

MEXICERBERUS TROGLODYTES N. GEN., N. SP. FROM A CAVE IN
MEXICO, WITH NOTES ON ISOPOD CRUSTACEANS OF THE
MICROCERBERIDEA FROM THE NEW WORLD

BY

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Five species of *Microcerberus* Karaman, 1933, have been described from sand of the marine beaches in North America. Three of them were described by Chappuis & Delamare-Deboutteville (1958) from Bimini Island in the Bahamas: *M. littoralis*, *M. mirabilis* and *M. renaudi*. A fourth species was described by Pennak (1958) from the Pacific Coast of Mexico: *M. mexicanus*. Lang (1961) described *M. abbotti* from California at Hopkins Marine Station. Remane & Siewing (1953) described *M. delamarei* from the beach near Rio de Janeiro, Brazil. The total number of species of *Microcerberus* then from the New World is six.

Lang (1961) included a good discussion of the morphology of the species of the genus and he is responsible for raising the group to full suborder Microcerberidea (Lang, 1961: 503). The suborder is near to the Anthuridea in the general classification of the Isopoda. Chappuis & Delamare-Deboutteville (1960: 328-357) present an excellent summary of the ecology of some species of the genus and in the same work they and others discuss many aspects of isopods of different suborders and species of animals other than isopods present in the sand beach habitats.

The species described here is a member of a new genus. It was collected from a freshwater pool in a cave situated at an altitude of 5006 ft (1526.8 m) in the Sierra de Guatemala of Tamaulipas, Mexico. One mature male 2.5 mm long was collected in Cueva de la Mina, 7 km northwest of Gomez Farias, Municipio de Gomes Farias. It was collected from freshwater with several trichoniscid isopods (Oniscoidea) where it was observed by the collector for several minutes as it was searching about the pebbles in the bottom of a pool three inches deep. I wish to thank Mr. J. Mark Rowland of Texas Technical University, Lubbock, Texas, for sending me the specimen.

Most of the 22 or so species of the suborder have been collected from the sand of marine beaches, but some have been recorded from the sandy borders of streams in Hungary. Cave species have been obtained in Yugoslavia, and one species has been obtained in an inland location in Morocco, North Africa. Lang (1961: 504) provides a map of the distribution of the species known until then. The freshwater members of *Microcerberus* described until the present apparently do not

differ greatly from those from the sand of marine beaches and all have been placed until now in the same genus. The justification for placement of the single, mature male specimen described here in a new genus follows the description. The specimen being the only one and the type-specimen of a new genus was not dissected and the drawings were made by use of a projecting microscope. The details of the mouth parts and pleopods other than male pleopod 2 are not shown. Peraeopod I is also drawn from projection without being removed from the specimen. That the specimen belongs to the Microcerberidea and that it is morphologically distinct from other species of the suborder is clearly illustrated without dissection of the specimen. Hopefully more specimens for dissection will be discovered when the cave type-locality and nearby caves are further explored.

Mexicerberus n. gen.

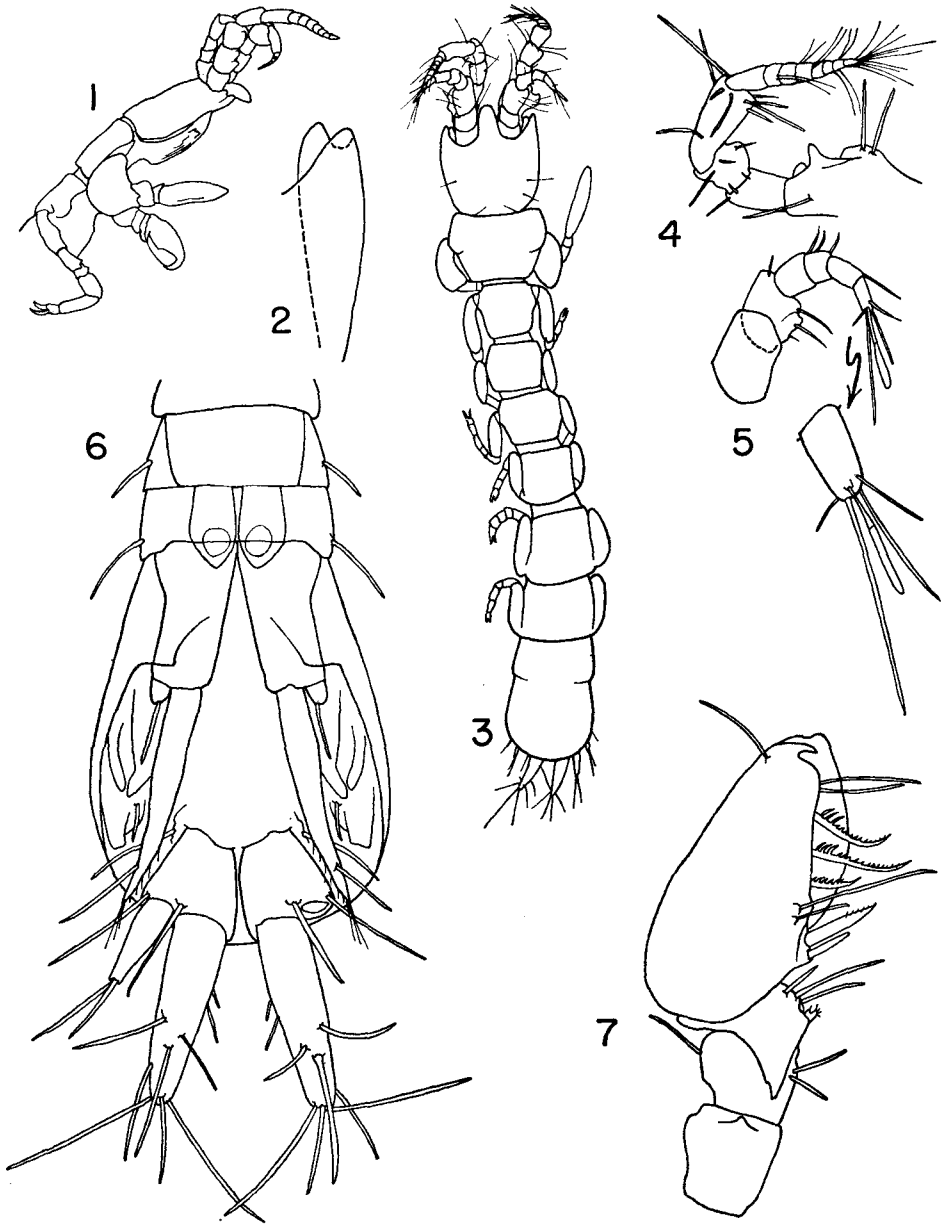
Blind, pigmentless. Cephalon with elongate, rounded medial rostral projection extending anteriorly beyond anterior extensions of anterolateral corners. Body elongate with lateral margins concave. Uropods with both rami extending beyond posterior margin of pleotelson. Exopod about half length of endopod.

Mexicerberus troglodytes n. sp.

Body about seven times as long as broad (fig. 3). Cephalon with lateral margins turned under (fig. 2), with two rounded projections when viewed dorsally (fig. 3). Peraeonal segment I as broad as cephalon, closely pressed to cephalon. Lateral margins of peraeonal segment I converging towards posterior margin. Posterior margin narrower than anterior margin. Peraeonal segments II to V smaller than peraeonal segment I; all four almost equal in area. Peraeonal segment VI longest. Peraeonal segment VII and pleotelson approximately as broad as cephalon. No conspicuous ornamentation or large number of setae on dorsum. Pleotelson shorter than peraeonal segments VI and VII combined. Lateral margins of pleotelson with single conspicuous notch indicating pleonal segmentation. Two pleonal segments distinct in ventral view (fig. 6). Posterior margin of pleon broadly rounded, narrowing anteriorly to where it is attached to peraeonal segment VII. Uropodal rami extending beyond margins of pleotelson.

Antenna 1 (fig. 5) about as long as cephalon, with five segments, four flagellar articles subequal in length, apical article tipped with four setae and one aesthetasc. Antenna 2 (fig. 4) with wide basal segment about twice as wide as other peduncular segments; flagellum with eight articles, basal article longest, apical article tipped with many setae.

Peraeopod I subchelate (fig. 7); manus about half as wide as long. Three long setae with sawtooth edge arising from inner margin of manus; two stout setae proximal to setae with sawtooth edge on inner margin; other regular setae also present. Carpus, which supports propodus, with three large regular setae and scale-like setae on inner margin. All other peraeopods with two claws; dorsal claw thinner and longer than ventral claw.



Figs. 1-7. *Mexicerberus troglodytes* n. gen., n. sp. 1, lateral view anterior part of body; 2, detail anterolateral margin of cephalon; 3, dorsal view male type-specimen (2.5 mm long); 4, antenna 2; 5, antenna 1; 6, pleon ventral view; 7, pereopod I.

Male pleopod 2 (fig. 6) with elongate basal segment; endopod longer than basal segment and tipped with small setae, with some small setae on inner margin. Exopod of pleopod 2 short with single long apical seta. Uropods with basal segment about as long as exopod; exopod half as long as endopod. Endopod with two apical setae. Exopod with apical and other setae.

The type-specimen has been deposited in the collection of the National Museum of Natural History (Smithsonian Institution), Washington, D.C. — USNM 141480.

The species differs from all other members of the *Microcerberidea* by the presence of the long rostral projection arising from the anterior margin of the cephalon. It also differs from others in being found in a cave high in the mountains which is quite different from the characteristic marine beach habitat. It is the only member of the New World group of species from a freshwater habitat. In addition to the unique configuration of the cephalon, the species differs from other members of the suborder in being large. Most species do not exceed 1.6 mm in length and the average size of all known species is less. *Mexicerberus troglodytes* is 2.5 mm long. The uropods of the species have short basal segments which are hidden in dorsal view with only the rami visible, extending beyond the borders of the pleotelson (fig. 3). In other species the basal segments of the uropods show in dorsal view. The exopod of the uropod is proportionately large (half the size of the endopod, fig. 5) in the new species when compared to the exopods of the uropods of other members of the group, where the exopods are generally minute or very small when compared to the endopods (Pennak, 1958: 301, fig. 2; Lang, 1961: 509, fig. 3-1). The new species also differs in that the basal segment of antenna 2 is, by comparison to many other species, fairly large and that there is only one pleonal segment strongly indicated in the dorsal view of the pleotelson, whereas in most species there are two quite conspicuous pleonal segments indicated in the dorsal view. The new species is not only morphologically distinct from other New World members of the *Microcerberidea*, but it is also distinct from all Old World members as well. Cole & Minckley (1972) review the isopods other than Oniscoidea found in caves and underground freshwater situations of North America and *Mexicerberus troglodytes* can be added to their list.

ZUSAMMENFASSUNG

Die Arten des Genus *Microcerberus* Karaman von Sandstränden der Neuen Welt werden angeführt. Eine neue Art einer neuen Gattung wird beschrieben. Sie stammt von einem Süßwassertümpel in einer Höhle (1.526 m hoch) in der Sierra de Guatemala in der Nähe der Municipio de Gomes Farias, Tamaulipas, Mexiko. Die neue Art ist länger als irgendeine vorher beschriebene Art von *Microcerberus* und besitzt andere, einmalige Charakteristika wie zum Beispiel ein Rostrum auf dem frontalen Rand des Cephalons.

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