

TWO NEW SPECIES OF *HEMICYCLOPS* (COPEPODA, CLAUDIIDAE)
AND A NEW SPECIES OF *PARAMACROCHIRON* (COPEPODA,
MACROCHIRONIDAE) FROM INDONESIAN WATERS

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ABSTRACT

Three new species of copepods, *Hemicyclops javaensis*, *H. minutus*, and *Paramacrochiron amboinense*, are described from Indonesian coastal waters, based on specimens collected from the Java Sea and from Ambon Bay.

H. javaensis can be distinguished from other species of *Hemicyclops* by the segmentation and armature of the antennule, the segmentation of the antenna, the presence of a blunt, barbed spine on the inner margin of the basis of the first and third swimming legs, the form of the fifth leg, the long caudal rami, and the spinous dorsal surface of the urosome.

H. minutus can be distinguished from its congeners by a combination of features in the segmentation of the antennule and antenna, the presence of one plumose seta on the first segment of the maxilliped and the very short third segment (claw) of that appendage, the form of the fifth and sixth legs, and the small size of the body.

P. amboinense is the seventh species known of its genus, following *P. sewelli* Reddiah, 1968 and *P. japonicum* Humes, 1970. The present species is distinguishable from other congeners by characteristics of the fifth leg, the segmentation and armature of the antennule, the segmentation of the antenna, and the small size of its body.

RÉSUMÉ

Trois espèces nouvelles de copépodes, *Hemicyclops javaensis*, *H. minutus*, et *Paramacrochiron amboinense*, sont décrites des eaux côtières indonésiennes, à partir de spécimens récoltés dans la mer de Java et dans la baie d'Ambon.

H. javaensis se distingue des autres espèces d'*Hemicyclops* par la segmentation et l'armature de l'antennule, la segmentation de l'antenne, la présence d'une épine barbelée, émoussée à son extrémité, insérée au bord interne du basipodite de la première et de la troisième pattes thoraciques, la forme de la cinquième patte, les longues rames furcales et la surface dorsale épineuse de l'urosome.

H. minutus se différencie de ses congénères par une combinaison de caractères de la segmentation de l'antennule et de l'antenne, la présence d'une soie plumeuse sur le premier segment du

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maxillipède et le très court troisième segment (croc) de cet appendice, la forme de la cinquième et de la sixième pattes, et la petite taille du corps.

P. amboinense est la septième espèce connue de ce genre, après *P. sewelli* Reddiah, 1968 et *P. japonicum* Humes, 1970. La présente espèce est distincte des autres congénères par les caractéristiques de la cinquième patte, la segmentation et l'armature de l'antennule, la segmentation de l'antenne, et la petite taille de son corps.

INTRODUCTION

The genus *Hemicyclops* represents a group of clausidiid copepods found predominantly in temperate and tropical regions of the world oceans. All species appear to be intertidal forms or inhabitants of shallow waters, and some live in association with other animals. Many species of this genus were recorded from coastal and intertidal zones in association with various invertebrates, others were not apparently associated with a host (Humes, 1984).

In their revisionary work, Vervoort & Ramirez (1966) recognized 22 species in *Hemicyclops*. Since then seven more species have been described, viz., *H. perin-signis* Humes, 1973, *H. columnaris* Humes, 1984, *H. mortoni* Boxshall & Humes, 1987, *H. ctenidis* Ho & Kim, 1990, *H. gomsoensis* Ho & Kim, 1991, and *H. japonicus* Itoh & Nishida, 1993. The two new species to be described below are the 2nd and 3rd species of *Hemicyclops* from Indonesian waters, the other one being *H. leggei* (Thompson & Scott, 1903) collected from dredge washings (13 m depth) at the Aru Islands (A. Scott, 1909).

Currently, the genus *Paramacrochiron* Sewell, 1949 consists of six species, *P. maximum* (Thompson & Scott, 1903), *P. pacificum* (Wilson, 1950), *P. ennorensis* Reddiah, 1968, *P. sewelli* Reddiah, 1968, *P. rhizostomae* Reddiah, 1968, and *P. japonicum* Humes, 1970.

This paper deals with descriptions and illustrations of the two new species of Clausidiidae Embleton, 1901 and one of Paramacrochironidae Humes & Boxshall, 1996 in Indonesian waters. All type specimens have been deposited in the Museum Zoologicum Bogoriense, Indonesia. Abbreviation used are: A1, antennule; A2, antenna; Ur1-Ur6, urosomal somites 1-6; P1-P6, swimming legs 1-6; Re, exopod; Ri, endopod; TL, total length; CR, caudal rami; Ms1-Ms6, metasomal somites 1-6. All figures were drawn with the aid of a camera lucida.

***Hemicyclops javaensis* n. sp. (figs. 1-2)**

Material examined. — Holotype, adult male, 2.03 mm TL, collected off Tegal, Java Sea, central Java (06°40'S 109°10'E), vertical haul of 0.1 mm mesh plankton net, 8 m depth to surface, at night, 3 June 1994.

Male. — Body long, greatest width on posterior end of cephalosome, length of prosome 1.58 times its width, and 1.65 times length of urosome excluding