Records of Anelytra boku sp. n., a new Agroeciinae, and of Anelytra nigrifrons REDTENBACHER 1891 from Thailand (Ensifera, Tettigoniidae)

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Nachweise von Anelytra boku sp. n., einer neuen Agroeciinae, und von Anelytra nigrifrons REDTENBACHER 1891 in Thailand (Ensifera, Tettigoniidae)

1. Introduction

Tettigoniids of the genus Anelytra seem to be widely distributed in South- and South East Asia, but only few records exist. Two species are known from Burma and one from India (KARNY, 1912). More recently, INGRISCH (1989) described three further Anelytra-species from Central and Northern Thailand and provided a key to the males of the Asian species. Generally, these tettigoniids are rarely represented in collections, perhaps due to their nocturnal activity and cryptic diurnal habits. They live in the leaf litter of forests and are mostly camouflaged by dark colours. A specific search for these animals will no doubt increase the numbers not only of new species, but also of locations within their distribution area.

In the present paper a new species of Anelytra is described and a first record of A. nigrifrons REDTENBACHER 1891 in Thailand provided. Indications of a rather astonishing geographical distribution of A. nigrifrons are probably based on a misinterpretation: the locality for the hitherto single known male specimen (labelled "lectotype, det. INGRISCH,

1995") is given as "Australia". A further label notes "This specimen is probably not from Australia, D. C. RENTZ, 1980" and in fact it seems very doubtful that this A. nigrifrons came from there. The female of this species was collected in Burma (REDTENBACHER, 1981). This is in agreement with the new record in Northwestern Thailand. The material is preserved in alcohol and located in the Naturhistorisches Museum Wien (Museum of Natural History Vienna).

2. Results

2.1 Anelytra boku sp. n.

Type material

Holotype: male, Sri Phang Nga (Province Phangnga, Thailand); moist evergreen lowland rain forest (sensu Whithmore, 1984); 19. Feb. 1997.

Paratype: 1 female, same locality; 19. Feb. 1997.

Zusammenfassung

Anelytra boku, eine neue Agroeciinae aus Thailand wird beschrieben und diagnostiziert sowie Anelytra nigrifrons erstmals in diesem Land nachgewiesen.

Schlagworte: Anelytra boku, neue Art, Anelytra nigrifrons, neuer Nachweis, Agroeciinae, Tettigoniidae, Thailand.

Summary

Anelytra boku, a new species of Agroeciinae from Thailand is described and diagnosed. Further, Anelytra nigrifrons for Thailand for the first time.

Key words: Anelytra boku, new species, Anelytra nigrifrons, new record, Agroeciinae, Tettigoniidae, Thailand.



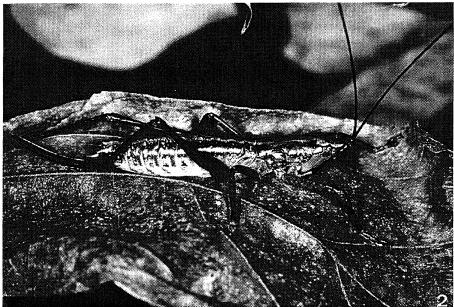


Figure 1: Anelytra boku. 1 Male; 2 Female Abbildung 1: Anelytra boku. 1 Männchen; 2 Weibchen

Description

Measurements (in mm, female in parentheses):

Body length (fastigium verticis to posterior margin of ultimate tergite) 30,3 (33,8); head length (fastigium verticis to labral suture) 6,0 (6,6); elytra length 2,7 (2,1); pronotum length 8,0 (8,0); metafemur length 14,8 (16,9); metatibia length 15,2 (17,3); ovipositor – (13,8).

Fastigium verticis narrow, approximately half the length of scapus, ventrally and dorsally indistinctly keeled, frons shining, with numerous punctations. Anterior and posterior margins of pronotum nearly straight. Ventral margins of paranota (= lateral lobes of pronotum) slightly undulating, posterior angle nearly rectangular, humeral sinus flat. Male micropterous, female squamipterous, the bases of elytra covered by pronotum; alae rudimentary. Prosternum unarmed, lobes of meso- and metasternum rounded. Procoxae dorsally with one downcurved spine. Profemora ventrally with 3–4 outer and 3–4 inner spines (the paratype with an additional,

rudimentary spine); knee lobes (=lobes of the apex of femur) oblong, the inner lobes of the holotype with one small spine. Tympana covered on both sides, with slit-shaped openings. Protibiae ventrally with 7 outer and 6–7 inner spines. Mesofemora ventrally with 5 spines on the outer edge, inner edge unarmed. Knee lobes as in profemora. Mesotibiae ventrally with 8–9 outer and 3–6 inner spines. Metafemora ventrally with 10–11 spines on the outer edge, inner edge unarmed.

Outer and inner knee lobes with 1 spine. Metatibiae dorsally with 7–9 outer and 4–6 inner spines and 2 pairs of apical spurs; ventrally with 11–12 outer and 13–14 inner spines and 1 pair of apical spurs.

Genital segments

Male (Plate 2):

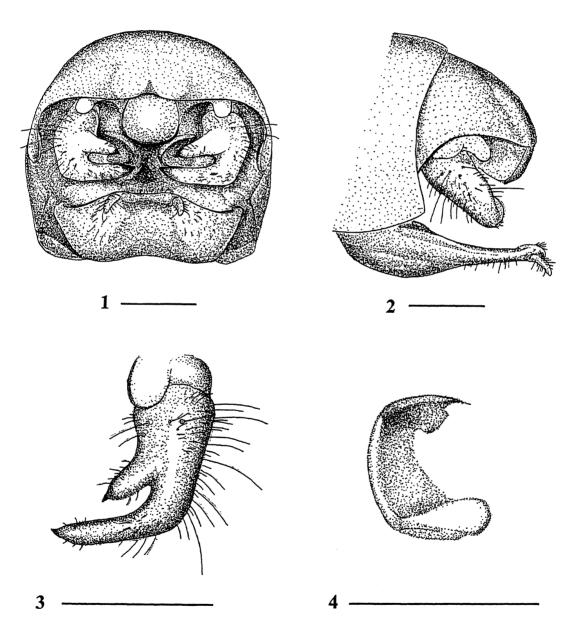


Figure 2: Ultimate segments of *Anelytra boku*, male.

1 view from the rear; 2 in lateral view; 3 right cercus in dorsal view; 4 right titillator in lateral view. Scale bar = 1 mm.

Abbildung 2: Genitalsegmente von *Anelytra boku*, Männchen.

1 Ansicht von hinten; 2 in Seitenansicht; 3 rechter Cercus in Dorsalansicht; 4 rechter Titillator in Seitenansicht; Maßstab = 1 mm

Ultimate tergite moderately long, posterior margin weakly triangularly incised. Supraanal plate bent downwards. Cerci short, directed backwards and downwards, basally with a rounded hump, in the middle nearly rectangularly curved inwards. Approximately in the middle an inner tooth. Apex and inner tooth with a conspicuous terminal spine. Titillators upcurved, apically pointed. Subgenital plate broad and long, with short styli.

Female (Plate 3):

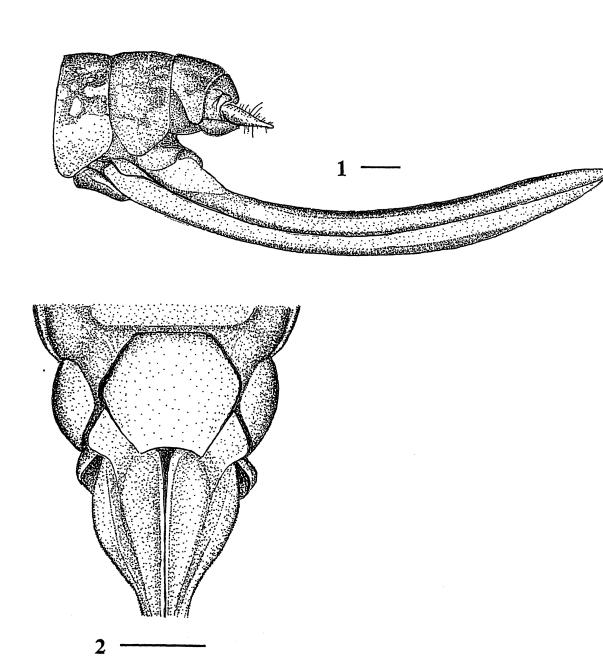


Figure 3: Ultimate segments of *Anelytra boku*, female. 1 in lateral view; 2 subgenital plate. Scale bar = 1 mm Abbildung 3: Genitalsegmente von *Anelytra boku*, Weibchen. 1 in Seitenansicht; 2 Subgenitalplatte. Maßstab = 1 mm

Ultimate tergite smooth, cerci spindle-shaped, acutely pointed. Ovipositor upcurved, valvae smooth. Subgenital plate relatively small, posterior margin concave.

Colouration

In vivo

Dorsally light brown to chestnut, bordered by longitudinal dark-brown, somewhat faded stripes. Frons blackish-brown, genae unicolourous light-brown, clypeus basally chestnut, distally whitish, labrum whitish, mandibles black. Scapus partly blackish-brown, partly chestnut, pedicellus and flagellum chestnut. Legs chestnut with dark-brown markings. Underside whitish-brown. Ovipositor basally chestnut, distally dark-brown.

Ex alcohol

General colour light-brown to ochre. Longitudinal stripes dark-brown, frons, mandibles and antennae blackish, genae light-brown to greyish, clypeus basally light-brown, distally white, labrum white. Legs light-brown with darker markings. Underside greyish. Ovipositor chestnut.

Diagnosis

Keel of fastigium verticis less distinct than in A. nigrifrons. Fastigium verticis distinctly shorter and narrower than the scapus (not as long as the scapus like in A. robusta, narrower than in A. tristellata). Frons shining like in the other Asian species, but more densely punctated than in A. nigrifrons and A. tristellata. Margin of paranota ventrally nearly straight and slightly undulated like in the other Asian species, but with prominent distal angle. Humeral sinus only weakly indicated. Different from all other Asian species of which males are hitherto known in the shape of the males' cerci: an inner tooth is present and located nearly in the middle of the cercus and not at the base like in A. robusta and A. tristellata. A. boku differs from Asian species based on females only in larger size (compared with A. punctata) or dark frons (compared with A. concolor).

Etymology

This species is named in reference to the University of Agri-

cultural SciencesVienna (BOKU Vienna), which celebrates its 125th anniversary this year.

2.2 Anelytra nigrifrons REDTENBACHER, 1891

Material

1 male, 1 female; Doi Inthanon (Province Chiang Mai, Thailand). Lower montane pine-oak forest (SANTISUK, 1988), ca. 1400 m; 16. Feb. 1996.

2 males, 3 females ex cult. (F1).

As the mountain ranges of Northwestern Thailand (e. g. the Daen Lao and Thanon Ton Chai ranges together with the Tanao Si (Tenasserim) Range) are in fact the southern extension of the Shan Range in Burma, the occurrence of A. nigrifrons was to be expected in this area.

Acknowledgements

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References

KARNY, H. (1912): Orthoptera, Fam. Locustidae, Subfam. Agroeciinae. In: P. WYTSMAN (ed.): Genera Insectorum 141, Verteneuil & Desmet, Bruxelles, 1–47.

INGRISCH, S. (1989): Zur Laubheuschrecken-Fauna von Thailand. Senckenbergiana biol. 70, 89–138.

REDTENBACHER, J. (1891): Monographie der Conocephaliden. Verh. k. k. zool.-bot. Ges. 41, 315–562.

SANTISUK, T. (1988): An account of the vegetation of Northern Thailand. Geoecological Res. 5, 1–101.

WHITMORE, T. C. (1984): Tropical rainforests of the Far East. 2nd ed., Clarendon, Oxford.

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