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REDISCOVERY AND REDESCRIPTION OF *CIROLANA OBTRUNCATA* RICHARDSON, 1901 (PERACARIDA: ISOPODA: CIROLANIDAE) FROM THE EAST COAST OF MEXICO

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Abstract.—The cirolanid isopod *Cirolana obtruncata* is reported and described from near Chompoton, Mexico. The single male collected is the third existing specimen; this report extends the known range of the species westward from Jamaica to Chompoton, Mexico. The slightly abnormal specimen is compared to earlier descriptions of the same species.

In 1901, Richardson described a new species of the isopod genus *Cirolana, C. obtruncata,* from a single specimen collected from shallow waters off Kingston, Jamaica. An additional specimen was reported on the following year by H. F. Moore; that specimen was collected at Fajardo, Puerto Rico (Moore 1902). Since that time no other collections have yielded any additional material. In her 1905 monograph on the isopods of North America, Richardson mentioned a third specimen in the U.S. National Museum of Natural History; however, this specimen lacked locality data.

In an ongoing study of the isopod fauna of the east coast of Mexico, one of us (DLF) collected a single male *Cirolana obtruncata* from a site approximately 16 km northeast of Chompoton, Mexico. The specimen measures 10.4 mm length by 4.6 mm width, and is therefore slightly larger than Moore's specimen (6 × 2.9 mm). Richardson's two specimens were not measured. Our specimen agrees closely with the original description of *C. obtruncata* by Richardson (1901, 1905) but not with that given by Moore (1902). Some useful morphological characters were not described by Richardson or Moore; below we describe our specimen of *C. obtruncata* from Mexico and comment on discrepancies between our specimen and the descriptions of Richardson (1901, 1905) and Moore (1902).

Cirolana obtruncata Richardson, 1901
Figs. 1–2

Cirolana obtruncata Richardson, 1901:514.—Moore, 1902:167, pl. 8, figs. 9–12.—Richardson, 1905:108–109, figs. 87–89.

Material examined.—USNM 23901, Kingston, Jamaica (Holotype); USNM 204419, Chompoton, Mexico (present study, male, 10.4 × 4.6 mm), coll. D. Felder and USL Tropical Field Expedition II-B, Univ. Southwestern Louisiana, 7 January 1978. From less than 1 m in *Thalassia* beds approximately 16 km northeast of Chompoton, State of Campeche, Mexico.

Distribution.—Previously known from Kingston, Jamaica (Richardson 1901). Our specimen extends the range westward into the southwestern Gulf of Mexico.

Description.—The following description is based upon our single male. Setal or

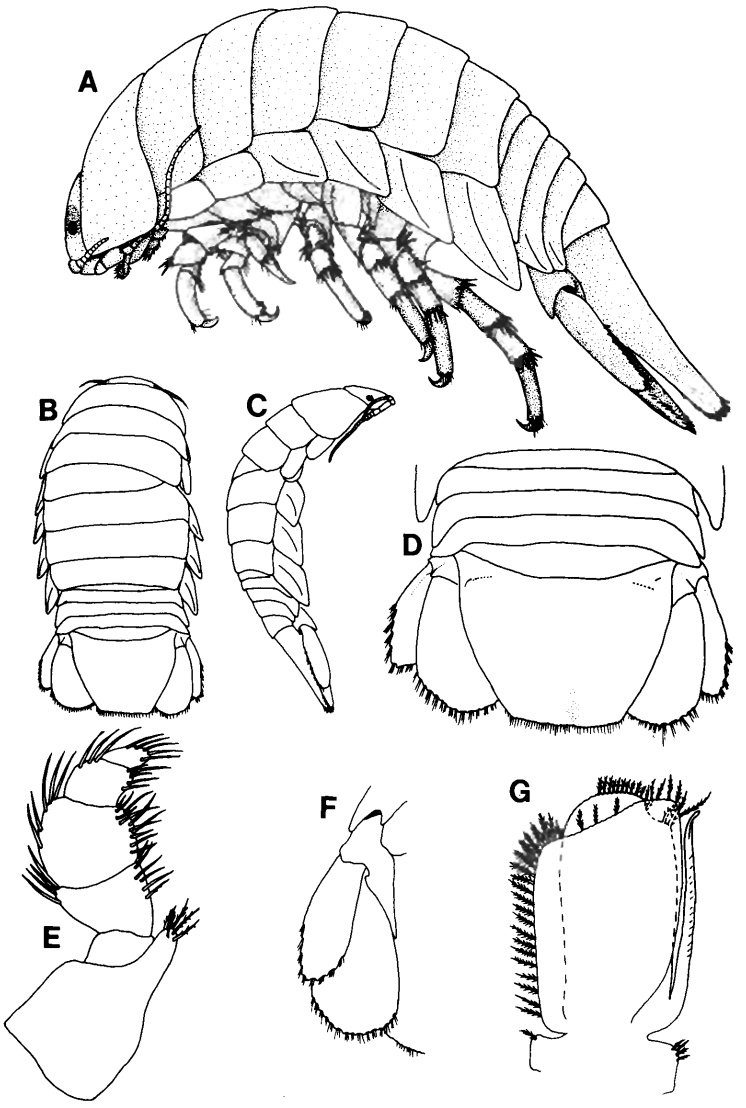

Fig. 1. *Cirolana obtruncata,* male, 10.4 × 4.6 mm. A, Lateral view; B, Dorsal view; C, Lateral view of right (abnormal) side; D, Pleotelson; E, Maxilliped; F, Uropods, ventral view; G, Pleopod 2.

segmental counts which differ in the descriptions by Richardson (1901, 1905) and Moore (1902) are set apart from our observations by brackets [ ] and parentheses ( ) respectively.

Body (Fig. 1A–D) approximately 2.3 times longer than wide, slightly abnormal; fourth pereonite on right side extending anteriorly beneath third pereonite, not reaching lateral right border (Figs. 1B, C). Coxae of pereonites as shown (Fig. 1A) with oblique groove stronger on coxae of pereonites 3–7. Cephalon transversely oval, with slight anterior medial projection between first antennae and frontal lamina. Frontal lamina (Fig. 2D) diamond-shaped; clypeus narrowly rhomboidal;

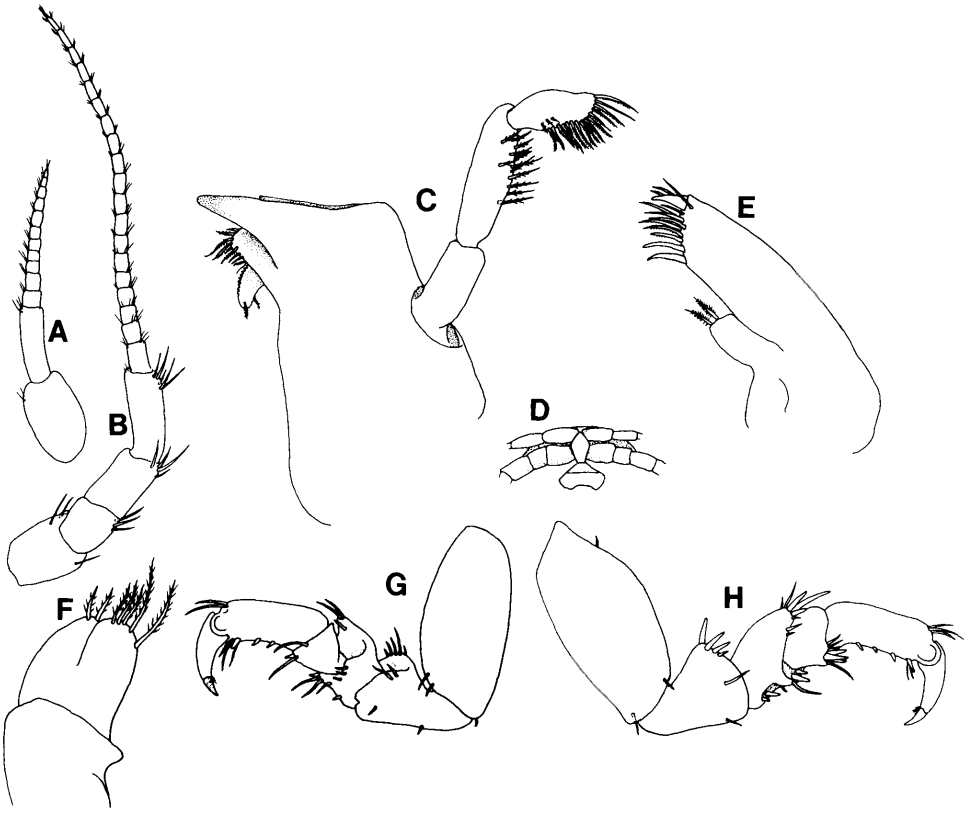

Fig. 2. *Cirolana obtruncata.* A, First antenna; B, Second antenna (proximal segment of peduncle not shown); C, Left mandible; D, Frontal lamina, clypeus, and labrum with bases of antennae; E, Maxilla 2; F, Maxilla 1; G, Pereopod 1; H, Pereopod 3.

labrum wide with shallow medial posterior indentation. Eyes small, lateral. First antennae (Fig. 2A) short, extending posteriorly just beyond posterior margin of cephalon; peduncle 2-segmented, flagellum with 11 [12] (8) segments. Second antennae (Fig. 2B) extending to midlength of third thoracic segment; peduncle 5-segmented (only 4 segments illustrated), flagellum with 20 [21] segments. Left mandible (Fig. 2C) tricuspidate; molar process narrow, directed posteriorly, with 2 terminal setae and an anterior row of rounded denticles; lacinia wide, with 10–12 serrate spines and plumose setae. Mandibular palp (Fig. 2C) 3-segmented; setation 0, 12, 19. Maxilla 1 (Fig. 2F) narrow; exopod with 12–13 serrate apical spines; endopod with 2 plumose setae. Maxilla 2 (Fig. 2E) poorly developed; exopod with 5, endopod with 2 plumose setae. Maxilliped (Fig. 1E) broad; endite with 5 lightly plumose setae and no coupling hooks; palp 5-segmented, setation 10, 16, 8, 5.

Pereopods (Figs. 2G, H) stout; distal border of all segments armed with thick blunt spines and setae as shown (only 1 and 3 illustrated).

Pleopod 1 (not illustrated) endopod broadly truncated distally with 10 plumose setae on distal margin, otherwise unarmed; exopod rounded distally, bordered

with 59 lightly plumose setae, with complete transverse suture more obvious toward lateral and medial borders. Exopods of pleopods 3–5 (not illustrated) larger than endopods, with complete transverse suture; exopods 3–5 bordered with 50–60 setae, endopods of pleopods 3, 4, and 5 bordered with 10, 11, and 0 plumose setae, respectively.

Pleopod 2 (Fig. 1G) with appendix masculina arising basally, extending to distal edge of endopod; endopod with many medial plumose setae and scattered setae on slightly convex and slanting distal margin; exopod minutely crenulate distally, with slight curved notch on ventromedial corner.

Uropods (Figs. 1D, F) extending to distal telson margin; posterolateral and posterior borders crenulate with short setae arising from small emarginations. Outer branch narrower, distal portion not as rounded as inner branch. Telson (Fig. 1D) posteriorly truncate, with shallow medial depression on posterior surface; weak row of tubercles on anterolateral dorsal surface. Posterior margin minutely crenulate, fringed with short setae.

Color.—Pale tan in alcohol (chromatophores not apparent), brown according to Richardson (1905).

Remarks.—Our description differs from that of Moore (1902) and Richardson (1901, 1905) as indicated above, and in the following characters. Richardson's (1905) illustration of the second maxilla shows a more complex structure, with what appears to be a 2-segmented exopod. Unfortunately, Richardson did not describe the mouthparts other than illustrating them, and Moore (1902) stated that the mouthparts are "as usual in the genus." Moore also described small spines in addition to the setae on the margins of the uropods and telson; the spines were not observed in our specimen. The telson in our specimen appears more truncate than in Richardson's or Moore's illustration. Moore's figure of the first pereopod does not show the strong ventral spination evident in our illustration (Fig. 2G). However, overall similarities between our specimen and the holotype convince us that these discrepancies are insufficient to question the specific status of our single male specimen.

There is reason to question the identity of the species described by Moore (1902). In the type-specimen, our single male, and Richardson's (1905) specimen from an unknown locality, the telson lacks spines and the telsonal setae are numerous and closely spaced. In contrast, the specimen described by Moore is much smaller, and the posterior margin of the telson is armed with small spines separated by groups of short setae (T. E. Bowman, National Museum of Natural History, Washington, D.C., personal communication). It is very likely that the Puerto Rican specimen is not *Cirolana obtruncata,* but an undescribed species. Thus, our specimen represents only the third collection of *Cirolana obtruncata.*

It should also be noted that in the description of the genus *Cirolana* restricted by Bruce (1981), one character of the genus is the presence of spines and setae on the margin of the telson and uropodal rami. The fact that this character is lacking in *C. obtruncata* may necessitate generic reassignment.

The isopod fauna of the east coast of Mexico is poorly known. Reports of the genus *Cirolana* from the east coast of Mexico are restricted to those of Richardson (1905), Dexter (1976), and Bruce and Bowman (1982) for *C. parva* Hansen, 1890. In addition, we have collected *Cirolana diminuta* Menzies, 1962, from Laguna de Terminos, Mexico and from near Chompoton, Mexico. Several workers (e.g.,

Menzies and Frankenberg 1966) have listed *Cirolana mayana* Ives, 1891 from Mexico. However, this species was transferred to the genus *Excirolana* by Richardson (1912), although this transfer has been largely overlooked in the literature. *Cirolana obtruncata* is easily distinguished from both *C. parva* and *C. diminuta* in having a truncate telson, diamond-shaped frontal lamina, and a distally twisted appendix masculina.

Our Mexican specimen of *C. obtruncata* is only the third one discovered and extends the known range of this species westward from Jamaica to waters off the State of Campeche, Mexico.

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Literature Cited

Bruce, N. L. 1981. The Cirolanidae (Crustacea: Isopoda) of Australia. Diagnoses of *Cirolana* Leach, *Metacirolana* Nierstrasz, *Neocirolana* Hale, *Anopsilana* Paulian and Debouteville and three new genera—*Natatolana, Politolana* and *Cartetolana*.—Australian Journal of Marine and Freshwater Research 32:945–966.

Bruce, N. L., and T. E. Bowman. 1982. The status of *Cirolana parva* Hansen, 1890 (Crustacea, Isopoda, Cirolanidae) with notes on its distribution.—Proceedings of the Biological Society of Washington 95:325–333.

Dexter, D. M. 1976. The sandy-beach fauna of Mexico.—The Southwestern Naturalist 20:479–485.

Menzies, R. J., and D. Frankenberg. 1966. Handbook on the common marine isopod crustaceans of Georgia.—University of Georgia Press, Athens, 93 pp.

Moore, H. F. 1902. Report on Porto Rican Isopoda.—Bulletin of the United States Commisioner of Fish and Fisheries, 1900 20:161–176.

Richardson, H. 1901. Key to the isopods of the Atlantic coast of North America, with descriptions of new and little-known species.—Proceedings of the United States National Museum 23:493–579.

———. 1905. A monograph on the isopods of North America.—Bulletin of the United States National Museum 54:I–LIII, 1–727.

———. 1912. Marine and terrestrial isopods from Jamaica.—Proceedings of the United States National Museum 42(1894):178–194.

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