopod with mesial border slightly convex with strongly subapical notch in caudal view; apex compressed cephalo-caudal, expanded mesially into subtriangular projection; mesial lobe forming acute triangle.

Description of holotype.—Carapace (Fig. 1A) with cervical groove nearly straight, deep, ending some distance from lateral margin. Anterolateral margin with shallow

depression behind external orbital angle, followed by series of papillae on anterolateral half; posterior half smooth. Postfrontal lobes small, oval, delimited anteriorly by 2 depressions; median groove deep, reaching upper border of front. Surface of carapace in front of postfrontal lobes inclined anteriorly, depressed towards midline. Front bilobed, lacking distinct upper border in frontal view; lower margin visible in dorsal view, strongly sinuous in frontal view, with tubercles. Orbital margins each with row of tubercles. Dorsal surface of carapace smooth, covered by small papillae; regions distinctly marked. Third maxilliped with merus having sharp angle on distal half of external margin; exognath 0.57 length of ischium (Fig. 1D). Orifice of efferent branchial channel irregularly ovate (Fig. 1B).

First pereopods heterochelous, left cheliped larger than the right. Merus with 3 longitudinal crests as follows: upper one with rows of tubercles, internal lower one with row of teeth, and external lower one with row of tubercles. Carpus with few tubercles on internal crest, and blunt distal spine. Palms of both chelipeds smooth and swollen; fingers elongate, each 0.58 the length of propodi, tips crossing, and surfaces with rows of small tubercles; finger of larger chelae not gaping when closed.

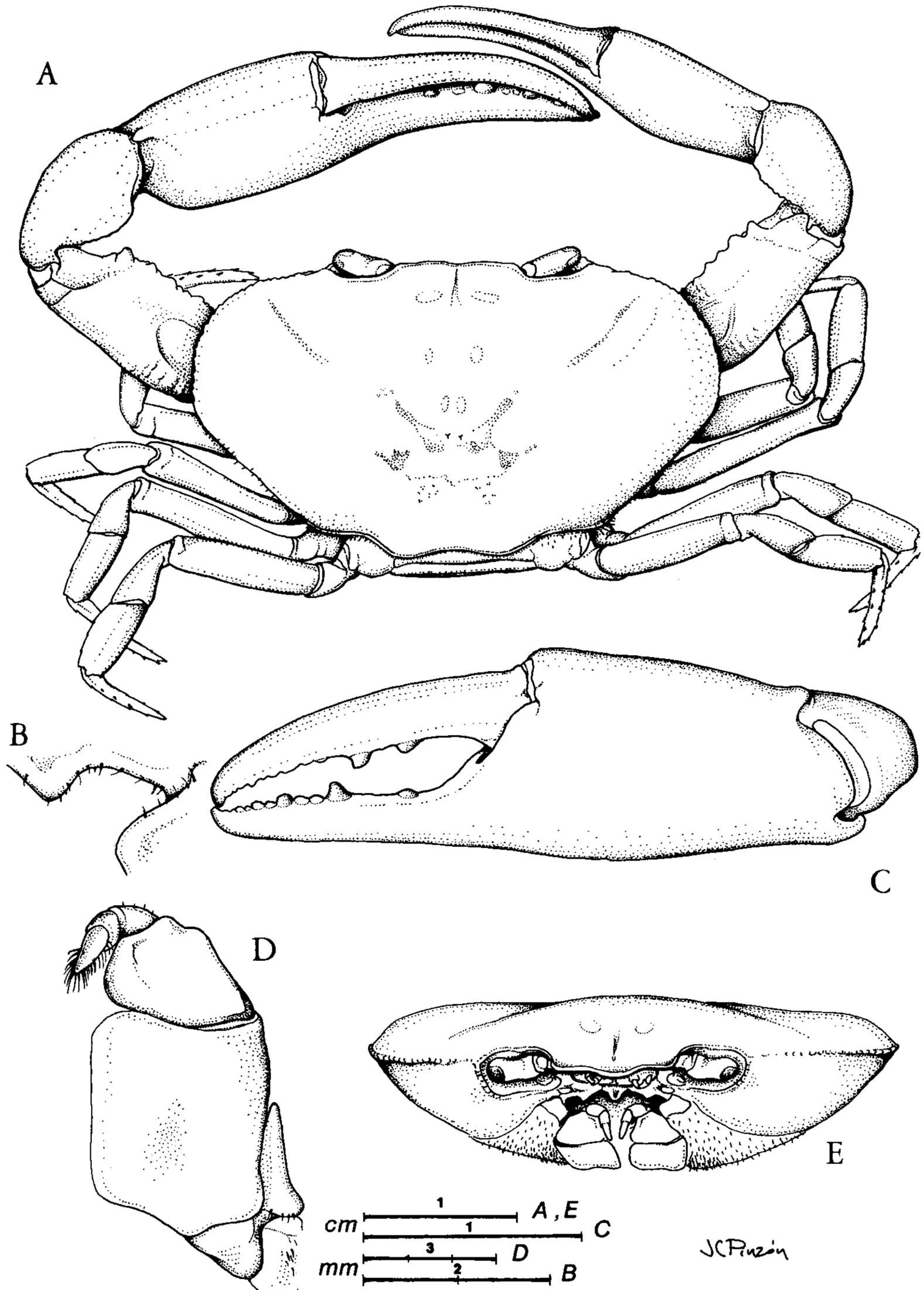
Walking legs (pereopods 2–5) slender (Fig. 1A). Dactyli elongated, each 1.5 times as long as propodi, with papillae and 5 longitudinal rows of large spines diminishing in size proximally. Number of spines and papillae on each dactylus arranged as follows: 1 anterolateral row and 1 anteroventral row each with 6 spines; 1 external row with 5 spines and 4 intercalated papillae and 1 pair of proximal papillae; 1 posterolateral row with 4 spines and 1 posteroventral row with 5 spines. First gonopod wide in caudal view, mesial border (Fig. 2A, 1) slightly convex with strongly subapical notch in caudal view. Accessory lobe (Fig. 2A, 2), shorter than lateral lobe (Fig. 2A, 3), flat caudally, elongate; lateral lobe wide and semicircular (Fig. 2A–D). Apex

in distal view compressed cephalo-caudally (Fig. 2E), expanded cephalically into subtriangular projection; mesial lobe (Fig. 2E, 4) forming acute triangle; mesocaudal projection of spermatic channel (Fig. 2E, 5) bifid with acute spinules.

Color.—The holotype preserved in alcohol is light brown (near 121C, Mikado Brown) with pale brown (Verona Brown, 223 B) specks on the dorsal side of the carapace. The walking legs and chelipeds are cinnamon brown (Tawny, 38) dorsally and ventrally. The ventral surface of the carapace is buffy-brown (Antique Brown, 37).

Etymology.—The species is named in honor of Dr. Philippe Binder, Colombian scientist who collected the specimens, and to recognize his efforts in stimulating a new generation of scientists at the Universidad de los Andes, Bogotá.

Remarks.—This species is most similar to *Neostrengeria aspera* Campos, 1992. Both can be distinguished by features of the first gonopod. The mesial border of the first gonopod (in caudal view) of *N. aspera* is slightly convex, similar to *N. binderi*, but this latter species has a strong subapical notch. The elongate accessory lobe of *N. binderi* is shorter than the lateral lobe, whereas in *N. aspera* this lobe is as long as the lateral lobe, with the apical portion irregular in form and densely covered with spinules on the distal half (cf., Campos & Lemaitre 1998). The lateral lobe is spatulate, rounded in its distal portion, and separated from the accessory lobe by a deep notch in *N. aspera*, while in *N. binderi* the lateral lobe is semicircular and is almost adpressed to the accessory lobe. In the apex of the gonopod, *N. binderi* is most similar and probably closely related to *N. gilberti* Campos, 1992. The differences are basically that in *N. gilberti* the apex is oval (not compressed cephalo-caudally) and there is an expansion with a conspicuous cephalic spine (cf. Campos 1992), whereas in *N. binderi* the apex consists of a subtriangular projection. The mesial lobe in *N. binderi* shows an acute subtriangular feature, while



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Fig. 1. *Neostrengeria binderi*, new species, male holotype, ICN-MHN-CR 1702. A, dorsal view of carapace and pereiopods; B, opening of left efferent branchial channel, external view; C, left chela, external view; D, left third maxilliped, external view; E, frontal view of carapace.

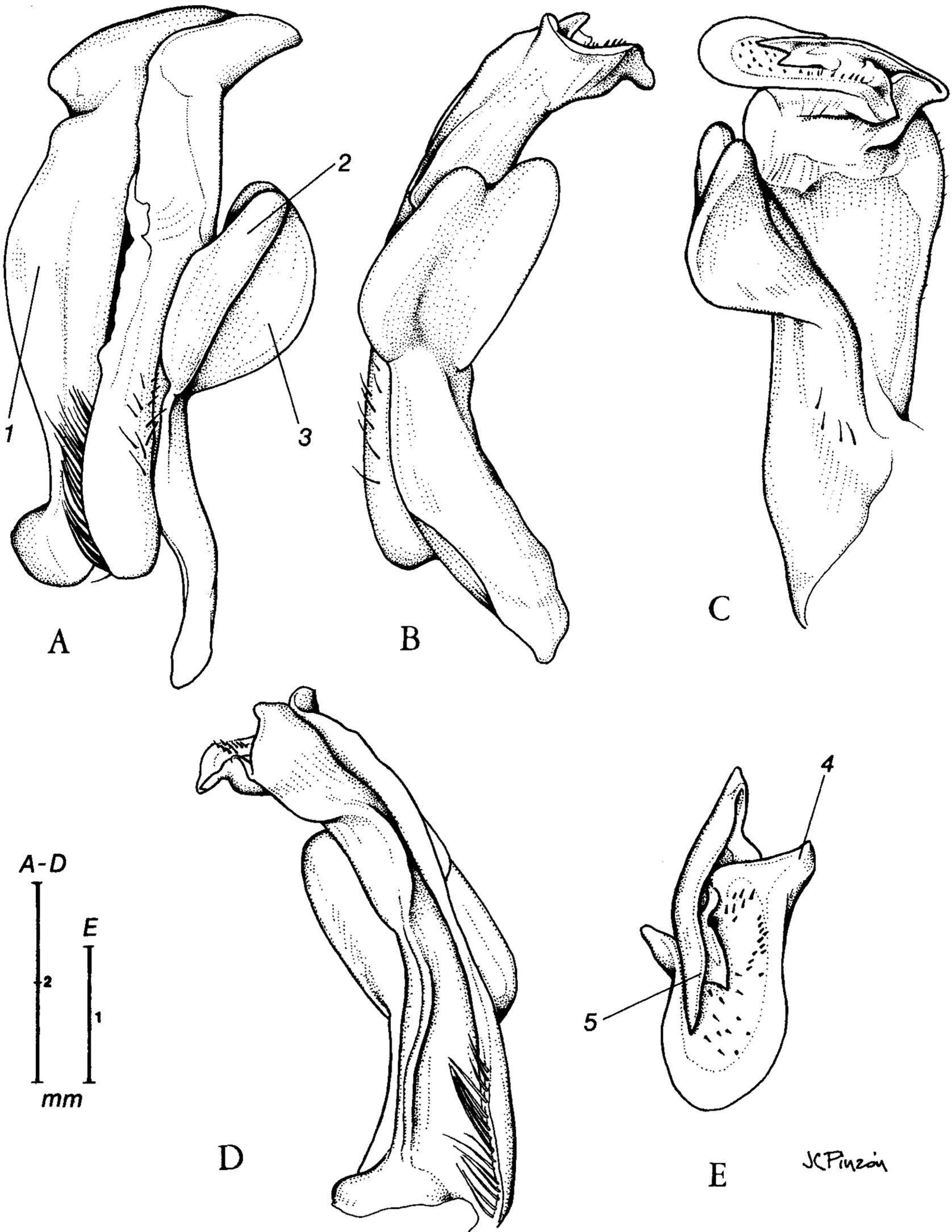


Fig. 2. *Neostrengeria binderi*, new species, male holotype, ICN-MHN-CR 1702. A, left first gonopod, caudal view; B, same, lateral view; C, same, cephalic view; D, same, mesial view; E, same, apex, distal view. 1, mesial border; 2, accessory lobe; 3, lateral lobe; 4, mesial lobe; 5, mesocaudal projection of spermatic channel.

in *N. gilberti* it is smaller and subcircular with a papilla. The mesocaudal projection of the spermatic channel in *N. gilberti* is awl-shaped, with one spinule on the inner side, while in *N. binderi* it is bifid with acute spinules.

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