

CARIDINA DEMENICA, A NEW SPECIES OF TROGLOBITIC SHRIMP (CRUSTACEA: DECAPODA: ATYIDAE) FROM GUIZHOU, CHINA

Yixiong Cai and Shuqiang Li

ABSTRACT. - *Caridina demenica*, new species, found in the Demen cave of Libo County of Guizhou Province, southern, China is described. It is characterized by its degenerated eye, the blunt antennal angle and the absence of an antennal spine.

KEY WORDS. - *Caridina demenica*, new species, Troglobitic, China.

INTRODUCTION

During an expedition to the Demen cave near Yongkang village, Libo County of Guizhou Province (25.4° N, 107.8° E), numerous invertebrate specimens were collected from the cave by local scientists. These materials were sent to the Institute of Zoology, Academia Sinica for identification. Of these, two male atyid specimens were placed at our disposal. As a result of improperly processing and keeping, some of the appendages had been lost in both specimens, namely the third pereiopods, second pereiopods, the dactylus and the propodus of the third pereiopods, the fourth pereiopods and the telson. However, the distinct diagnostic characters still show that they present a new species of the genus *Caridina*. The types are kept in the Institute of Zoology, Academia Sinica, Beijing (CA), and Zoological Reference Collection, National University of Singapore (ZRC).

Caridina demenica, new species

(Fig. 1)

Material examined. - Holotype: male, (ASC97001, CA) carapace length: 3.2 mm, Demen cave near Yongkang village, Libo County of Guizhou Province, southern China, coll. J. Ran, 8 Dec. 1994.

Paratype: one male (ZRC1997.780, ZRC), carapace length: 3.0mm, data same as the holotype.

Y. Cai - c/o School of Biological Sciences, National University of Singapore, Kent Ridge, Singapore 119260, Republic of Singapore. S. Li - Institute of Zoology, Academia Sinica, Beijing 100080, P.R. China.

Description. - Rostrum extremely short, unarmed, reaching middle of basal segment of antennular peduncle. Antennal angle quite blunt, antennal spine absent. Pterygostomian margin rounded. Eye degenerated, with reduced stalk and poty pigment.

Branchial formula normal, with epipods on first 4 pairs of pereopods. Incisor process of mandible ending in three irregular teeth, molar process truncated. Lower lacinia of maxillula broadly rounded, upper lacinia elongated, with numerous distinct teeth on inner margin, palp slender. Upper endites of maxilla subdivided, palp short, scaphognathite tapering posteriorly with some long, curved setae at posterior end. Palp of first maxilliped triangular, with a finger-like tip. Second maxilliped typical in the genus, ultimate segment merging with penultimate segment.

First pereopod short, stout; fingers 1.4 times as long as palm; chela 1.8 times as long as broad; carpus short, triangular, as long as fingers, deeply concaved anteriorly; merus slightly longer than chela, 3 times as long as broad. Merus of third pereopod 1.9 times as long as carpus. Fifth pereopod overreaching end of antennular peduncle; propodus 3.2 times as long as dactylus, 8.5 times as long as broad, with numerous spinules on anterior and posterior margin; dactylus with 41 comb-like teeth on posterior margin.

Endopod of male first pleopod sigmoid, concaved innerly, with numerous spinules, longer innerly than outerly around its margin; appendix interna overreaching anterior margin of endopod by half. Appendix masculina of male second pleopod half as long as endopod, with long spines on inner and distal margin; appendix interna strong, reaching end of 0.8 length of appendix masculina.

Uropodal diaeresis with 14 movable spinules.

Etymology. - The new species is named after its type locality, the Demen cave.

Remarks. - Taking into account of the form of rostrum and the degenerated eye, *Caridina demenica*, new species, most resembles another Chinese troglobitic shrimp, *Caridina semiblepsia* Guo, Choy & Gui, 1996 from Hunan province of southern China, but it can be readily distinguished from the latter by its blunt antennal angle and the absence of antennal spine (vs. with a well developed antennal angle and an antennal spine), by its shorter rostrum (reaching to the middle of basal segment of antennular peduncle vs. to its end of), by the shorter carpus of first pereopod (ratio of length to width 1.2 vs. 1.9-2.8). With respect to the form of rostrum and antennal angle, and the absence of distinct antennal spine, *Caridina demenica*, new species, is most similar to the epigeal species *C. formosae* Hung, Chan & Yu, 1993, but the form of eyes (degenerated vs. well developed) and the shape of endopod of male first pleopod (sigmoid vs. rectangle) can easily separate it from the Taiwanese species.

The discovery of *Caridina demenica*, new species, thus, raises the number of Chinese troglobitic shrimps to six. The previously reported species are: *Typhlocaridina lanceifrons* Liang & Yan, 1981, *T. liui* Liang & Zhou, 1993, *T. semityphlata* Cai, 1995, *Caridina ablepsia*, Guo, Jiang & Zhang, 1992 and *C. semiblepsia* Guo et al., 1996. The first three were found from Guangxi, southern China and the latter two from Hunan, southern China.

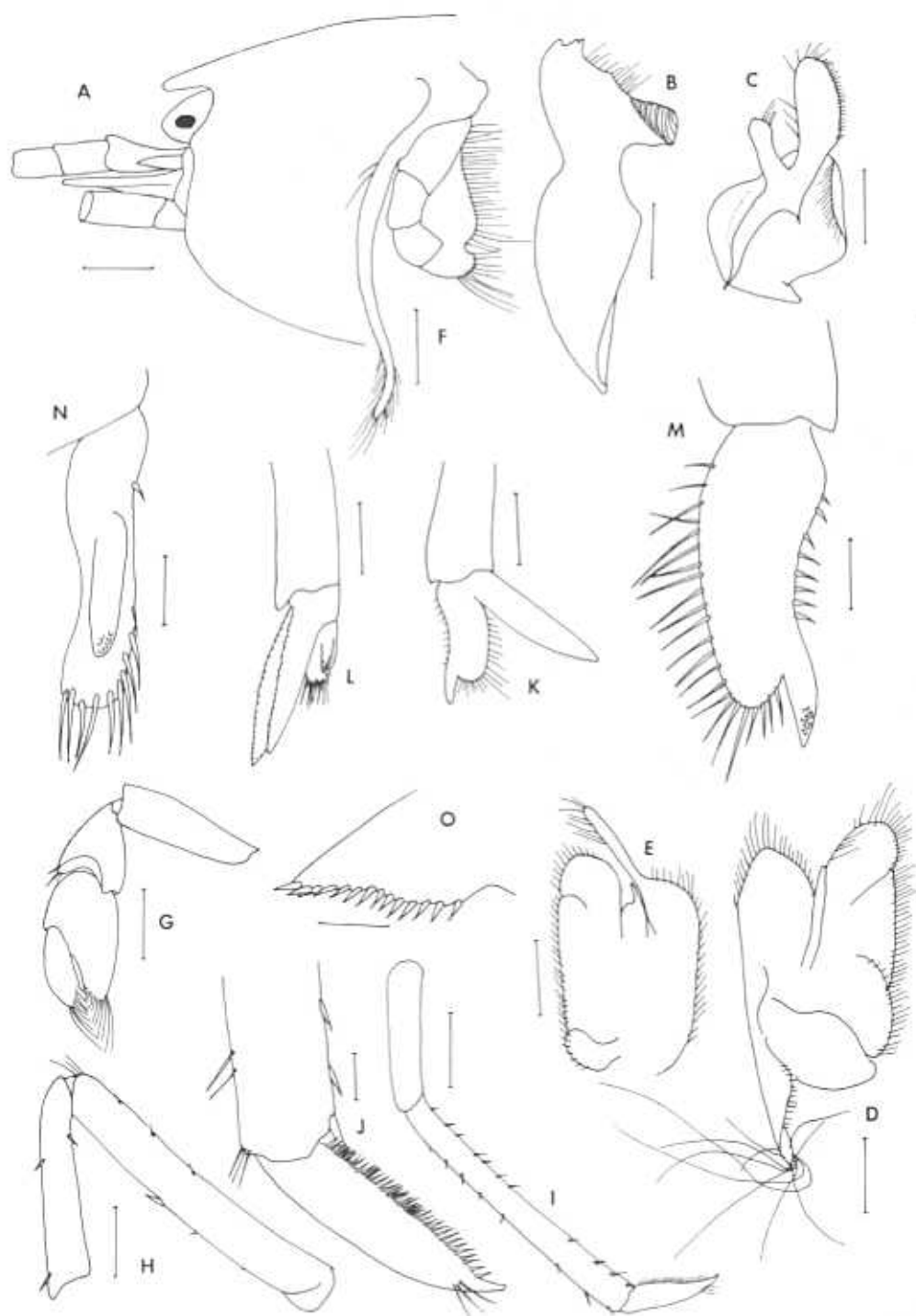


Fig. 1. *Caridina demenica*, new species, holotype. A. anterior portion of cephalothorax, B. mandible, C. maxillula, D. maxilla, E. first maxilliped, F. second maxilliped, G. first pleopod, H. third pereiopod, I. fifth pereiopod, J. dactylus of fifth pereiopod, K. first pleopod, L. second pleopod, M. endopod and appendix interna of first pleopod, N. appendix masculina and appendix interna of second pleopod, O. uropodal diacresis. Scale: A, G, H, K, L = 0.5mm; B, C, D, E, F, I = 0.4mm; M, N, J, O = 0.1mm.

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