PHYLLODIAPTOMUS THAILANDICUS, A NEW FRESHWATER COPEPOD (COPEPODA, CALANOIDA, DIAPTOMIDAE) FROM THAILAND

BY

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ABSTRACT

Examination of freshwater diaptomid copepods from Thailand resulted in the discovery of a new species belonging to the genus *Phyllodiaptomus*, namely *P. thailandicus* n. sp. It belongs to the *blanci*-group and is most similar to *P. christineae* Dumont, Reddy & Sanoamuang, 1996 and *P. blanci* (Guerne & Richard, 1890). The new species is the tenth member of the genus and the fourth species recorded from Thailand. It is rare and has been recorded only in 15 permanent ponds in eastern and southern Thailand.

RÉSUMÉ

L'examen des copépodes diaptomides d'eau douce de Thaïlande a permis de découvrir une nouvelle espèce appartenant au genre *Phyllodiaptomus*, *P. thailandicus* n. sp. Elle appartient au groupe *blanci* et est proche de *P. christineae* Dumont, Reddy & Sanoamuang, 1996 et *P. blanci* (Guerne & Richard, 1890). La nouvelle espèce est le dixième membre du genre et la quatrième reconnue en Thaïlande. Elle est rare et a été trouvée dans seulement 15 mares permanentes dans l'est et le sud de la Thaïlande.

INTRODUCTION

Records of the first member of the genus *Phyllodiaptomus* Kiefer from Thailand, *P. annae* (Apstein, 1907), were documented by Lai & Fernando (1981) and Boonsom (1984). This species turned out later to be a misidentification of a new congener, namely *P. praedictus* Dumont & Reddy, 1994 (cf. Dumont & Reddy, 1994). Subsequently, *P. christineae* Dumont, Reddy & Sanoamuang, 1996, and *P. surinensis* Sanoamuang & Yindee, 2001, were added to the Thai diaptomid checklist by Dumont et al. (1996), and Sanoamuang & Yindee (2001), respectively.

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While examining copepod samples from the eastern and southern parts of Thailand, we have come across another unknown species of *Phyllodiaptomus*. In this contribution, an illustrated description of the species, named *P. thailandicus* n. sp., is presented.

MATERIAL AND METHODS

About 2,000 qualitative samples were collected from different types of freshwater habitats in Thailand during 1993-2005, using a 60 μm mesh plankton net. The animals were preserved in 5% formaldehyde. Specimens were sorted under a stereomicroscope, and examined taxonomically using an Olympus CHD microscope. Figures were drawn using a camera lucida. Some preserved specimens were prepared for scanning electron microscopy (SEM) by dehydration in a graded alcohol series, and subsequent critical-point drying. The dried specimens were then mounted on a metal stub using double-sided adhesive tape and coated with gold, and observed using a LEO 1450VP scanning electron microscope.

DESCRIPTIVE PART

Phyllodiaptomus thailandicus n. sp. (figs. 1-40)

Type locality and material examined. — A permanent pond (14°10′56″N 101°21′52″E, 62 m above sea level) in Noen Horm sub-district, Muang district, Prachin Buri Province, eastern Thailand. Twenty males, 20 females from a plankton sample, 3 February 2001. Water temperature 28.5°C, pH 7.8, conductivity 150 μS cm^{-1}. The male holotype, female allotype, and 10 male and 10 female paratypes from the type locality were deposited in the Natural History Museum, London. Ten male and 10 female paratypes were deposited in the Science Museum of Khon Kaen University (KKU) and the Natural History Museum, Prince of Songkla University (PSU), Thailand. All type specimens have been preserved in whole, in 5% formalin.

Other localities. — (1) Permanent pond at Ban Pakprak, Sawee district, Chumporn Province, southern Thailand, 8 October 1999. (2) Pond (12°56′48″N 101°51′42″E, 28 m above sea level) in Sampeenong sub-district, Kanghangmaew district, Chantaburi Province, eastern Thailand, 28 June 2004. Water temperature 33.1°C, pH 7.8, conductivity 65 μS cm^{-1}. (3) Canal (12°51′28″N 101°49′50″E, 22 m above sea level) in Kanghangmaew district, Chantaburi Province, eastern Thailand, 28 June 2004. Water temperature 31.2°C, pH 7.1, conductivity 62 μS cm^{-1}. (4) Pond (13°26′57″N 102°16′26″E, 137 m above sea level) in Klong Hat district, Sa Kaeo Province, eastern Thailand, 29 June 2004. Water temperature 32.7°C, pH 6.8, conductivity 29 μS cm^{-1}. (5) Canal (13°35′43″N 102°19′57″E, 136 m above sea level) in Aran Prathed district, Sa Kaeo Province, eastern Thailand, 29 June 2004. Water temperature 31.8°C, pH 7.6, conductivity 481 μS cm^{-1}. (6) Pond (13°36′00″N 102°21′51″E, 95 m above sea level) in Aran Prathed district, Sa Kaeo Province, eastern Thailand, 29 June 2004. Water temperature 32.7°C, pH 8.1, conductivity 231 μS cm^{-1}. (7) Pond (13°38′20″N 102°26′01″E, 48 m above sea level) in Aran Prathed district, Sa Kaeo Province, eastern Thailand, 29 June 2004. Water temperature 31.7°C, pH 7.5, conductivity 270 μS cm^{-1}. (8) Canal (13°46′15″N 102°04′38″E, 39 m above sea level) in Watananakhon district, Sa Kaeo Province, eastern Thailand, 30 June 2004. Water temperature 28.9°C, pH 6.8, conductivity 73 μS cm^{-1}. (9) Pond