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A second species of *Pleciogonus* (Hemiptera, Heteroptera, Gerridae) from Thailand

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Abstract: The water strider genus *Pleciogonus* CHEN, NIESER & WATTANACHAIYINGCHAROEN, 2002 was described from a single species, *P. wongsirii* CHEN, NIESER & WATTANACHAIYINGCHAROEN, 2002 from North Thailand. Here we describe a second species, *Pleciogonus narumonae* nov.sp. from an apterous female collected in Pha Nga Province, South Thailand.

Key words: Gerridae, Ptilomerinae, *Pleciogonus*, Southeast Asia, new species, taxonomy.

Introduction

Pleciogonus CHEN, NIESER & WATTANACHAIYINGCHAROEN, 2002 is a very distinct, but still poorly known genus. It was first recognized by CHEN & ZETTEL (1998) but remained unnamed at that time. The original description (CHEN et al. 2002) provides a detailed morphological characterisation, which allows a safe identification. *Pleciogonus* has superficial similarities with *Rheumatogonus* KIRKALDY, 1909, a common inhabitant of streams in Southeast Asia; these two genera share, e.g., small size, a weakly protruded frons, and a rich pale colouration on their body sides (greenish in life, yellow to orange in preserved specimens). However, as already correctly pointed out by CHEN et al. (2002) *Pleciogonus* is a close relative of two other, rarely collected Southeast Asian genera, *Pleciobates* ESAKI, 1930 and *Andersenius* ZETTEL & CHEN, 1996. CHEN et al. (2002) gave an excellent analysis of the generic characteristics, which is not repeated here.

The type species, *Pleciogonus wongsirii* CHEN, NIESER & WATTANACHAIYINGCHAROEN, 2002, originates from North Thailand. CHEN et al. (2002) studied specimens from the provinces Lampang, Chiang Mai, and Chiang Rai. RARUANYSONG et al. (2014) reported *P. wongsirii* from a wider range in Thailand, adding the provinces of Kanchanaburi, Prachuap Khiri Khan, and Ratchaburi. No further species has been described.

Material and methods

The new species is described after a single specimen collected by the first author. It has been dry mounted on a cardboard. For comparison, a pair of paratypes of *P. wongsirii* from Chiang Mai was used. The verbal description and measurements were performed with a Leica Wild M10 binocular microscope at magnifications from 10× to 80×. Measurements are given in millimetres. For line drawings, the same microscope was equipped with a

camera lucida. Figure 1 was taken with a Leica DFC450 camera attached to a Leica Z16APO optics carrier, using Leica Application Suite V3.8. The photos were stacked with ZereneStacker 64-bit, the stacked digital image was processed with Adobe Photoshop 7.0.

Taxonomy

Pleciogonus narumoniae nov.sp. (Figs 1-3)

H o l o t y p e (apterous female; Natural History Museum Vienna): Thailand, Phang Nga Province, Khuraburi District, Baan Tumnang, West of Si Phang Nga National Park, 29.XI.2006, leg. H. Zettel (#48).

D e s c r i p t i o n: Measurements: Body length 5.60, maximum width (at mesopleura) 2.11. Head length 0.71, width (including eyes) 1.06; minimum distance of eyes 0.43. Pronotum length 0.63, width 1.21. Mesonotum length (at midline) 1.87. Metanotum length (at midline) 0.70. Combined length of abdominal tergites 1-7, 1.70. Length of antennomeres 1-4: 2.38, 0.64, 0.96, 0.64. Lengths of leg joints: Profemur 2.52, protibia 1.91, protarsus 0.90 + 0.71, mesofemur 7.58, mesotibia 1.82, mesotarsus 0.13 + 0.14, metafemur 7.42, metatibia 1.02, metatarsus 0.33.

C o l o u r: Dorsal pattern as in Figure 1. Sides yellow to pale orange. Venter pale yellow. Antennae black. Legs: coxae and trochanters chiefly yellow; profemur chiefly black; mesofemur black except extreme base yellow; metafemur, and all tibiae and tarsi black.

S t r u c t u r e s: Head anteriorly only slightly protruded, antennal tubercles rounded. Antennomere 1 hardly longer than antennomeres 2-4 combined; antennomere 3 longer than each, antennomere 2 and 4. Pronotum transverse; sides rounded. Meso- and metanotum without special structures; hind margin of metanotum deeply sinuated. Profemur hardly incrassate, flexor side in distal half with numerous short black oblique spines; protarsomere 1 much longer than 2. Meso- and metafemur subequal in length, each longer than body. Mesotarsomeres subequal in length; metatarsomeres fused. Claws of middle and hindlegs reduced. Abdomen short. Mediotergites 1-6 transverse; 1 about 1.5 times longer than 2; 6 slightly shorter than 4 and 5 combined. Mediotergite 7 (Fig. 2) about as long as wide; anterior two-fifths flat, posterior third folded in a roof-like shape; hind margin with two roundish convexities separated by a deep incision. Laterotergites steep; connexival margin strongly sinuate in dorsal view. Laterotergite 6 (Figs. 2, 3) with a short, triangular protrusion. Sternum 7 as characteristic for the genus: sides posteriorly curved towards middle, posterodorsally broadly rounded; middle with a large lobe that is wider than hind margin of mediotergite 7. Segment 8 and genitalia retracted into segment 7.

C o m p a r a t i v e n o t e s: *Pleciogonus narumoniae* nov.sp. can be easily distinguished from *P. wongsirii* by the structure of connexivum 6 of the female. In *P. wongsirii* it is posteriorly protracted in a long, slender, hirsute process that almost reaches or even surpasses the hind margin of tergite 7 (cf. CHEN et al. 2002: figs. 28, 30), whereas in *P. narumoniae* nov.sp. it forms a short, inconspicuous, slightly acute angle, that has the length of one fourth of tergite 7 and does not bear any longer setae (Fig. 3). A distinct spot of golden brownish pilosity at the middle of the mesonotal hind margin of *P. wongsirii* is lacking in *P. narumoniae* nov.sp. Antennomere 1 is relatively shorter (compared to antennomeres 2-4) in *P. narumoniae* nov.sp. than in *P. wongsirii*. The black areas of *P. narumoniae* nov.sp. are comparatively more widely extended, especially on the profemur,

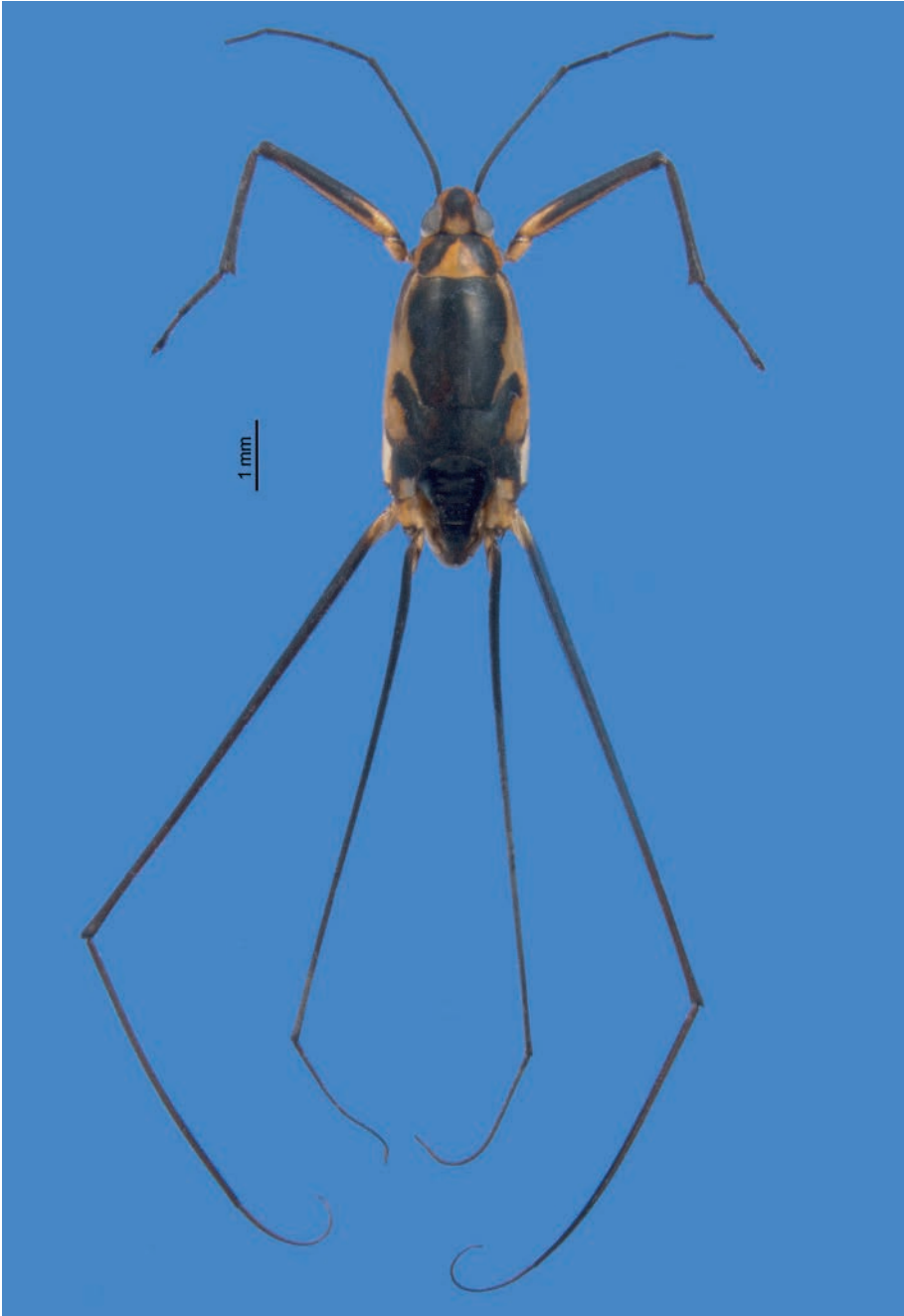
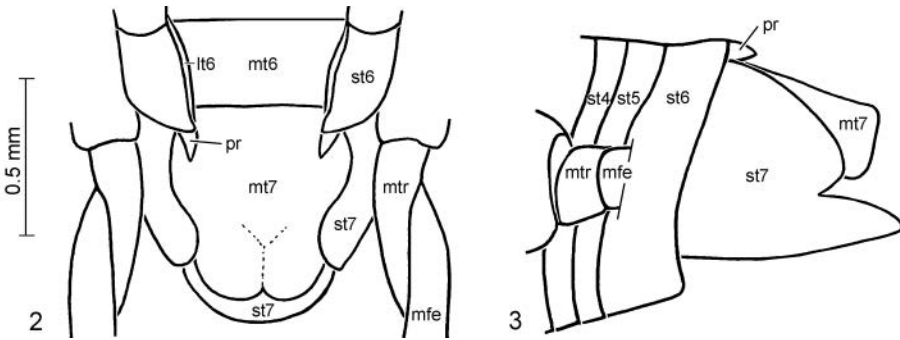


Fig. 1: *Pleciogonus narumonae* nov.sp., habitus of apterous female (holotype). © Alice Laciny / Natural History Museum Vienna, Hemiptera Image Collection.



Figs 2-3: *Pleciogonus narumonae* nov.sp., apterous female (holotype): posterior part of abdomen, (2) in dorsal view (between bases of hind legs), (3) in lateral view; lt6 – laterotergite 6; mfe – metafur; mt6, mt7 – mediotergites 6-7; mtr – metatrochanter; pr – process of laterotergite 6; st4-st7 – sternite 4-7.

but the pattern of *P. wongsirii* shows some variation in colour. We could not find differences in the genus-specific structures of abdominal segment 7.

E t y m o l o g y : This new species is dedicated to Associate Professor Dr. Narumon Sangpradub of the Khon Kaen University for her work on aquatic insects of Thailand.

Discussion

Whereas CHEN et al. (2002) studied only specimens from North Thailand, RARUANYSONG et al. (2014) reported *P. wongsirii* from a wider range in Thailand, southwards till the Isthmus of Kra, the well-known biogeographical border. However, these authors report extreme morphological variations, especially in the length of the female connexival spines, so that the material in their hands seems to include several species. They argued that males from all populations are consistent in paramere shape. However, parameres of *Pleciogonus* are rather simple, and those among species of *Pleciobates* and *Andersenius* are also rather similar to each other, so that in this genus group the females offer the better diagnostic characters to separate species (e.g., ZETTEL & CHEN 1996). Moreover, the secluded habitats of *Pleciogonus* and its obviously limited dispersal abilities – a winged specimen has not been reported yet – indicate that *Pleciogonus* may tend to a regional endemism, as documented, e.g., for *Ptilomera* AMYOT & SERVILLE, 1843 (VITHEEPADIT & SITES 2007). It seems that *Pleciogonus* will offer some taxonomical "surprises" in the future.

The specimen treated in this study is the southernmost record of the genus to date and extends the distribution of *Pleciogonus* to the Malay Peninsula. However, *Pleciogonus* is still only reported from Thailand.

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Zusammenfassung

Die Wasserläufergattung *Pleciogonus* CHEN, NIESER & WATTANACHAIYINGCHAROEN, 2002 wurde nach einer einzigen Spezies, *P. wongsirii* CHEN, NIESER & WATTANACHAIYINGCHAROEN, 2002 aus Nord-Thailand, beschrieben. Hier beschreiben wir eine zweite Art, *Pleciogonus narumonae* nov.sp., nach einem flügellosen Weibchen, das in der Provinz Phang Nga im Süden Thailands gesammelt wurde.

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