

# A new species of *Athermantus* Kirby (Hymenoptera: Argidae) from China

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**Abstract:** A new species of Argidae is described from Zhejiang, China: *Athermantus melanopectera* Wei sp. nov. This new species is similar to *A. leucopilosus* Wen & Wei, 2002, but differs from it by the body hairs black; the upper of hind orbit clearly broader than eye in lateral view; pterostigma entirely black; vein R of fore wing clearly shorter than vein R+M; valvifers of penis valve narrow and hardly oblique, about 3.5 times as long as broad. A key to species of *Athermantus* Kirby, 1882 is also provided.

**Key words:** Symphyta; Athermantinae; sawflies; taxonomy

## 中国扁脰三节叶蜂属一新种（膜翅目：三节叶蜂科）

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**摘要：**记述中国浙江三节叶蜂科 1 新种：黑翅扁脰三节叶蜂 *Athermantus melanopectera* Wei sp. nov.。该种与淡毛扁脰三节叶蜂 *A. leucopilosus* Wen & Wei, 2002 近似，但体毛黑褐色，后眶上部明显宽于复眼横径，翅痣全部黑色，前翅 R 脉明显短于 R+M 脉；阴茎瓣头叶较窄，不明显弯折，长宽比约等于 3.5 等，与该种不同。还编制了扁脰三节叶蜂属分种检索表。

**关键词：**广腰亚目；扁脰三节叶蜂亚科；叶蜂；分类

## Introduction

*Athermantus* Kirby, 1882 is a small and peculiar genus of Argidae. The body size of the species is the largest among the family. The body color is also outstanding: totally black with strong metallic bluish and purplish reflection, yellow wings large and broad. The adults of the species usually stand conspicuously in the top leaves of a plant. It appears shiny under the sunshine.

Two species have been described in this genus: *Athermantus imperialis* (Smith, 1860) from South China, Indonesia and India (Kirby 1882; Wei & Nie 2003), and *A. leucopilosus* Wen & Wei, 2002 from Zhejiang, Guangxi and Hainan, China (Wen & Wei 2002). Here we report a new species of this genus from China.

## Material and method

Insect specimens were examined using a Leica S8APO dissecting microscope. Detailed

images of adults were taken with a Leica Z16 APO/DFC550 and were then montaged using Helicon Focus (Helicon Soft). Montaged images were further processed using Adobe Photoshop CS 6.0.

The terminology used for sawfly genitalia follows Ross (1945), whereas the terminology for general morphology follows Niu & Wei (2010). Abbreviations are as follows: OOL — distance between the eye and outer edge of lateral ocelli; POL — distance between the mesal edges of lateral ocelli; and OCL — distance between the lateral ocellus and the occipital carina or hind margin of the head.

Specimens examined during this study are deposited in the Asian Sawfly Collection, Nanchang, China (ASC).

## Taxonomy

### *Athermantus* Kirby, 1882

*Athermantus* Kirby, 1882: 54. Type species: *Hylotoma imperialis* F. Smith, 1860, by monotypy.

Diagnosis. Body large and robust; body black with strong metallic purplish tinge; malar space broader than diameter of median ocellus; occipital carina absent; cell 2R1 of fore wing distinctly broadened at base, not less than half breadth of cell 2R1; cell R1 and anal cell in fore and hind wings closed; head strongly enlarged behind eyes in dorsal view, face roundly and strongly elevated, without middle ridge, lateral slopes steep; lateral carinae between toruli low and very short; postocellar area large with distinct postocellar furrow; female antenna short and stout, apex distinctly enlarged; middle and hind tibia compressed toward apex, without subapical spur; ovipositor sheath short and very broad, round at apex in dorsal view; lancet broad and simple, annular spines in narrow band; valviceps of penis quite narrow with a large caudal lobe.

Distribution. China; Indonesia; India.

Host plant. Unknown.

The three known species of the genus can be separated by the following key:

#### Key to species of *Athermantus*

1. Membrane of wings, pterostigma and veins entirely yellow brown; body hairs black; vein R of fore wing clearly longer than vein R+M; valviceps broad and clearly oblique, about 2 times as long as broad. South China; Indonesia; India..... *A. imperialis* (F. Smith)
- . Basal 3/5 of wings distinctly infuscate, apical 2/5 hyaline; veins black brown, pterostigma at least black at basal half..... 2
2. Body hairs black; upper of hind orbit clearly broader than eye in lateral view; pterostigma entirely black; vein R clearly shorter than R+M; valviceps of penis valve narrow and hardly oblique, about 3.5 times as long as broad. China (Zhejiang)..... *A. melanoptera* Wei **sp. nov.**
- . Head and thorax with silver hairs; upper of hind orbit clearly narrower than eye in lateral view; pterostigma black at basal half and pale brown at apical half; vein R clearly longer than R+M; valviceps of penis valve broad and hardly oblique, about 2.6 times as long as broad. China (Zhejiang, Guangxi, Hainan) ..... *A. leucopilosus* Wen & Wei

### *Athermantus melanoptera* Wei **sp. nov.** (Fig. 1)

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Male. Holotype. Body length 13 mm. Black, with strong metallic blue and purplish reflection (Fig. 1A); antenna black, basal 2 antennomeres with distinct blue reflection, flagellum dim, without bluish tinge; legs black with strong blue reflection; wing distinctly infusate in basal 3/5 and hyaline in apical 2/5, veins and pterostigma black brown, body hairs and wing hairs black.

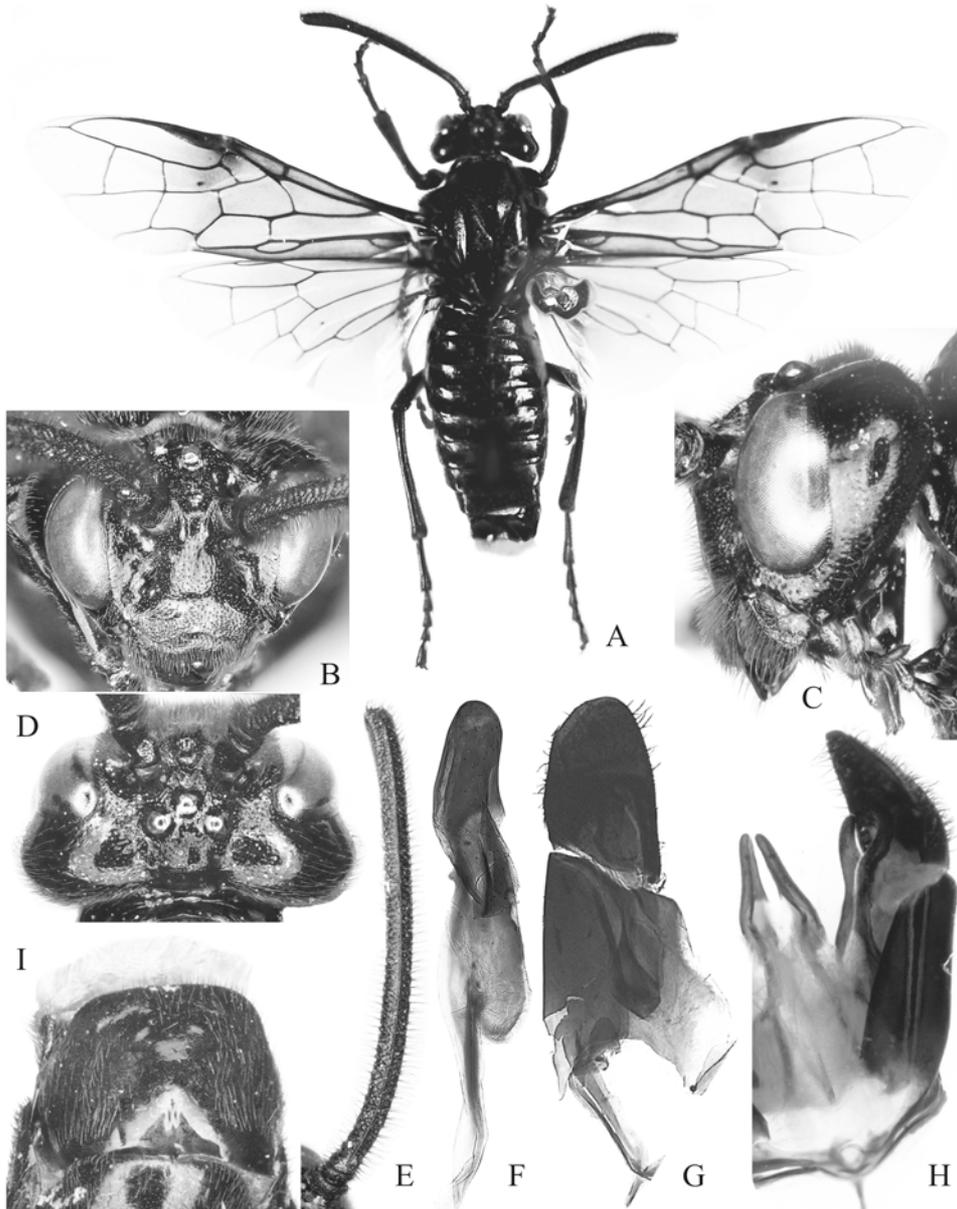


Figure 1. *Athermantus melanoptera* Wei sp. nov. ♂, holotype. A. Adult, dorsal view; B. Head, frontal view; C. Head, lateral view; D. Head, dorsal view; E. Antenna; F. Penis valve; G. Gonoforcep; H. Right half of genitalia; I. Subgenital plate.

Body strongly shiny; clypeus, labrum, basal half of mandibles, lateral of supraclypeal area minutely and densely punctured, center of supraclypeal area and postocellar area sparsely punctured, upper half of lateral carinae, frons, upper half of inner orbits, ocellar area and inner side of temple coarsely and densely punctured, outer side of temple and hind orbits smooth, hardly punctured; antennal flagellum densely microsculptured; dorsum of pronotum irregularly rugose, lateral margins sparsely and minutely punctured; mesonotum and metanotum smooth, dorsum of mesoscutellum scarcely and faintly punctured; mesopleuron smooth, anepimeron sparsely punctured; abdominal tergites and sternites highly smooth, without punctures or microsculptures.

Clypeus flat, anterior margin shallowly and roundly incised (Fig. 1B); labrum narrow, anterior margin shallowly incised; inner margins of eyes almost parallel, shortest distance between eyes 1.2 times the longest axis of eye, malar space 1.1 times as long as diameter of median ocellus (Figs. 1B, C); eyes long elliptical, about 1.65 times as long as broad, upper of hind orbit much broader than eye in lateral view (Fig. 1C); supraclypeal area strongly elevated, top broad and flat, lateral furrow deep (Fig. 1B), in lateral view about as high as clypeus (Fig. 1C); middle fovea deep and round, lateral carinae very short, upper half distinctly convergent downward and lower half subparallel, not meeting in lower ends, middle fovea connected with frontal basin by a shallow furrow (Fig. 1B); frons small with a shallow middle basin, frontal walls low and obtuse (Fig. 1D); OOL : POL : OCL = 20 : 17 : 19, interocellar and postocellar furrows broad and shallow; postocellar area about 2 times as broad as long, center weakly elevated and clearly below top of ocelli, lateral furrows fine and shallow, clearly convergent backward; head strongly enlarged behind eyes and about as long as eye in dorsal view (Fig. 1D). Antenna distinctly bent, total length 2 times the head breadth and as long as head and thorax combined, with sharp longitudinal carina, apex round (Fig. 1E). Middle furrow of mesoscutal middle lobe long, notaulix deep; mesoscutellum triangular, posterior weakly elevated and below top of mesoscutal lobes, anterior corner obtusely protruding; distance between cenchri 0.6 times the longest axis of an ocellus. Outer side of tibia without distinct longitudinal furrow, inner apical tibial spur 0.6 times the apical breadth of tibia, apex acute; metabasitarsus as long as following 3 tarsomeres combined. Forewing: vein R+M slightly shorter than vein Sc, vein R clearly shorter than R+M, 1r-m feebly inclined, third and fourth abscissas of vein Rs about equal in length, 3r-m interstitial to 2m-cu, cell 2Rs slightly shorter than 1Rs, vein cu-a meeting cell 1M at basal 0.4, veins 1 M and 1m-cu slightly convergent toward pterostigma; hind wing: dorsal length of cell about half length of cell Rs, length of anal cell 3 times as long as anal petiole, anal petiole 1.3 times the length of cu-a (Fig. 1A). Subgenital plate broader than long, apical margin truncate (Fig. 1I); right half of gonoforceps as Fig. 1H; harpe much longer than broad, apex roundish (Fig. 1G); valviceps of penis valve hardly oblique, about 3.5 times as long as broad, with a long and broad caudal lobe (Fig. 1F).

**Holotype.** ♂, **China**, Zhejiang, Lin'an, Mt. Tianmu, Kaishanlaodian, 119.433°E, 30.343°N, alt. 1106 m, 08-VI-2017, Mengmeng LIU, Kaiwen GAO & Tingting JI leg.

**Paratype.** 1♂, data same as the holotype.

Female. Unknown.

Etymology. This new species epithet indicates that the wing color is blackish.

Distribution. China (Zhejiang).

Host plant. Unknown.

Remarks. See the above key for the differences between the three species in this genus.

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