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A revision of the *Axylus* group of Agraeciini (Orthoptera: Tettigoniidae: Conocephalinae) and of some other species formerly included in *Nicsara* or *Anthracites*
Revision of the Indo-Australian Conocephalinae, part 3

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Table of contents

Abstract

Axylus group is used to include the five genera *Axylus* Stål, 1877, *Anthracites* Redtenbacher, 1891 sensu stricto, *Eucoptaspis* Willemse, 1966, *Eulobaspis* gen. nov., and *Heminicsara* Karny, 1912. It is mainly based on a combination of the characters shape of pronotum, spiniform meso- and metasternal lobes, and similar basic ground plans of the male cerci, titillators and female subgenital plates. The five genera together with two superficially similar genera *Euanthracites* gen. nov. and *Sulasara* gen. nov. are fully revised. *Papuacites* gen. nov. is proposed for two New Guinean species formerly included in *Anthracites*. *Nicsara* Walker, 1869 is restricted to Australian species; *Spinisternum* Willemse, 1942 is synonymised with *Heminicsara* Karny, 1912; *Odontocoryphus* Karny, 1907 based on two nymphs is synonymised with *Macroxiphus* Pictet, 1888; *Pseudoliara* Karny, 1907 described after one nymph is regarded incertae sedis.

40 new combination of species are proposed: *Axylus bimaculatus* (Redtenbacher, 1891) comb. nov., *A. inferior* (Brunner, 1898) comb. nov., *A. inflatus* (Brunner, 1898) comb. nov., *A. loboensis* (De Haan, 1842) comb. nov., *A. minutus* (Dohrn, 1905) comb. nov., *A. nigrifrons* (Brunner, 1898) comb. nov., *A. philippinus* (Hebard, 1922) comb. nov., *A, taylori* (Hebard, 1922) comb. nov., and *A. thoracicus* (Dohrn, 1905) comb. nov. (all from *Nicsara*); *Euanthracites apoensis* (Hebard, 1922) comb. nov., *E. femoralis* (Dohrn, 1905) comb. nov., *E. rufus* (Ingrisch, 1998) comb. nov., and *E. tibialis* (Karny, 1931) comb. nov. (from *Anthracites*); *Eucoptaspis inexpectatus* (Willemse, 1953) comb. nov. (from *Gonatacanthus* Karny, 1907); *Eulobaspis dehaani* (Karny, 1920) comb. nov., *E. emarginata* (Karny, 1926) comb. nov., *E. moluccana* (Redtenbacher, 1891) comb. nov., *E. personata* (Karny, 1926) comb. nov., *E. quadrimaculata* (Karny, 1926) comb. nov., *E. rotundata* (Karny, 1926) comb. nov., and *E. strigatipes* (Bolivar, 1898) comb. nov. (from *Nicsara*);

Eulobaspis lobaspoides (Karny, 1907) comb. nov. and *E. ornata* (Brunner, 1898) comb. nov. (from *Axylus*); *Heminicsara excisa* (Karny, 1926) comb. nov., *H. insulana* (Willemse, 1966) comb. nov., *H. schlaginhaufeni* (Karny, 1912) comb. nov., and *H. viridipes* (Karny, 1912) comb. nov. (from *Nicsara*); *Heminicsara castaneipictus* (Willemse, 1966) comb. nov., *H. insularis* (Willemse, 1942) comb. nov., and *H. palauensis* (Vickery & Kevan, 1999) comb. nov. (from *Spinisternum*); *Heminicsara decipiens* (Karny, 1926) comb. nov. and *H. griffinii* (Karny, 1911) comb. nov. (from *Gonatacanthus*); *Heminicsara novaeguineae* (Willemse, 1966) comb. nov. (from *Eucoptaspis*); *Sulasara aethiops* (Karny, 1931) comb. nov., *S. karnyi* (Willemse, 1932) comb. nov., and *Sulasara sarasini* (Karny, 1931) comb. nov. (from *Nicsara*); *Papuacites nigrifrons* (Karny, 1912) comb. nov. and *P. nakanaiensis* (Naskrecki & Rentz, 2010) comb. nov. (from *Anthracites*); *Paramacroxiphus multispinosa* (Bolivar, 1898) comb. nov. (from *Nicsara*); *Palaeoagraecia globiceratus* Vickery & Kevan, 1999 comb. nov. (from *Macroxiphus*). *Odontocoryphus pullus* Karny, 1907 becomes a new synonym of *Macroxiphus sumatranus sumatranus* (Haan, 1842).

87 species are described as new: nine species in *Axylus*: *A. brachypterus* sp. nov., *A. dulang* sp. nov., *A. furcatus* sp. nov., *A. mengkoka* sp. nov., *A. montanus* sp. nov., *A. negros* sp. nov. , *A. superior* sp. nov., *A. totop* sp. nov. , *A. unicolor* sp. nov.; six species in *Anthracites*: *A. bilineatus* sp. nov., *A. flagellatus* sp. nov., *A. pyramidalis* sp. nov., *A. romblon* sp. nov., *A. sinuatus* sp. nov., *A. unispinus* sp. nov.; four species in *Euanthracites*: *E. bispinus* sp. nov., *E. eboreus* sp. nov., *E. ile* sp. nov., *E. uru* sp. nov.; six species in *Eucoptaspis*: *E. adonara* sp. nov., *E. hexamaculatus* sp. nov., *E. remotus* sp. nov., *E. stylatus* sp. nov., *E. trapezoides* sp. nov., *E. wawo* sp. nov.; eight species in *Eulobaspis*: *E. bacan* C.Willemse & Ingrisch sp. nov., *E. baduri* sp. nov., *E. buruensis* sp. nov., *E. ceramica* C.Willemse & Ingrisch sp. nov., *E. morotai* sp. nov., *E. sudirman* sp. nov., *E. ternate* sp. nov., *E. variata* sp. nov.; 51 species in *Heminicsara*: *H. albatros* sp. nov., *H. albipuncta* sp. nov., *H. albogeniculata* Naskrecki & Ingrisch sp. nov., *H. alticola* sp. nov., *H. ammea* sp. nov., *H. anggi* sp. nov., *H. bilobata* sp. nov., *H. cingima* sp. nov., *H. comprima* sp. nov., *H. coriformis* sp. nov., *H. corneli* sp. nov., *H. cyclops* sp. nov., *H. despecta* Naskrecki & Ingrisch sp. nov., *H. dilatata* sp. nov., *H. dividata* sp. nov., *H. dobo* sp. nov., *H. elongata* Naskrecki & Ingrisch sp. nov., *H. furcata* sp. nov., *H. gibba* sp. nov., *H. gugusu* Naskrecki & Ingrisch sp. nov., *H. illugi* sp. nov., *H. jacobii* Karny, 1912, *H. jayawijaya* sp. nov., *H. kelila* sp. nov., *H. kolombangara* sp. nov., *H. lamas* Naskrecki & Ingrisch sp. nov., *H. longiloba* sp. nov., *H. lord* sp. nov., *H. malu* sp. nov., *H. mamberamo* sp. nov., *H. manus* sp. nov., *H. montana* sp. nov., *H. nigra* sp. nov., *H. nomoensis* sp. nov., *H. obiensis* sp. nov., *H. ohu* sp. nov., *H. pak* sp. nov., *H. parallela* Naskrecki & Ingrisch sp. nov., *H. pinniger* sp. nov., *H. popoman* sp. nov., *H. rugosa* sp. nov., *H. scutula* sp. nov., *H. sica* sp. nov., *H. sinewit* sp. nov., *H. siwi* sp. nov., *H. stylata* sp. nov., *H. tabtab* sp. nov., *H. truncata* Naskrecki & Ingrisch sp. nov., *H. tumulus* sp. nov., *H. umasani* sp. nov., *H. wanuma* sp. nov., *H. zugi* sp. nov.; and three species in *Sulasara*: *S. armata* sp. nov., *S. renschi* sp. nov., *S. tambu* sp. nov.

Key words: Orthoptera, katydids, Indonesia, Philippines, Papua New Guinea, Solomon Islands, Conocephalinae, Agraeciini

Introduction

This is the third part of a revision of the Indo-Australian Conocephalinae; for parts one and two see Ingrisch (2008, 2009). It mainly deals with the *Axylus* group of genera. The name is based on the formerly monotypic genus *Axylus* Stål, 1877. It mainly comprises species that had been included in the long-winged genus *Nicsara* Walker, 1869 thought to be distributed from Australia to the Philippines or the micropterous genus *Anthracites* Redtenbacher, 1891 in the old sense containing species from East Africa to New Guinea.

The key to the genera of Agraeciini established by Redtenbacher (1891) and adopted with little deviations by Karny (1907, 1912a) is based on superficial morphological characters easily recognized on specimens but it does not consider natural or phylogenetic relations between taxa. As a result, identifying a specimen one easily runs out at a genus, which had in consequence that unrelated species with similar general habitus were described in the same genus. For example the genera *Axylus* and *Nicsara* both have a similar general habitus and pronotum, lobate meso- and metasternal lobes, and both are without striking characters regarding fastigium verticis, wings, legs or other obvious morphological structures. That fact may have led Karny (1931) to the supposition that *Axylus* might be a synonym of *Nicsara*. But though he did not propose any taxonomic changes, *Axylus* remained a monotypic genus while species related to it were described under *Nicsara* (see history). However authors overlooked or regarded as of minor importance that the sternal lobes differed markedly between the type species of both genera: while meso- and metasternal lobes terminating into a long cone in *Axylus castaneus*, they are simply rounded in *Nicsara trigonalis*. The male and female abdominal appendages would have provided further striking differences. But the male cerci or female subgenital plate were at best regarded as of species specific importance at that time, the titillators unknown. Even species with considerably different habitus had been described under *Nicsara*, probably