

Hobbs, H.H., Jr. 1986. A new troglobitic crab (Crustacea: Decapoda: Pseudothelphusidae) from Belize. Texas Mem. Mus., Speleol. Monogr., 1:1-4.

A NEW TROGLOBITIC CRAB (CRUSTACEA: DECAPODA: PSEUDOTHELPHUSIDAE) FROM BELIZE

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ABSTRACT

Typhlopseudothelphusa acanthochela is described from Blind Crab Cave, Cayo District, Belize. This is the fourth known member of this troglobitic genus, the range of which is here extended some 170 kilometers northeast of the previous eastern record, Cueva Chiacam, the type-locality of *T. juberthiei*, in central Guatemala.

INTRODUCTION

Described here is the fourth known member of the genus *Typhlopseudothelphusa*. The first species of the genus discovered was *T. mocinoi* Rioja (1953) from Cueva del Tío Ticho, approximately 3 km south of Comitán, Chiapas, México. It was reported to occur in two additional localities in Chiapas by Hobbs, Hobbs, and Daniel (1977:145): Cueva Murciélagos and Cueva de los Llanos, both located 14 km ESE of San Cristóbal de las Casas. Two additional species of the genus were described by C. Delamare Deboutteville in 1976: *T. mitchelli* was reported from grottes C3 and G3, Sierra de Pampur au Guatemala, Alta Verapaz, Guatemala, and *T. juberthiei* from Grotte de Chiacam, Sierra de Chama, Alta Verapaz, Guatemala, a short distance to the east of the caves in which *T. mitchelli* occurs. The locality in which the new species was found extends the range of the genus some 170 kilometers to the northeast and suggests the likelihood of the presence of one or more congeners in the intervening karst areas separating this crab from its closest allies in north-central Guatemala.

Typhlopseudothelphusa acanthochela, new species

Figs. 1, 2

Type-data.—Male holotype (carapace width 37.5 mm; carapace length 24.4 mm) from Blind Crab Cave, 12 km SW of Millionario, Cayo District, Belize, June 1984 (Tom Miller) (U.S.N.M. no. 216239).

Description.—Eystalks reduced, lacking distinct faceted cornea and pigment, and finely tuberculate. Front sloping gently from minutely beaded interior border and lacking clearly defined margin above minute tubercles studding most of area (Figs. 1a, i, 2c). Inferior border weakly biconvex in dorsal view and conspicuously so in frontal aspect. Carapace weakly convex but somewhat depressed in median line; sutures delimiting regions poorly defined or absent. Paired postfrontal lobules well marked by median groove, but lateral limits not distinctly delimited. Cervical groove U-shaped, quite shallow, reaching margin of carapace in rather distinct emarginations situated lateral to unmistakable lateral orbital angles. Cephalic and lateral margins of carapace (Figs. 1a, 2a) almost uniformly, minutely beaded, even across front where "beads" along ventral border set off by constriction; caudal margin of carapace, however, smooth. Almost entire dorsal surface studded with very small tubercles not differing from "beads" of border of carapace. External scars of 2 pairs of apodemes marking otherwise gently sculptured surface.

Exopod of third maxilliped falling short of distolateral margin of ischium by slightly less than one-eighth of length of latter. Orifice of efferent branchial channel broadly open ventrally. Chelae subequal in

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size although left dactyl not reaching tip of fixed finger, probably partly regenerated. Except for opposable margins of fingers, surface almost smooth, broken here and there by very fine tubercles (see external borders of finger in Fig. 2b). Palm and fingers conspicuously gracile. Opposable margin of each finger bearing 9 to 11 major (long but comparatively slender), rather regularly spaced teeth; 0 (basally) to 11 smaller, although conspicuous teeth present between successive major teeth.

Gonopod moderately long; marginal lobe simple, produced only slightly in rudimentary caudal process; lobe delimited laterally by well defined lateral suture extending from base of distal segment of appendage almost to distal end of lobe. Cephalic lobe bearing sublateral cluster (mesial process) of 3 cephalomesially directed spines: most distally situated much larger than adjacent one, and most proximal quite inconspicuous. Distal end of gonopod capped by oblique, rather high ridge bearing row of 8 small tubercles caudomesially and 2 of similar size offset slightly caudomesially; ridge flanked cephalolaterally by

lower one, and valley between them bearing sublateral arrangement of short apical setae (Fig. 2d-f). Distal aperture of sperm channel situated at terminal caudolateral junction of marginal lobe and two apical ridges just mentioned.

Relationships.—*Typhlopseudothelphusa acanthochela* resembles *T. mocinoi* and *T. juberthiei* in possessing a distal, tuberculate ridge on the gonopod. The distribution of the tubercles resembles that in the former more closely than that in *T. juberthiei*, in which the tubercles are clustered at the cephalomesial angle of the horizontally truncate ridge. In contrast, however, the presence of three teeth on the cephalic lobe of the gonopod and the heavy concentration of spines on the distal part of the second pleopod are similar to the corresponding elements in *T. mitchelli*, but the absence of apical spines and the subhorizontal, truncate end of the pleopod clearly distinguishes this crab from that species. The spines on the opposable margins of the chelae are also distinctly more strongly developed than in the other three. Thus, while sharing characters with the three previously

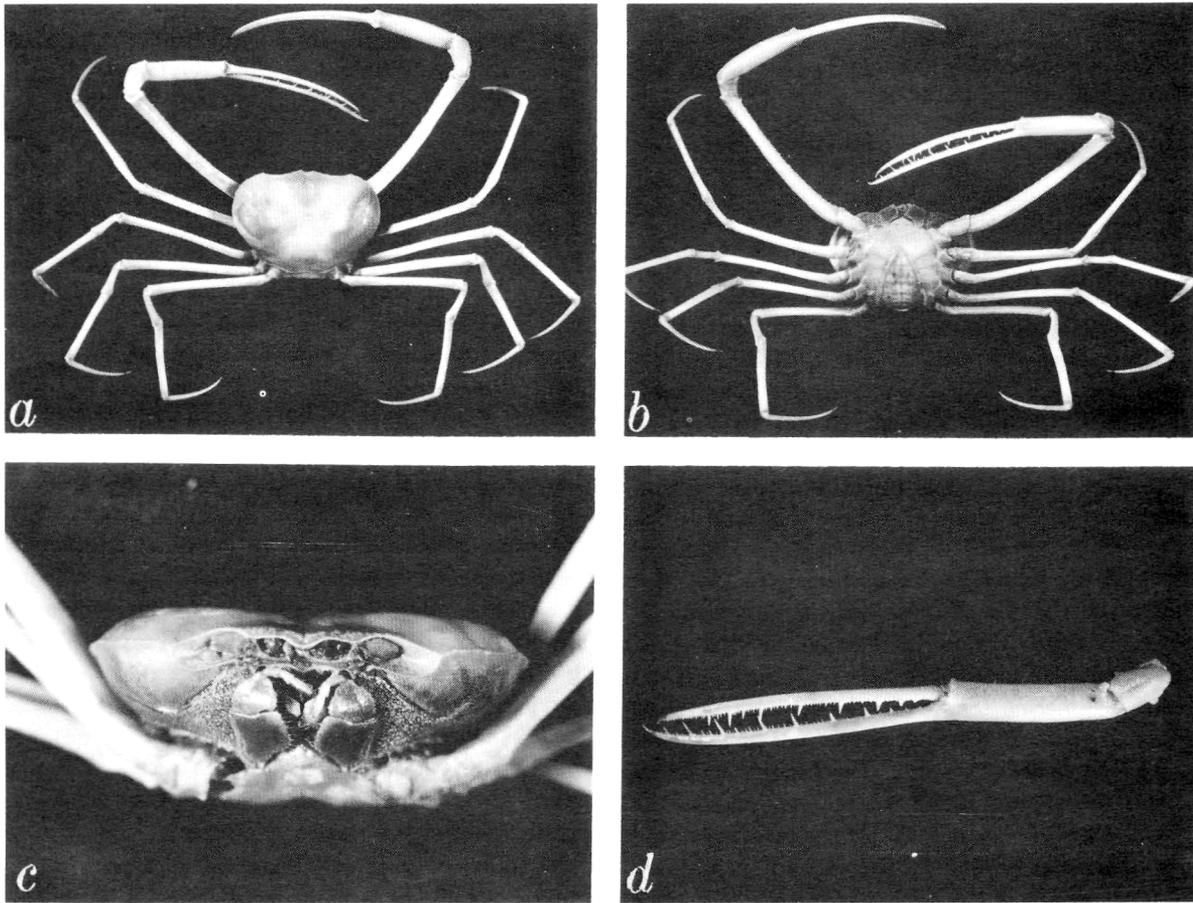


Fig. 1.—Holotype male of *Typhlopseudothelphusa acanthochela*, new species: a, Dorsal view (x0.51); b, Ventral view (x0.51); c, Frontal view of cephalothoracic region (x1.55); d, Abductor surface of left chela (x1.01).

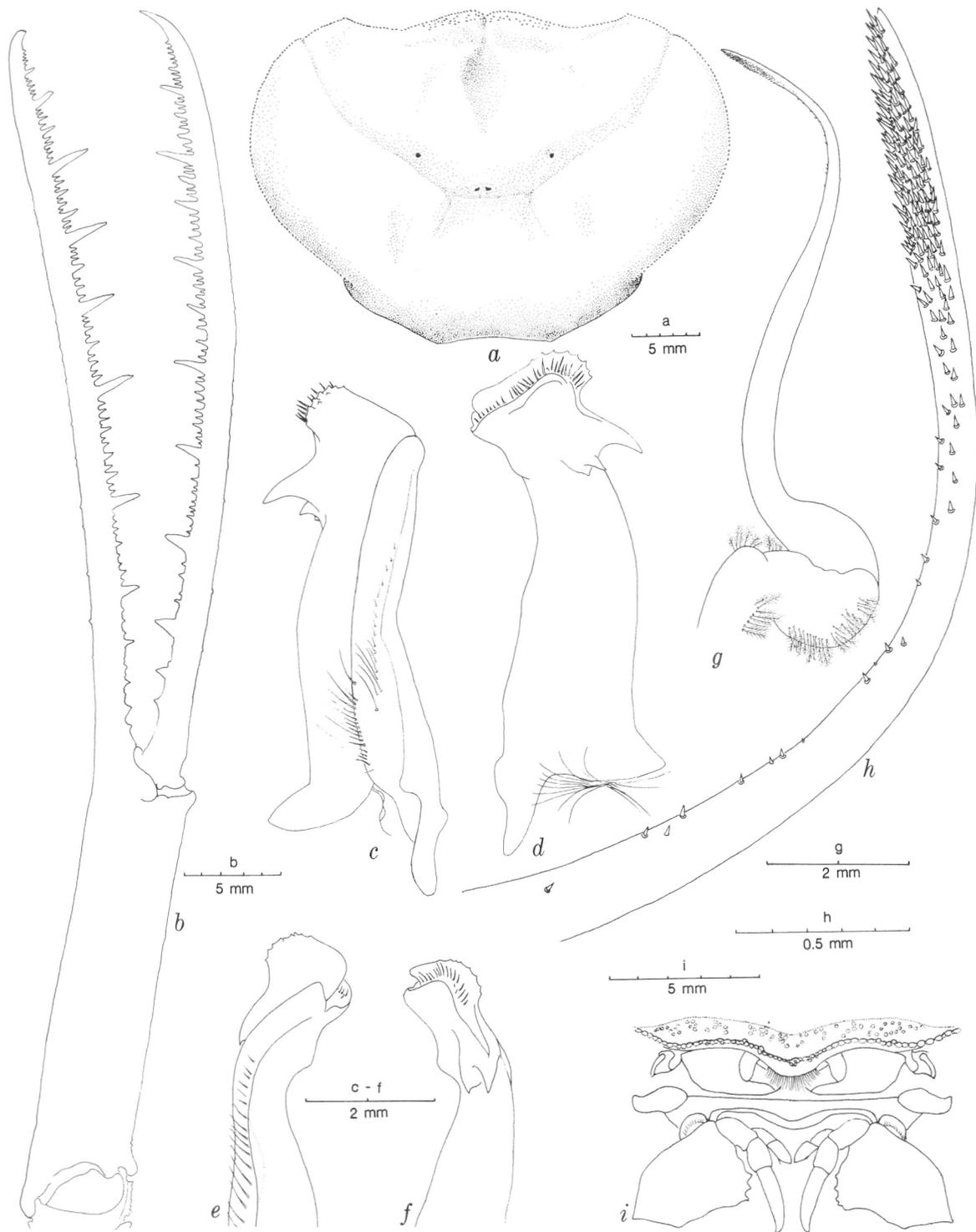


Fig. 2.—Holotypic male of *Typhlopseudothelphusa acanthochela*, new species: a, Dorsal view of carapace; b, Adductor surface of right chela; c, Caudal view of gonopod; d, Cephalic view of same; e, Mesial view of same; f, Lateral view of same; g, Caudal view of second pleopod (curvature of distal part intensified by clearing agent); h, Distal part of second pleopod; i, Frontal view of front and buccal region.

Key to the Species of the Genus *Typhlopseudothelphusa*
(Based on males; modified from Rodriguez, 1982)

1. Mesial process of gonopod ending in 3 spines; apical ridge with or without denticles. 2
 Mesial process of gonopod ending in 2 spines; apical ridge with denticles 3
2. Truncate extremity of gonopod perpendicular to axis of appendage; apical ridge
 without denticles. *mitchelli*
 Subtruncate extremity of gonopod oblique to axis of appendage; apical ridge
 with denticles *acanthochela*
3. Apical ridge with fewer than 5 teeth *juberthiei*
 Apical ridge with at least 5 teeth *mocinoi*

recognized members of the genus, *T. acanthochela* exhibits a unique combination of characteristics which is pointed out in the following key.

ACKNOWLEDGMENTS

My thanks are extended to Tom Miller of Eastern Washington University for permitting me to describe the crab, to James R. Reddell of the Texas Memorial Museum for advising me of its discovery and transmitting the single known specimen to the Smithsonian, and to Raymond B. Manning and Michael R. Carpenter of the Smithsonian Institution for criticisms of the manuscript and for the photographs, respectively.

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