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**Description of a new subspecies of *Phytoecia (Neomusaria) balcanica*  
(Frivaldszky von Frivald, 1835) (Coleoptera, Cerambycidae,  
Lamiinae, Phytoeciini) from Iran**

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**Key words:** Coleoptera, Cerambycidae, taxonomy, new subspecies, Kurdistan, Turkey.

**Abstract:** *Phytoecia (Neomusaria) balcanica skoupyi* ssp. n. is described from Iranian Kurdistan. The nominate subspecies *Ph. (N.) b. balcanica* (Frivaldszky von Frivald, 1835) distributed from Greece to Anatolia differs by more pubescent pronotum and much lighter abdomen.

## **Introduction**

*Phytoecia (Neomusaria) balcanica* (Frivaldszky von Frivald, 1835) was described (as *Saperda*) from the environs of Slivno in Bulgaria (Bálint, Abadjiev, 2006), though Slivno in Bosnia and Herzegovina was sometimes wrongly accepted as a type locality of the species. *Ph. (N.) balcanica* is rather rare in Balkans and widely distributed in Anatolia. It was not known from Iran up to 2019, when it was recorded for Kurdistan by Danilevsky (2020). Iranian populations are described below as a new subspecies.

### ***Phytoecia (Neomusaria) balcanica* (Frivaldszky von Frivald, 1835)**

*Saperda balcanica* Frivaldszky, 1835: 268 - "Találtatott egy példányban Szlivnó' vidékén." - [One specimen found in the Slivno region]; 1837: 90 - "Habitat in Balcani montosis" [Inhabits Stara Planina] (redescription); 1845: 165 - "Szlivno (Selimno)... a Haemus déli s éjszaki vidékei" [Southern and northern side of Stara Planina, Sliven] (type locality restriction), 172, "Constantinápoly kies vidéke" [Surroundings of Istanbul]; Bálint, Abadjiev, 2006: 260 - "the type locality was restricted to the southern and northern sides of Stara Planina, near Sliven".

*Oberea balcanica*, Küster, 1848: 87- "In der Türkei und im Gebiet des Balkangebirges".

*Phytoecia balcanica*, Ganglbauer, 1884: 560 - "Türkei"; Mulsant, 1863b: 417; Kantardjiewa-Minkova, 1934: 140 - "България"; Bense, 1995: 418-419 - Bulgarien; Georgiev, Stojanova, 2003: 106-107 - Bulgaria: Tsarevo, Izgrev.

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*Helladia balcanica*, Pic, 1903: 18 - "Turquie".

*Phytoecia (Musaria) balcanica*, Pic, 1905: 38 - "Turquie, Tokat, Caucase"; 1915: 112 - "Turq., Anat., Cauc., Tokat"; Aurivillius, 1923: 554 - "Türkei"; Winkler, 1929: 1223 - "T. Asm.".

*Phytoecia (Neomusaria) balcanica*, Plavilstshikov, 1930: 382, 383 - "partie orientale de la Méditerranée; elle est connue des Balkans, de l'Asie Mineure, de la Syrie", Crete (as "Candia"); Breuning, 1951: 90 - "Bulgarie: Slivno. Monts Balkan, environs de Constantinople, Anatolie occidentale et septentrionale, Crète"; Sama, Löbl, 2010: 305 - "E: BU GR TR A: IQ TR"; H. Özdkmen, G. Özdkmen, 2016: 495 (type locality: "Bosnia-Herzegovina" [wrong data]), 498 - "Bulgaria: Slivno; Greece: Crete: Kandia; N Iraq; Turkey: Amasya, Ankara, Hakkari, İstanbul, Karabük, Kastamonu, Mardin, Tunceli provinces"; Georgiev et al., 2018: 111 - "Bulgaria: Tsarevo, Izgrev"; Tezcan et al., 2020: 152 - Turkey (Şırnak province); Danilevsky, 2020: 12 (Iran, Kurdistan, Sarvabad), 438 (= *subvitticollis* Breuning, 1951) - "E: BU GR TR A: IN IQ TR".

*Phytoecia balcanica* m. *subvitticollis* Breuning, 1951: 92 [unavailable name] - "Amasia".

*Phytoecia balcanica* *subvitticollis* Breuning, Villiers, 1967: 62 - Turquie, "Amasya" [see Art. 45.6.4.1.].

*Neomusaria balcanica*, Sama, 1993: 296; Özdkmen, 2006: 84 - "more or less widely distributed in Turkey"; Pesarini, Sabbadini, 1994: 62 - "Bulgaria, Tracia, Creta", 110 - "mediterranea orientale, rara in Europa, dove si incontra in Bulgaria, Turchia europea y Creta"; 2009: 28-29 - Turchia, "18 Km N Pülümür (Turchia, vil. Tunceli); Georgiev, Hubenov, 2006: 328 - Bulgaria; Migliaccio et al., 2007: 52 - South Bulgaria (Sliven, Tzarevo, Izgrev), Greece, Turkey.

**Type locality.** Slivno in Bulgaria, according to the original description.

**Diagnosis.** The species is one of the most characteristic representatives of the subgenus, as it has wide and dense yellow stripe along pronotum and vertex, a pair of shining black pronotal callosities; besides black antennae often with partly reddish middle joints; elytra densely covered with orange-yellow pubescence excluding wide elytral apex covered with black pubescence, black apical elytral area can be from 4 to 7 times shorter than elytral length; sometimes black elytral apex can be reduced to a very narrow band in about 20 times or more shorter than elytral length; legs always partly red: anterior legs nearly totally orange-yellow with black femoral bases; middle femora with black bases and apices; hind femora black or bicolored; tarsi often totally reddish, or more or less darkened; male antennae a little longer than body, female antennae can sometimes reach elytral apex; three last abdominal

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segments in males can be partly reddish including hind border of 2nd abdominal segment (last segment can be darkened apically); in females only last segment can be reddish including hind margin of 4th segment; body length in Bulgarian and Turkey specimens: 9-15 mm, width at humeri: 2.4-6.2 mm.

**Distribution.** The species is very rare in Balkans (Bulgaria, Greece including Crete, European Turkey); it is known from several provinces in Anatolia (eastwards to Hakkari) and recorded for Syria and Iraq. The records for Caucasus were incorrect. The species was not recorded for Iran before 2020.

### *Phytoecia (Neomusaria) balcanica skoupyi* ssp. n.

Figs 4-9, 14, 16

*Phytoecia (Neomusaria) balcanica*, Danilevsky, 2020: 12 - "Iranian Kurdistan (Sarvabad)".

**Description.** The new subspecies is generally characterized by darker pronotum, legs and abdomen, but dorsal view of the body can be sometimes about same as in the nominative subspecies.

Central pronotal orange-yellow stripe between shining callosities usually very contrasting with sharp margins; lateral black pronotal areas usually shining, without yellow pubescence from anterior to posterior thoracic margins; only 3-4 specimens of all 147 known items have pronotal black lines interrupted anteriorly by yellow pubescence (Fig. 4).

Black apical elytral area 4 to 6 times shorter than elytral length, never strongly reduced.

Anterior legs red with shortly black femoral bases and tarsi, middle femora black in basal half or more, hind femora with very narrow reddish apical band, sometimes indistinct; middle and hind tibiae black with narrow reddish basal areas, or hind tibiae totally black; all tarsi usually black or bases of 2nd tarsal joints reddish.

Abdomen in males can be totally black, though last tergite with dense orange pubescence and last ventrite with dense lateral pubescence; or last ventrite reddish apically, or last ventrite totally reddish, or posterior margin of 4th ventrite also reddish; in females abdomen always black, with narrow goldish pubescence along posterior margins of all ventrites, last ventrite with wider apical and

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lateral goldish pubescence, last tergite totally covered with dense goldish pubescence; body length in males: 6.5-11.0 mm, width at humeri: 1.7-3.1 mm; body length in females: 7.0-13.0 mm, width at humeri: 1.9-3.5 mm.

**Differential diagnosis.** The new taxon differs from the nominative subspecies (Figs 1-3, 10-13, 15) first of all by the total domination of forms with wide and long pronotal black areas reaching anterior pronotal margin (in the nominative subspecies only a pair of black spots situated at posterior pronotal margin); by rather dark abdomen, which is totally black in females, or with red last segment in males (abdomen of the nominative subspecies in females with red last segment, in males up to 3 apical segments red); besides legs are much darker, posterior tibiae largely black (in the nominative subspecies posterior tibiae totally orange-red).

**Type materials.** Holotype, male with a label: "IN Kordistan. 26.4.18 / 10 km NE Baneh / Skoupy leg." [between Baneh and Saqqes, 36°03'21"N, 45°58'02"E] - author's collection (Moscow); 1 paratype, female with same label - author's collection (Moscow); 141 paratypes in Czech Republic: 14 males, 14 females with same label - collection of V. Skoupy (Zilina, Czech Republic); 12 males, 11 females from same locality with same date, but P. Stepanek leg. - collection of P. Stepanek (Kladno, Czech Republic); 18 males, 18 females, from same locality with same date, but S. Hofmeister leg. - collection of S. Hofmeister - (Praha, Czech Republic); 26 males, 28 females, from same locality with same date, but J. Kadlec leg. - collection of J. Kadlec - (Varnsdorf, Czech Republic); 4 paratypes in the Department of Plant Protection, Faculty of Agriculture, College of Agriculture and Natural Resources, University of Tehran, Karaj, Iran and in collection of M.L. Danilevsky (Moscow): 1 male, with a label: "Iran, Kurdistan, 01.05.2017 / Marivan city, / Baghan, Oak Forest / 35°31'8.67"N, 46°24'28.62"E / Fardin Faizi leg.; 1 female with the label: "Iran, Kurdistan / Marivan, 1.5.2017 / Kureh Darreh / Fardin Faizi leg.; 1 male and 1 female with the label: "Iran, Kurdistan / Sarvabad city, 15.5.2017 / Darake, rangeland / 35°20'39.73"N, 46°10'15.11"E / Fardin Faizi leg.".

**Additional materials.** *Phytoecia (Neomusaria) balcanica balcanica* (Frivaldszky von Frivald, 1835): 1 male, Asia Minor, Kizilcahamam,

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6.1965, I. Dr. Schurmann leg. - author's collection; 1 male, TR Gümüşhane, Kale, 1400 m, 25.6.1986, S. Kadlec, J. Voříšek leg. - author's collection; 1 male and 1 female, Turkey, Erzincan, 20 km N Pülümür, Pelitly, 1200-1600m, 39°35'N, 39°55'E, 15-17.6.2005, E. and P. Hajdaj leg. - author's collection.

Besides I have got photos of several specimens: holotype female with labels from Hungarian Natural History Museum, photos by A. Grabant and O. Merkl; male "Balkán" with the labels from Hungarian Natural History Museum, photos by A. Grabant and O. Merkl; 1 female, Bulgaria, Strandzha Mountain, Izgrev vill., 150 m, 21.06.2002, A. Stojanova leg - collection of J. Kurzawa, photo by J. Kurzawa; 1 female, Turkey, Tunceli, Pülümür, 19.6.2003, Roman Krolik leg. - collection of J. Kurzawa, photo by J. Kurzawa; 1 male, Turkey, Muş, Buglan Gecidi, 15 km E of Solhan, 6-9.6. 2002, Roman Królik leg. - collection of J. Kurzawa, photo by J. Kurzawa; 1 female, TR prov. Bingöl, 20km S of Genç, 26.5.2011, L. Skořepa leg. - collection of J. Kadlec, photo by J. Kadlec.

**Distribution.** The subspecies is known from three localities in Iranian Kurdistan: between Baneh and Saqqes, 36°03'21"N, 45°58'02"E - type locality (Fig. 16); Marivan city, Baghan (Kureh Darreh), 35°31'8.67"N, 46°24'28.62"E; Sarvabad city, Darake, 35°20'39.73"N, 46°10'15.11"E.

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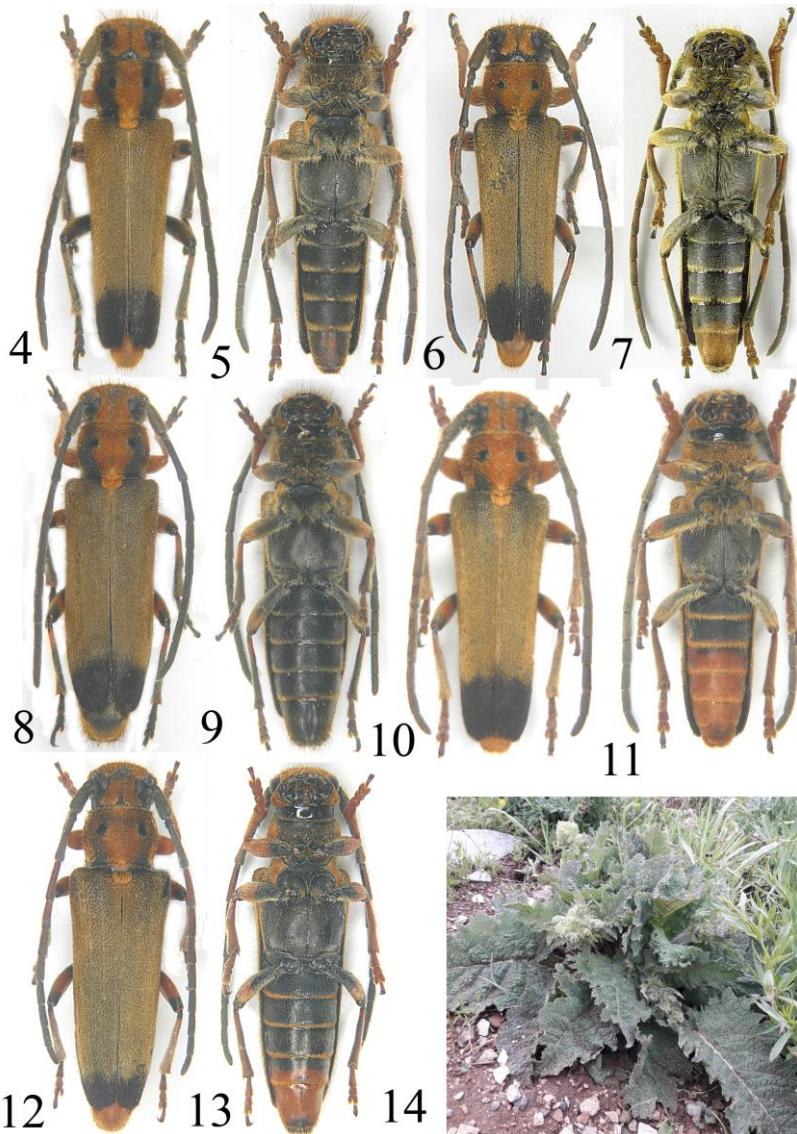
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**Tab. 1.** *Phytoecia (Neomusaria) balcanica balcanica* (Frivaldszky von Frivaldszky, 1835).  
Fig. 1 - holotype, female with labels (photos and composition by A. Grabant and O. Merkl); Figs: 2-3 - female, Bulgaria, Strandzha Mountain, Izgrev vill., 150 m, 21.06.2002, A. Stojanova leg - collection of J. Kurzawa (photo by J. Kurzawa) (2 - dorsal view, 3 - lateral view).



**Tab. 2.** Figs 4-9: *Phytoecia (Neomusaria) balcanica skoupyi* ssp. n. (dorsal and ventral views): 4-5 - male, holotype; 6-7 - male, paratype from same locality; 8-9 - female, paratype from same locality; Figs 10-13 *Phytoecia (Neomusaria) balcanica balcanica*: 10-11 male, Turkey, Erzincan, 20 km N Pülmür, Pelitly, 1200-1600 m, 39°35'N, 39°55'E, 15-17.6.2005, E. and P. Hajdaj leg.; 12-13 - female from same locality; Fig. 14 - *Salvia* sp. - food plant of *Ph. (N.) b. skoupyi* ssp. n. (photo by J. Kadlec).

15



1846-ban került  
a Múzeumba

Phytoecia  
balcanica Friv.  
coll. E. Frivaldszky

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**Tab. 3.** Fig. 15 - *Phytoecia (Neomusaria) balcanica balcanica* (Frivaldszky von Frivald, 1835). Male “Balkán” (photos and composition by A. Grabant and O. Merkl); Fig. 16 - Type locality of *Phytoecia (Neomusaria) balcanica skoupyi* ssp. n.

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## **Two new Longhorn beetles (Coleoptera, Cerambycidae) from Iran**

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**Key words:** Coleoptera, Cerambycidae, taxonomy, new species, new subspecies, *Phytoecia*, *Cortodera*, Iran, Turkey.

**Abstract:** *Cortodera colchica serowensis* ssp. n. is described from Serow environs in Iranian West Azerbaijan province. Only one subspecies of *Cortodera colchica* Reitter, 1890 was known from Iran before - *C. c. danczenkoi* Danilevsky, 1985; the distinguishing characters are described. *Phytoecia* (s. str.) *martinae* sp. n. close to sympatric *Ph.* (s. str.) *bodemeyeri* Reitter, 1913 is described from same locality as previous taxon; the distinguishing characters are described.

### **Introduction**

A very interesting locality (Fig. 7) in North-West Iran near Serow in West Azerbaijan province was several times visited by Czech entomologists 2018 and 2019. The first results of the collecting efforts in the area were published before as *Agapanthia martinae* Danilevsky & Navrátil, 2018. Now two more new taxa from same biotope are described below.

#### *Cortodera colchica serowensis* ssp. n.

Figs 1-3, 7

**Description.** Parthenogenetic species, no males known; the newly discovered Iranian population definitely belongs to *Cortodera colchica* Reitter, 1890 because of wide and short, middle size body, short head with angulated temples and short oval palpal joints; transverse short prothorax without lateral angulation, pronotum with very dense, conjugates small punctuation, with dense mixed erect and recumbent pubescence; elytra with dense small punctuation, with oblique short pubescence, without erect setae.

Body usually black, including antennae, elytra and legs (Fig. 1), but anterior femora always with narrow reddish middle band, which can be nearly indistinct or occupy about third of femur length; only one specimen (Fig. 3) have reddish-brown elytra and bicolored legs: all tibiae reddish with narrowly darkened apices, all femora reddish at middle, last ventrite red, 4<sup>th</sup> ventrite red near middle of hind margin; another single specimen (Fig. 2) with black elytra has partly (along internal margin) red scapus, partly red legs, red last ventrite, 4<sup>th</sup> ventrite red at middle, 3<sup>rd</sup> ventrite red near middle of hind margin.

Antennae surpassing elytral middle; 5<sup>th</sup> joint a little longer or a little shorter than 3<sup>rd</sup>, 4<sup>th</sup> joint is the shortest, sometimes about equal to 1<sup>st</sup>, but usually shorter.

Prothorax about 1.5 times wider posteriorly, than anteriorly; about 1.2 times wider than long; pronotum with shallow central depression bearing posteriorly a short shining stripe.

Elytra from 2.0 to 2.2 times longer than wide, widest behind middle; slightly narrowed before middle; body length (to elytral apices): 8.6-10.6 mm, width (at humeri): 2.6-3.4 mm.

**Differential diagnosis.** Only one subspecies of *C. colchica* was known in Iran before. *C. c. danczenkoi* Danilevsky, 1985 penetrates to Iran from north-east in Iranian Talysh from the Republic of Azerbaijan, where it is connected with *Centaurea* sp. with blue flowers. *C. c. danczenkoi* is also parthenogenetic - no males known; all specimens are black; body distinctly wider about 2.1 times wider than long; anterior femora never with reddish central band; apical joint of maxillary palpi widened apically with distinct outer and inner angles; smooth pronotal line more elongated.

**Type material.** Holotype, female, Iran, West Azerbaijan prov. (Āzārbāyjān-e Gharbī), 11 km SE Serow, 37°38'37"N, 44°44'13"E, 1950 m, 27-28.5.2019, K. Hodek leg. - collection of M.L. Danilevsky (Moscow, Russia); 21 paratypes from same locality collected on 29-31.5.2018 and 25-28.5.2019: 2 females in collection of M.L. Danilevsky (Moscow, Russia), 5 females in collection of K. Hodek (Brno, Czech Republic), 2 females in collection of I. Klapka (Česká Lípa, Czech Republic), 8 females in collection of M. Holomčík (Lužice, Czech Republic), 4 females in collection of Š. Hofmeister (Praha, Czech Republic).

All specimens were collected on flowers of *Centaurea* sp.

**Additional materials used for comparison.** 12 females, paratypes of *C. c. danczenkoi* Danilevsky, 1985 - Azerbaijan, Talysh, Mistan, 4.6.1979, M. Danilevsky leg. - collection of M. Danilevsky.

**Distribution.** Only one locality (Fig. 7) is known in Iranian West Azerbaijan (Āzārbāyjān-e Gharbī), 11 km SE Serow, 37°38'37"N, 44°44'13"E, 1950 m.

**Remark.** Due to unpredictable and unprecedented delay of the publication of the original description (Danilevsky, 1987) of *C. c. danczenkoi* by "Revue d'Entomologie de l'URSS" more than for 3 years, all new names of that paper were published in the key by Danilevsky and Miroshnikov (1985) without formal description. The publication in the key was valid, though it did not include complete description, neither type material, neither photographs. So, the type material, published in 1987 as holotype and paratypes, must be regarded as lectotype and paratypes.

**Etymology.** The new taxon is named after the name of the nearest village - Serow (37°43'19"N, 44°39'5"E).



**Figs 1-3.** *Cortodera colchica serowensis* ssp. n. (photos by M.L. Danilevsky): 1 - holotype, female; 2-3 - paratypes, females.

*Phytoecia (s. str.) martinae* sp. n.

Figs 4-5, 7

**Description.** Body totally black with dense recumbent grayish or partly yellowish pubescence.

Head a little wider than prothorax; frons and vertex with long erect black setae; frons slightly transverse; recumbent pale frons pubescence much denser in males, than in females; genae in males a little narrower than lower eye lobes, genae in females about as wide as lower eye lobes; eyes deeply emarginated, lower and upper lobes are connected by very narrow bar.

Antennae in males and females black, thin, long, a little longer than body, 3<sup>rd</sup> and 4<sup>th</sup> antennal joints with indistinct apical swellings; with very rare single erect setae and fine dense grayish recumbent pubescence; 3<sup>rd</sup> joint is the longest, longer than 4<sup>th</sup> and much longer than 1<sup>st</sup>, 5<sup>th</sup> joint a little shorter than 1<sup>st</sup>.

Prothorax long, cylindrical, without lateral tubercles, nearly without middle widening, about as wide anteriorly as posteriorly, in males and in female about as long as basal width, or in males a little longer; pronotum with moderately dense small punctuation, with wide central grayish-yellowish central pronotal stripe and numerous black erect setae, lateral stripes absent; two small flat callosities distinct in males, or usually indistinct in females.

Scutellum transverse, with dense pale pubescence.

Elytra slightly converging posteriorly, more in males than in females; about 2.9-3.0 times longer than basal width in males, or 2.6-2.7 times in females; flat with distinct lateral carinae; slightly depressed along middle; with grayish short recumbent pubescence and numerous short erect setae all along elytral length; elytral punctuation very small, moderately dense, distant between dots longer than diameter of each one; elytral apices truncated with poorly pronounced outer and inner angles.

Legs black with reddish anterior tibiae and partly reddish apices of anterior femora; coxal spines of hind legs absent; 1<sup>st</sup> joint of posterior tarsi about as long as 2<sup>nd</sup> and 3<sup>rd</sup> combined; 4<sup>th</sup> tarsal joint deeply emarginated, nearly to about its bases; dents of tarsal claws sharpened, elongated.

Metepisternum with dense pale recumbent pubescence

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concentrated along its dorsal margin; ventral body side also with dense pale pubescence; pygidium with dense pale pubescence, convex in males or strongly convex in females, truncated apically; in males last ventrite slightly depressed, rounded apically, postpygidium emarginated; in females last ventrite slightly convex, shallow emarginated apically; parameres wide, aedeagus with sharp apex.

Body length in males: 6.7-7.8 mm, width: 1.6-1.9 mm

**Differential diagnosis.** The new species is very close to sympatric *Ph. (s. str.) bodemeyeri* Reitter, 1913 (Fig. 6), which differs by distinctly transverse prothorax, very sparse elytral punctuation with wide spaces between dots, recumbent elytral pubescence very dense hiding elytral sculpture, antennae thicker, 3<sup>rd</sup> and 4<sup>th</sup> antennal joint with apical swellings, middle antennal joints partly reddish.

Besides body, legs and antennae in *Ph. martinae* sp. n. more subtile than in *Ph. bodemeyeri*; pronotum narrower and longer, with indistinct callosities; antennae slightly longer than in *Ph. bodemeyeri*, in males usually reach the end of the elytra; tarsi longer than in *Ph. bodemeyeri*, especially posterior tarsi; eyes about same width as genae; in *Ph. bodemeyeri* genae shorter than eyes.

*Ph. (s. str.) bialookii* Danilevsky, 2010 from Eastern Turkey is also similar to the new species, but easily differs by very short antennae reaching in males posterior elytral forth, and in female posterior elytral third

**Type materials.** Holotype, male, Iran, West Azerbaijan prov. (Āzārbāyjān-e Gharbī), 11 km SE Serow, 1950 m, 37°38'30"N, 44°44'04"E, 27-28.5.2019, K. Hodek leg. - collection of M. Danilevsky (Moscow, Russia); 9 paratypes from same locality; 1 female, 30-31.5.2018, K. Hodek leg. - collection of M. Danilevsky (Moscow, Russia); 5 females, 27-28.5.2019, K. Hodek leg. - collection of K. Hodek (Brno, Czech Republic); 1 male and 1 female from same locality, 27-28.5.2019, L. Klapka leg. - collection of L. Klapka (Česká Lípa, Czech Republic); 1 male from same locality, 27-30.5.2018, P. Jelinek leg. - collection of P. Jelinek (Jindřichův Hradec, Czech Republic).

**Additional materials used for comparison.** *Ph. (s. str.) bodemeyeri*: 1 male and 1 female, Iran, West Azerbaijan prov. (Āzārbāyjān-e Gharbī), 11 km SE Serow, 1950 m, 37°38'30"N, 44°44'04"E, 27-28.5.2019, K. Hodek leg. - collection of

M. Danilevsky (Moscow, Russia); 1 male, Iran, Kazvin prov., Kouhin, 31.5.2019, K. Hodek leg. - collection of M. Danilevsky (Moscow); 1 female with same label - collection of M. Danilevsky (Moscow, Russia).

*Ph. (s. str.) bialookii*: 1 male, holotype, E Turkey, Guroymak env., NW Tatwan, 9.6.2002, P. Bialooki leg. - collection of M. Danilevsky (Moscow, Russia); 7 paratypes; 2 males and 2 females with same label - collection of M. Danilevsky (Moscow, Russia); 1 male, 2 females, E Turkey, Buglan Gecidi, NW Mus, 8.6.2002, P. Bialooki leg. - collection of M. Danilevsky (Moscow, Russia).

**Distribution.** Only one locality (Fig. 7) is known in Iranian West Azerbaijan (Āzārbāyjān-e Gharbī), 11 km SE Serow, 37°38'37"N, 44°44'13"E, 1950 m.

**Etymology.** The species is dedicated to Martina Jandlová - a girlfriend of Karel Hodek, as thanksgiving for her help and support in his entomological activity.



**Figs 4-5.** *Phytoecia* (s. str.) *martinae* sp. n.: 4 - holotype, male with genitals (photos by K. Hodek); 5 - paratype, female, K. Hodek leg. (photo by M.L. Danilevsky).

**Fig. 6.** *Phytoecia* (s. str.) *bodemeyeri* Reitter, 1913 - male with genitals, Iran, Qazvin, Kouhin, (photos by K. Hodek).



**Fig. 7.** Iran, West Azerbaijan, Serow environs, type locality of both new taxa (photo by K. Hodek).

**Acknowledgments.** We are very grateful to Štěpán Hofmeister (Praha, Czech Republic), Michal Holomčík (Lužice, Czech Republic), Petr Jelinek (Jindřichův Hradec, Czech Republic) and Ladislav Klapka (Česká Lípa, Czech Republic), who supplied us with specimens for study.

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**New data on the distribution and biology of the longhorn beetles  
from Taiwan (Coleoptera: Cerambycidae)**

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**Key words:** Coleoptera, Cerambycidae, faunistics, biology, zoogeography, Taiwan.

**Abstract:** New data on the distribution and biology of the longhorn beetles occurring in Taiwan are presented together with a list of 156 species and subspecies representing 92 genera and 6 subfamilies that were collected during two entomological expeditions conducted in May 2012 and May/June 2013. New localities of 69 taxa recorded so far only from Taiwan are given. *Euryctyosemia nomurai* (Gressitt, 1951) and *Sybra botelensis* Breuning et K. Ohbayashi, 1966 are recorded from Lutao Isl. for the first time.

## **Introduction**

Taiwan is a mountainous island in the western Pacific. The Tropic of Cancer runs through the middle part of Taiwan. The highest peak in the Backbone Mountains (or the Central Ridge) of this island is 3952 m. Two monsoon systems influence the climate in Taiwan, the summer monsoon from the south-western direction and the winter monsoon from the north-eastern direction. The warm and humid environment, long altitudinal gradients, different monsoon systems and complex topography cause the highly diverse flora and vegetation in Taiwan. According to the Flora of Taiwan (Huang at al., 1994-2003), there are 235 families, 1419 genera and 4340 species within an area of about 36 000 km<sup>2</sup>. Among the 4340 species, 262 are naturalized and 1069 are endemic. Forests are the most dominant vegetation types in Taiwan, covering almost 60% of the land ([www.forest.gov.tw](http://www.forest.gov.tw)). More than half of the natural forests are evergreen broad-leaved

forests and there are 463 evergreen broad-leaved woody species in the flora of Taiwan.

A great variety of habitats and natural vegetation is reflected in a great number of associated insect, many of them endemic to the island. The longhorn beetle fauna of Taiwan has been studied intensively over the past several decades, but additional taxa still await discovery. A total of approximately 806 Cerambycidae species and subspecies are now known from Taiwan out of which 508 are recorded so far only from this region.

## **Material and methods**

A survey of the Cerambycidae of Taiwan was conducted out during years 2012 and 2013. The material for this study was collected by the first author and other collectors from different localities in Taiwan and is deposited in the personal collections.

The most effective standard methods for collecting beetles, such as attracting them to artificial light sources, shaking them into an entomological umbrella, sweep netting and analyses of the inhabited material, were used during the field research. The adults were determined by Carolus Holzschuh (Villach, Austria), Petr Viktora (Kutná Hora, Czech Republic), Tomáš Tichý (Opava, Czech Republic) and by the authors.

The following abbreviations of collectors are used in the text:  
WG - Walter Grosser, Opava, Czech Republic  
PK - Pavel Kučera, Liberec, Czech Republic  
FČ - František Černý, Liberec, Czech Republic

## Results

### Family VESPERIDAE Subfamily Philinae

#### Tribe Philini

##### 1) *Philus antennatus* (Gyllenhal, 1817)

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5.2012, 1 adult (WG).

**Distribution:** Known from SE Asia, China (Anhwei, Fukien, Kwantung, Kweichow, Kwangsi, Hainan, Hebei, Henan, Hongkong, Hubei, Hunan, Kiangsu, Kiangsi, Shaanxi, Shantung, Chekiang) and Taiwan.

##### 2) *Philus pallescens* ssp. *pallescens* Bates, 1866

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 1 adult (WG); Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5.2012, 1 adult (WG); Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 1 adult (WG); Taiwan, Pingtung prov., Kenting env., 21°56'52.21"N 120°46'57.23"E, 36 m, 4.6.2013, 1 adult (WG).

**Distribution:** Known from Laos, continental China (Fukien, Kwantung, Kweichow, Kwangsi, Henan, Hongkong, Hunan, Kiangsi, Sichuan, Shaanxi, Chekiang) and Taiwan.

### Family DISTENIIDAE Subfamily Disteniinae

#### Tribe Cyrttonopini

##### 3) *Cyrttonops asahinai* Mitono, 1947

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

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**Family CERAMBYCIDAE  
Subfamily Prioninae**

**Tribe Aegosomatini**

**4) *Aegolipton sauteri* (Lameere, 1913)**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5.2012, 12 adults (WG); Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 4 adults (WG); Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 4 adults (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**5) *Aegosoma sinicum* ssp. *sinicum* White, 1853**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5.2012, 1 adult (WG); Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 2 adults (WG).

**Distribution:** Known from Russia (Far East), North Korea, South Korea, SE Asia, China (Anhwei, Peking, Fukien, Gansu, Kwantung, Kweichow, Hainan, Hebei, Heilongjiang, Henan, Hubei, Hunan, Kiangsu, Kiangsi, Kirin, Kiangsi, Liaoning, Nei Mongol, Sichuan, Shanghai, Shandong, Shanxi, Tianjin, Tibet, Yunnan, Chekiang) and Taiwan.

**Tribe Anacolini**

**6) *Sarmydus antennatus* Pascoe, 1867**

**Material:** Taiwan, Taitung prov., Wulu env., 23.12762°N 121.15394°E, 403 m, 31.5.2013, 1 adult (WG).

**Distribution:** Known from India (Uttarakhand, Uttar Pradesh, Sikkim, Darjeeling), Bhutan, Nepal, SE Asia, China (Fukien, Kwantung, Kwangsi, Hainan, Hunan, Kiangsu, Shaanxi, Yunnan) and Taiwan.

**Tribe Eurypodini**

**7) *Eurypoda antennata* Saunders, 1853**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 2 adults (WG).

**Distribution:** Known from China (Anhwei, Kwantung, Kweichow, Kwangsi, Henan, Hongkong, Hainan, Hubei, Hunan, Kiangsu, Kiangsi, Sichuan, Shanghai, Tianjin, Tsinghai, Yunnan, Chekiang) and Taiwan.

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### Tribe Macrotomini

#### 8) *Bandar pascoei ssp. formosae* (Gressitt, 1938)

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 2.6.2013, 3 adults (WG, PK, FC).

**Distribution:** Known from Japan (Ryukyu Isl.) and Taiwan.

### Tribe Prionini

#### 9) *Prionus scabripunctatus* Hayashi, 1971

**Material:** Taiwan, Taichung prov., 15 km W Lishan, 24.25830°N 121.21086°E, 1413 m, 25.5.2012, 1 adult (PK).

**Distribution:** This taxon is so far known only from Taiwan.

#### 10) *Priotyrranus closteroides* ssp. *closteroides* (Thomson, 1877)

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 1 adult (WG).

**Distribution:** Known from Vietnam, China (Anhwei, Fukien, Kwantung, Kweichow, Kwangsi, Hainan, Henan, Hongkong, Hubei, Hunan, Kiangsu, Kiangsi, Sichuan, Liaoning, Nei Mongol, Sichuan, Shaanxi, Tianjin, Yunnan, Chekiang) and Taiwan.

## Subfamily Lepturinae

### Tribe Lepturini

#### 11) *Anoploderomorpha formosana* (Matsushita, 1933)

**Material:** Taiwan, Nantou prov., 15 km of Wushe, Chingching Farm, 24.06680°N 121.16770°E, 2000 m, 13.6.2013, 1 adult (WG).

**Distribution:** Known from China (Hainan) and Taiwan.

#### 12) *Anoploderomorpha izumii* (Tamanuki et Mitono, 1939)

**Material:** Taiwan, Taitung prov., Siangyang, 23.24774°N 120.98602°E, 2342 m, 31.5.-1.6.2013, 1 adult (FC).

**Distribution:** Known from continental China (Fukien, Kwantung, Yunnan, Chekiang) and Taiwan.

#### 13) *Leptura auratopilosa* (Matsushita, 1931)

**Material:** Taiwan, Taichung prov., 15 km W Lishan, 24.25830°N 121.21086°E, 1413 m, 25.5.2012, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

#### 14) *Nanostrangalia semichujoi* Hayashi, 1974

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 2 adults (WG).

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**Distribution:** This taxon is so far known only from Taiwan.

### **15) *Parastrangalis phantoma* Holzschuh, 1999**

**Material:** Taiwan, Taichung prov., 15 km W Lishan, 24.25830°N 121.21086°E, 1413 m, 25.5.2012, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

### **16) *Parastrangalis lateristriata* (Tamanuki et Mitono, 1939)**

**Material:** Taiwan, Taitung prov., 20 km NW Litao, 23.24724°N 120.99052°E, 2120 m, 22.5.2012, 2 adults (WG); Taiwan, Taitung prov., Siangyang, 23.24774°N 120.98602°E, 2342 m, 31.5.-1.6.2013, 1 adult (WG).

**Distribution:** Known from SE Asia and Taiwan.

### **17) *Parastrangalis subapicalis* (Gressitt, 1935)**

**Material:** Taiwan, Taitung prov., 20 km NW Litao, 23.24724°N 120.99052°E, 2120 m, 22.5.2012, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

## **Tribe Rhagiini**

### **18) *Pidonia (Mumon) sacrosancta* Kuboki, 1995**

**Material:** Taiwan, Taitung prov., 20 km NW Litao, 23.24724°N 120.99052°E, 2120 m, 22.5.2012, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

## **Subfamily Cerambycinae**

## **Tribe Asemini**

### **19) *Cephalallus oberthueri* Sharp, 1905**

**Material:** Taiwan, Yilan prov., Tuleng env., 24.34637°N 121.31773°E, 1885 m, 10.5.2012, 1 adult (WG).

**Distribution:** Known from India (Arunachal Pradesh), continental China (Fukien, Kwangsi, Hubei, Kiangsi, Tibet, Yunnan) and Taiwan.

### **20) *Cephalallus unicolor* ssp. *unicolor* (Gahan, 1906)**

**Material:** Taiwan, Taitung prov., Siangyang, 23.24774°N 120.98602°E, 2342 m, 31.5.-1.6.2013, 1 adult (WG).

**Distribution:** Known from North Korea, South Korea, Japan, SE Asia, China (Fukien, Kwantung, Kweichow, Hainan, Henan, Hongkong, Hubei, Hunan, Kiangsu, Kirin, Kiangsi, Sichuan, Yunnan, Chekiang) and Taiwan.

**Tribe Callichromatini**

**21) *Aphrodisium faldermannii* ssp. *horishaense* (Kano, 1933)**

**Material:** Taiwan, Nantou prov., Sun Moon Lake env., 23.82303°N 120.94062°E, 800 m, 24.5.2012, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**23) *Aphrodisium sauteri* (Matsushita, 1933)**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 1 adult (WG).

**Distribution:** Known from continental China (Anhwei, Fukien, Kwangsi, Henan, Hunan, Kiangsi, Shandong, Sichuan, Chekiang) and Taiwan.

**24) *Embrikstrandia unifasciata* (Ritsema, 1897)**

**Material:** Taiwan, Nantou prov., Sun Moon Lake env., 23.82303°N 120.94062°E, 800 m, 24.5.2012, 1 adult (WG).

**Distribution:** Known from SE Asia, China (Anhwei, Fukien, Gansu, Kwantung, Kwangsi, Hainan, Henan, Hongkong, Hubei, Hunan, Kiangsi, Sichuan, Shanxi, Chekiang) and Taiwan.

**Tribe Callidiopini**

**25) *Ceresium elongatum* ssp. *elongatum* Matsushita, 1933**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5. 2012, 1 adult (WG); Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 2 adults (WG); Taiwan, Nantou prov., Sun Moon Lake env., 23.82303°N 120.94062°E, 800 m, 24.5.2012, 1 adult (WG).

**Distribution:** Known from Japan (Ryukyu Isl.), China (Hongkong) and Taiwan.

**26) *Ceresium flavipes* (Fabricius, 1792)**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 1 adult (WG); Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5.2012, 6 adults (WG); Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 5 adults (WG).

**Distribution:** Known from Afrotropical Region, Australian Region, Neotropical Region, India, Pakistan, SE Asia, continental China (Kwantung, Hongkong) and Taiwan.

**27) *Ceresium longicorne* Pic, 1926**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5. 2012, 2 adults (WG); Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 1 adult (WG); Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 1 adult (WG); Taiwan, Taitung prov., Wulu env., 23.12762°N 121.15394°E, 403 m, 8.6.2013, 1 adult (FČ).

**Distribution:** Known from South Korea, Japan, SE Asia, continental China (Hubei, Hongkong, Kiangsi) and Taiwan

**28) *Ceresium sinicum* ssp. *sinicum* White, 1855**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 5 adults (WG).

**Distribution:** Known from South Korea, Japan, SE Asia, China (Peking, Fukien, Kwantung, Kweichow, Kwangsi, Hainan, Henan, Hubei, Hunan, Kiangsu, Kiangsi, Sichuan, Shaanxi, Shanghai, Tibet, Yunnan, Chekiang) and Taiwan.

**29) *Ceresium subuniforme* Schwarzer, 1925**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5. 2012, 1 adult (WG); Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 3 adults (WG); Taiwan, Nantou prov., Sun Moon Lake env., 23.82303°N 120.94062°E, 800 m, 24.5.2012, 1 adult (WG); Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 1 adult (FČ).

**Distribution:** This taxon is so far known only from Taiwan.

**30) *Parasalpina kojimai* Hayashi, 1962**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 1 adult (WG).

**Distribution:** Known from Japan (Ryukyu: Iriomote Isl.) and Taiwan.

**31) *Stenodryas clavigera* ssp. *impuncticollis* Hayashi, 1974**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 2.6.2013, 1 adult (WG); Taiwan, Taipei prov., Pinglin env., 24.97280°N 121.77214°E, 436 m, 16.-19.6.2013, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**Tribe Cerambycini**

**32) *Gibbocerambyx maculicollis* (Matsushita, 1933)**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 1 adult (WG); Taiwan, Nantou prov., Sun Moon Lake env., 23.82303°N 120.94062°E, 800 m, 24.5.2012, 3 adults (WG); Taiwan, Nantou prov., 5 km NE Shuili, 23.71029°N 120.87933°E, 900 m, 23.5.2012, 1 adult (WG); Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5.2012, 1 adult (WG); Taiwan, Taitung prov., Wulu env., 23.12762°N 121.15394°E, 403 m, 31.5.2013, 1 adult (WG); Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 2.6.2013, 1 adult (FC).

**Distribution:** This taxon is so far known only from Taiwan.

**33) *Hemadius oenochrous* Fairmaire, 1889**

**Material:** Taiwan, Yilan prov., Ssuchi (Siji) env., 24.50907°N 121.43788°E, 675 m, 26.5.2012, 3 adults on trunk of *Prunus serrulata* (WG, PK).

**Distribution:** Known from SE Asia, continental China (Anhwei, Fukien, Kwangsi, Hubei, Hunan, Kiangsi, Sichuan, Tibet, Yunnan, Chekiang) and Taiwan.

**34) *Lachnopterus socius* Gahan, 1891**

**Material:** Taiwan, Lanyu Isl., 22.06827°N 121.56625°E, 22 m, 16.5.2012, 1 adult (WG).

**Distribution:** Known from SE Asia and Taiwan.

**35) *Margites fulvidus* (Pascoe, 1858)**

**Material:** Taiwan, Nantou prov., Sun Moon Lake env., 23.82303°N 120.94062°E, 800 m, 24.5.2012, 2 adults (WG).

**Distribution:** Known from North Korea, South Korea, Japan, continental China (Fukien, Kwantung, Kweichow, Henan, Hubei, Hunan, Kiangsi, Sichuan, Shaanxi, Yunnan) and Taiwan.

**36) *Massicus trilineatus* (Pic, 1933)**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 2 adults (WG); Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 3 adults (WG, FC).

**Distribution:** Known from India (Arunachal Pradesh), SE Asia, China (Fukien, Kweichow, Kwangsi, Hainan, Kiangsi, Yunnan) and Taiwan.

**37) *Nadezhdiella cantori* (Hope, 1845)**

**Material:** Taiwan, Taitung prov., Wulu env., 23.12762°N 121.15394°E, 403 m, 31.5.2013, 1 adult (PK).

**Distribution:** Known from Thailand, China (Fukien, Kwantung, Kweichow, Kwangsi, Hainan, Henan, Hongkong, Hubei, Hunan, Kiangsu, Kiangsi, Sichuan, Shaanxi, Yunnan, Chekiang) and Taiwan.

**38) *Neoplocaederus bicolor* (Gressitt, 1942)**

**Material:** Taiwan, Hsinchu prov., 20 km NW Neiwan, 24.69140°N 121.31076°E, 1563 m, 28.5.2013, 1 adult (PK).

**Distribution:** Known from China (Kweichow, Hainan, Hebei, Hubei, Hunan, Kiangsi, Shaanxi, Tibet, Yunnan) and Taiwan.

**39) *Pseudopachydissus taiwanensis* Hayashi, 1992**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 1 adult (WG); Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 2 adults (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**40) *Trachylophus sinensis* Gahan, 1888**

**Material:** Taiwan, Taitung prov., Wulu env., 23.12762°N 121.15394°E, 403 m, 31.5.2013, 1 adult (WG).

**Distribution:** Known from Vietnam, Myanmar, China (Fukien, Kwantung, Kweichow, Kwangsi, Hainan, Hongkong, Hubei, Hunan, Kiangsi, Sichuan, Chekiang) and Taiwan.

**41) *Trirachys indutus* (Newman, 1842)**

**Material:** Taiwan, Lanyu Isl., 22.06827°N 121.56625°E, 22 m, 16.5.2012, 1 adult (WG).

**Distribution:** Known from SE Asia, China (Anhwei, Fukien, Kwantung, Kweichow, Kwangsi, Hainan, Hongkong, Kiangsi, Chekiang) and Taiwan.

**42) *Xoanodera maculata* Schwarzer, 1925**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 1 adult (WG); Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 1 adult (WG); Taiwan, Kaoshing prov., Baolai env., 21.10487°N 120.72800°E, 845 m, 10.6.2013, 1 adult (WG); Taiwan, Taitung prov., Wulu env., 23.12762°N 121.15394°E, 403 m, 31.5.2013, 1 adult (FČ).

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**Distribution:** Known from China (Fukien, Kwangsi, Hainan, Hunan, Sichuan, Yunnan) and Taiwan.

**Tribe Cleomenini**

**43) *Cleomenes auricollis* Kano 1933**

**Material:** Taiwan, Taitung prov., 20 km NW Litao, 23.24724°N 120.99052°E, 2120 m, 22.5.2012, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**44) *Dere kirai* Mitono, 1943**

**Material:** Taiwan, Hsinchu prov., 20 km NW Neiwan, 24.69140°N 121.31076°E, 1563 m, 15.6.2013, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**Tribe Clytini**

**45) *Chlorophorus annularis* (Fabricius, 1787)**

**Material:** Taiwan, Taitung prov., Wulu env., 23.12762°N 121.15394°E, 403 m, 31.5.2013, 1 adult (WG); Taiwan, Taitung prov., Wulu env., 23.12762°N 121.15394°E, 403 m, 8.6.2013, 1 adult (FČ).

**Distribution:** Known from South Africa, Brazil, USA, Australia, Pakistan, India, Nepal, Japan, South Korea, SE Asia, China (Anhwei, Fukien, Kwantung, Kweichow, Kwangsi, Hainan, Hebei, Henan, Hongkong, Hubei, Hunan, Kiangsu, Kirin, Kiangsi, Liaoning, Sichuan, Shaanxi, Tibet, Yunnan, Chekiang) and Taiwan.

**46) *Chlorophorus annulatus* (Hope, 1831)**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5. 2012, 15 adults (WG); Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 2 adults (WG); Taiwan, Taitung prov., 20 km NW Litao, 23.24724°N 120.99052°E, 2120 m, 22.5.2012, 1 adult (WG); Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 42 adults (WG); Taiwan, Taipei prov., Pinglin env., 24.97280°N 121.77214°E, 436 m, 16.-19.6.2013, 1 adult (WG); Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 2.6.2013, 1 adult (WG).

**Distribution:** Known from Japan, SE Asia, continental China (Fukien, Kwantung, Hubei, Kiangsi, Shaanxi, Chekiang) and Taiwan.

**47) *Chlorophorus anticemaculatus* Schwarzer, 1925**

**Material:** Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 1 adult (WG); Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 2 adults (WG, FC).

**Distribution:** This taxon is so far known only from Taiwan.

**48) *Chlorophorus chiuae* Nakamura, 1974**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 3 adults (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**49) *Chlorophorus kanekoi* Matsushita, 1941**

**Material:** Taiwan, Nantou prov., Heshe env., 23°33'44N 120°52'03E, 917 m, 23.5.2012, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**50) *Chlorophorus cf. oppositus* (Chevrolat, 1863)**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5. 2012, 3 adults (WG).

**Distribution:** Known from South continental China, Laos, Vietnam and Taiwan.

**51) *Chlorophorus probsti* Holzschuh, 1989**

**Material:** Taiwan, Taitung prov., Wulu env., 23.12762°N 121.15394°E, 403 m, 31.5.2013, 2 adults (WG); Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 2.6.2013, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**52) *Chlorophorus verus* Holzschuh, 1998**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 11 adults (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**53) *Chlorophorus viridulus* Kano, 1933**

**Material:** Taiwan, Chiayi prov., Shihtzulu (Shizhuo), 23°28'N 120°41'E, 1350 m, 23.5.2012, 2 adults (WG); Taiwan, Nantou prov., Heshe env., 23°33'44N 120°52'03E, 917 m, 23.5.2012, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**54) *Chlorophorus taihorensis* Schwarzer, 1925**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 8 adults (WG).

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**Distribution:** This taxon is so far known only from Taiwan.

**55) *Demonax bidenticornis* Matsushita, 1974**

**Material:** Taiwan, Nantou prov., Heshe env., 23°33'44N 120°52'03E, 917 m, 23.5.2012, 2 adults (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**56) *Demonax bimaculicollis* (Schwarzer, 1925)**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5. 2012, 1 adult (WG).

**Distribution:** Known from China (Hainan) and Taiwan.

**57) *Demonax okunii* Mitono, 1942**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 2.6.2013, 3 adults (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**58) *Demonax substitutus* Gressitt, 1934**

**Material:** Taiwan, Nantou prov., Sun Moon Lake env., 23.82303°N 120.94062°E, 800 m, 24.5.2012, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**59) *Perissus kankauensis* Schwarzer, 1925**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 18 adults (WG, FČ).

**Distribution:** This taxon is so far known only from Taiwan.

**60) *Xylotrechus atronotatus* ssp. *atronotatus* Pic, 1917**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 22 adults (WG, FČ).

**Distribution:** Known from China (Fukie, Hainan, Kirin, Liaoning) and Taiwan.

**61) *Xylotrechus grayii* ssp. *grayii* (White, 1855)**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 1 adult (WG).

**Distribution:** Known from South Korea, Japan (Mariana Isl.), continental China (Fukien, Gansu, Kwantung, Kweichow, Hebei, Henan, Hubei, Hunan, Kiangsu, Sichuan, Shaanxi, Northeast Territory, Shandong, Tibet, Yunnan) and Taiwan.

**62) *Xylotrechus magicollis* (Fairmaire, 1888)**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 18 adults (WG, FČ).

**Distribution:** Known from India (Assam), Myanmar, Laos, Thailand, China (Fukien, Kwangsi, Hainan, Hebei, Hubei, Hunan,

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Kiangsi, Sichuan, Yunnan, Chekiang) and Taiwan.

### Tribe Obriini

#### 63) *Pseudiphra apicalis* (Schwarzer, 1925)

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5. 2012, 1 adult (WG).

**Distribution:** Known from Japan, SE Asia and Taiwan.

#### 64) *Uenobrium piceorubrum* (Hayashi, 1971)

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 2.6.2013, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

### Tribe Oemini

#### 65) *Nortia carinicollis* ssp. *carinicollis* Schwarzer, 1925

**Material:** Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 2 adults (WG).

**Distribution:** Known from Japan (Ryukyu Isl.), continental China (Fukien, Kwangsi) and Taiwan.

#### 66) *Oplatocera* (*Epiplatocera*) *mitonoi* Hayashi, 1981

**Material:** Taiwan, Taipei prov., Pinglin env., 24.97280°N 121.77214°E, 436 m, 16.-19.6.2013, 1 adult (WG).

**Distribution:** Known from continental China (Chekiang) and Taiwan.

### Tribe Pseudolepturini

#### 67) *Erythrus formosanus* Bates, 1866

**Material:** Taiwan, Taitung prov., Wulu env., 23.12762°N 121.15394°E, 403 m, 31.5.2013, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

### Tribe Purpuricenini

#### 68) *Dicelosternus corallinus* Gahan, 1900

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 11 adults (WG, FČ).

**Distribution:** Known from China (Fukien, Kwantung, Kweichow, Kwangsi, Hainan, Hubei, Hunan, Kiangsi, Chekiang) and Taiwan.

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**Tribe Stenhomalini**

**69) *Stenhomalus fenestratus* White, 1855**

**Material:** Taiwan, Nantou prov., 5 km NE Shuili, 23.71029°N 120.87933°E, 900 m, 23.5.2012, 1 adult (WG).

**Distribution:** Known from India, Nepal, SE Asia, continental China (Fukien, Kwantung, Hongkong, Northeast Territory, Northern Territory, Shaanxi, Sichuan) and Taiwan.

**Tribe Stenopterini**

**70) *Merionoeda (Ocytasia) formosana* ssp. *formosana* Heller, 1924**

**Material:** Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 2 adults (WG); Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 14 adults (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**71) *Microdebilissa testacea* Matsushita, 1933**

**Material:** Taiwan, Nantou prov., Heshe env., 23°33'44N 120°52'03E, 917 m, 23.5.2012, 11 adults (WG); Taiwan, Yilan prov., Ssuchi (Siji) env., 24.50907°N 121.43788°E, 675 m, 26.5.2012, 1 adult (WG).

**Distribution:** Known from Nepal, continental China (Yunnan) and Taiwan.

**Tribe Thraniini**

**72) *Thranius multinotatus* ssp. *signatus* Schwarzer, 1925**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5. 2012, 1 adult (PK); Taiwan, Yilan prov., Chingshui env., 29.-30.5.2013, 24.62943°N 121.57557°E, 257 m, 2 adults (WG, FC).

**Distribution:** Known from SE Asia, China (Fukien, Hainan, Chekiang) and Taiwan.

**73) *Thranius rufescens* ssp. *formosanus* Schwarzer, 1925**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 2 adults (WG, PK).

**Distribution:** This taxon is so far known only from Taiwan.

**Tribe Tillomorphini**

**74) *Epipedocera rollei* Pic, 1910**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6. 2013, 69 adults (WG, FČ); Taiwan, Taitung prov., Wulu env., 23.12762°N 121.15394°E, 403 m, 8.6.2013, 1 adult (FČ).

**Distribution:** This taxon is so far known only from Taiwan.

**Tribe Xystrocerini**

**75) *Leptoxenus bimaculatus* (Matsushita, 1933)**

**Material:** Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**76) *Xystrocera globosa* (Olivier, 1795)**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 1 adult (WG).

**Distribution:** Known from Afrotropical Region, Australian Region, Naotropical Region, Egypt, Israel, Pakistan, India, Nepal, Bhutan, North Korea, South Korea, Japan, SE Asia, China (Anhwei, Fukien, Gansu, Kwantung, Kweichow, Kwangsi, Hainan, Hebei, Henan, Hubei, Hunan, Kiangsu, Kiangsi, Sichuan, Shaanxi, Shanghai, Shandong, Yunnan, Chekiang) and Taiwan.

**Subfamily Lamiinae**

**Tribe Acanthocinini**

**77) *Euryctyosemia nomurai* (Gressitt, 1951)**

**Material:** Taiwan, Lanyu Isl., 22.06827°N 121.56625°E, 22 m, 15.-17.5.2012, 1 adult (PK); Taiwan, Lutao Isl., 6.-7.6.2013, 1 adult (WG).

**Distribution:** Known from Japan (Ryukyu Isl.) and Taiwan (Lanyu and Lutao Isl.).

**Remark:** The species is recorded from Lutao Isl. for the first time.

**78) *Rondibilis horiensis* ssp. *horiensis* Kano, 1933**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6. 2013, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**79) *Rondibilis semielongata* Hayashi, 1974**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5. 2012, 45 adults (WG); Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 2 adults (WG); Taiwan, Nantou prov., Sun Moon Lake env., 23.82303°N 120.94062°E, 800 m, 24.5.2012, 2 adults (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**80) *Rondibilis taiwana* Hayashi, 1974**

**Material:** Taiwan, Taitung prov., Siangyang, 23.24774°N 120.98602°E, 2342 m, 31.5.-1.6.2013, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**Tribe Agapanthiini**

**81) *Pothyne albolineata* Matsushita, 1933**

**Material:** Taiwan, Nantou prov., 5 km NE Shuili, 23.71029°N 120.87933°E, 900 m, 23.5. 2012, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**82) *Pothyne formosana* ssp. *formosana* Schwarzer, 1925**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5. 2012, 1 adult (WG); Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 1 adult (WG).

**Distribution:** Known from continental China (Kwantung) and Taiwan.

**83) *Pothyne formosana* ssp. *nanshanchina* Takakuwa et Kusama, 1979**

**Material:** Taiwan, Nantou prov., Sun Moon Lake env., 23.82303°N 120.94062°E, 800 m, 24.5.2012, 2 adults (WG); Taiwan, Nantou prov., Sun Moon Lake env. 23.82303°N 120.94062°E, 800 m, 12.6.2013, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**84) *Pothyne variegata* ssp. *variegata* Thomson, 1864**

**Material:** Taiwan, Nantou prov., Sun Moon Lake env., 23.82303°N 120.94062°E, 800 m, 24.5.2012, 2 adults (WG); Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5.2012, 1 adult (WG).

**Distribution:** Known from N India (Sikkim, Darjeeling), Nepal, SE Asia, continental China (Hunan, Hongkong, Yunnan) and Taiwan.

**85) *Pseudocalamobius pubescens* Hasegawa, 1987**

**Material:** Taiwan, Nantou prov., 15 km of Wushe, Chingching Farm, 24.06680°N 121.16770°E, 2000 m, 13.6.2013, 1 adult (WG); Taiwan, Taitung prov., Siangyang, 23.24774°N 120.98602°E, 2342 m, 31.5.-1.6.2013, 1 adult (FC).

**Distribution:** This taxon is so far known only from Taiwan.

**Tribe Aencylonotini**

**86) *Palimna palimnooides* (Schwarzer, 1925)**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6. 2013, 2 adults (PK); Taiwan, Taitung prov., Siangyang, 23.24774°N 120.98602°E, 2342 m, 3.6.2013, 1 adult (FC).

**Distribution:** Known from India (Sikkim, Darjeeling), Nepal, Bhutan, Laos, China (Fukien, Kwangsi, Hainan, Yunnan) and Taiwan.

**Tribe Apodasyini**

**87) *Cylindilla formosana* (Gressitt, 1951)**

**Material:** Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**88) *Euseboides matsudai* ssp. *matsudai* Gressitt, 1938**

**Material:** Taiwan, Pingtung prov., Kenting env., 21°56'52.21"N 120°46'57.23"E, 36 m, 19.5.2012, 1 adult (WG).

**Distribution:** Known from Japan and Taiwan.

**89) *Falsoterinaea rufipennis* (Matsushita, 1933)**

**Material:** Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 6 adults (WG); Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**90) *Mimectatina murakamii* Hayashi, 1978**

**Material:** Taiwan, Lanyu Isl., 22.06827°N 121.56625°E, 22 m, 15.-17.5.2012, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan (Lanyu Isl.).

**91) *Penthides flavus* ssp. *flavus* Matsushita, 1933**

**Material:** Taiwan, Nantou prov., Sun Moon Lake env.,

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23.82303°N 120.94062°E, 800 m, 24.5.2012, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**92) *Rhodopina formosana* (Breuning, 1954)**

**Material:** Taiwan, Yilan prov., 20 km S Yilan, Yulan, 24.70017°N 121.64717°E, 95 m, 8.5.2012, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**Tribe Apomecynini**

**93) *Apomecyna histrio* ssp. *histrio* (Fabricius, 1792)**

**Material:** Taiwan, Lanyu Isl., 22.06827°N 121.56625°E, 22 m, 15.-17.5.2012, 4 adults (WG); Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 1 adult (WG); Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 1 adult (WG).

**Distribution:** Known from Russia (E Siberia), Pakistan, Nepal, India (Arunachl and Uttar Pradesh, Sikkim, Darjeeling), Mongolia, S Korea, Japan (Ryukyu Isl.), SE Asia, China (Hainan, Yunnan, Kweichow) and Taiwan.

**94) *Doliops similis* Miwa et Mitono, 1933**

**Material:** Taiwan, Lanyu Isl., 22.06827°N 121.56625°E, 22 m, 15.-17.5.2012, 1 adult (PK).

**Distribution:** This taxon is so far known only from Taiwan (Lanyu Isl.).

**95) *Ropica dorsalis* Schwarzer, 1925**

**Material:** Taiwan, Taitung prov., Wulu env., 23.12762°N 121.15394°E, 403 m, 31.5.2013, 1 adult (WG); Taiwan, Nantou prov., Sun Moon Lake env. 23.82303°N 120.94062°E, 800 m, 24.5.2012, 1 adult (WG).

**Distribution:** Known from India (Sikkim, Darjeeling, Uttar Pradesh), Nepal, Bhutan, Japan, SE Asia, China (Kwantung, Kwangsi, Hainan, Kiangsu) and Taiwan.

**96) *Ropica formosana* Bates, 1866**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 1 adult (WG); Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5.2012, 3 adults (WG); Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 1 adult (WG); Taiwan, Taitung prov., Wulu env., 23.12762°N

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121.15394°E, 403 m, 31.5. 2013, 2 adults (WG); Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 2.6.2013, 2 adults (WG); Taiwan, Kaoshiung prov., Baolai env., 21.10487°N 120.72800°E, 845 m, 10.6.2013, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**97) *Ropica fuscolaterimaculata* Hayashi, 1974**

**Material:** Taiwan, Lanyu Isl., 22.06827°N 121.56625°E, 22 m, 15.-17.5.2012, 4 adults (WG).

**Distribution:** This taxon is so far known only from Taiwan (Lanyu Isl.).

**98) *Ropica honesta* Pascoe, 1865**

**Material:** Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 2 adults (WG).

**Distribution:** Known from Nepal, Japan, SE Asia, China (Hongkong) and Taiwan.

**99) *Sybra baculina* Bates, 1866**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5. 2012, 1 adult (WG).

**Distribution:** Known from Japan (Ryukyu Isl.), China (Hongkong) and Taiwan.

**100) *Sybra bioculata* ssp. *quadrinotata* Schwarzer, 1925**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5.2012, 1 adult (WG); Taiwan, Taitung prov., Taiyuan env., N 23.08212° E 121.28433°, 248 m, 2.6.2013, 1 adult (WG).

**Distribution:** Known from Vietnam, continental China (Kiangsu, Yunnan, Chekiang) and Taiwan.

**101) *Sybra botensis* Breuning et K. Ohbayashi, 1966**

**Material:** Taiwan, Lanyu Isl. 22.06827°N 121.56625°E, 22 m, 15.-17.5.2012, 2 adults (WG). Taiwan, Lutao Isl., 6.-7.6.2013, 9 adults (WG).

**Distribution:** This taxon is so far known only from Taiwan (Lanyu and Lutao Isl.).

**Remark:** The species is recorded from Lutao Isl. for the first time.

**102) *Sybra flavostriata* ssp. *flavostriata* Hayashi, 1968**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5.2012, 1 adult (WG); Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m,

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18.5.2012, 1 adult (WG).

**Distribution:** Known from Japan (Ryukyu Isl.) and Taiwan.

**103) *Sybra ordinata* ssp. *ordinata* Bates, 1873**

**Material:** Taiwan, Yilan prov., Chingshui env., 24.62943°N 121.57557°E, 257 m, 29.-30.5.2013, 1 adult (WG); Taiwan, Yilan prov., Chingshui env., 24.62943°N 121.57557°E, 257 m, 29.-30.5.2013, 3 adults (WG); Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 1 adult (WG).

**Distribution:** Known from China (Fukien, Kwangsi, Hainan, Kiangsu, Kiangsi, Shanghai) and Taiwan.

**104) *Sybra pascoei* ssp. *taiwanella* Gressitt, 1951**

**Material:** Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 1 adult (WG); Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 2 adults (WG). Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5.2012, 3 adults (PK).

**Distribution:** Known from Japan (Ryukyu Isl.) and Taiwan.

**105) *Sybra posticalis* (Pascoe, 1858)**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5.2012, 1 adult (WG); Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 3 adults (WG); Taiwan, Taitung prov., Wulu env., 23.12762°N 121.15394°E, 403 m, 31.5.2013, 4 adults (WG).

**Distribution:** Known from China (Hainan, Hongkong) and Taiwan.

**Tribe Batocerini**

**106) *Apriona rugicollis* ssp. *rugicollis* Chevrolat, 1852**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5. 2012, 1 adult (WG); Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 1 adult (WG); Taiwan, Taitung prov., Wulu env., 23.12762°N 121.15394°E, 403 m, 31.5.2013, 5 adults (WG); Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 2.6.2013, 2 adults (WG, FČ); Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 3 adults (WG, FČ); Taiwan, Kaoshiung prov., Baolai env.,

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21.10487°N 120.72800°E, 845 m, 10.6.2013, 3 adults (WG, FČ); Taiwan, Taitung prov., Siyangang, 23.24774°N 120.98602°E, 2342 m, 31.5.-1.6.2013, 1 adult (FČ); Taiwan, Taitung prov., Wulu env., 23.12762°N 121.15394°E, 403 m, 8.6.2013, 2 adults (FČ).

**Distribution:** Known from Russia (Far East), North Korea, South Korea, China (Anhwei, Fukien, Gansu, Kwantung, Kweichow, Kwangsi, Hainan, Hebei, Henan, Hongkong, Hubei, Hunan, Kiangsu, Kiangsi, Liaoning, Sichuan, Shaanxi, Shandong, Shanxi, Tibet, Yunnan, Chekiang) and Taiwan.

### **107) *Batocera lineolata* Chevrolat, 1852**

**Material:** Taiwan, Hsinchu prov., 20 km NW Neiwan, 24.69140°N 121.31076°E, 1563 m, 28.5.2013, 2 adults (WG, PK); Taiwan, Taitung prov., Wulu env., 23.12762°N 121.15394°E, 403 m, 31.5.2013, 1 adult (WG).

**Distribution:** Known from India (Sikkim, Darjeeling), Japan, South Korea, China (Anhwei, Fukien, Kwantung, Kweichow, Kwangsi, Hainan, Hebei, Hubei, Kiangsu, Kiangsi, Sichuan, Shaanxi, Yunnan, Chekiang) and Taiwan.

## Tribe Dorcaschematini

### **108) *Microlenecamptus biocellatus* (Schwarzer, 1925)**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 2.6.2013, 1 adult (WG).

**Distribution:** Known from continental China (Anhwei, Kwantung, Hunan) and Taiwan.

### **109) *Olenecamptus bilobus* ssp. *bilobus* (Fabricius, 1801)**

**Material:** Taiwan, Lanyu Isl., 22.06827°N 121.56625°E, 22 m, 15.-17.5.2012, 4 adults (WG); Taiwan, Lutao Isl., 6.-7.6.2013, 1 adult (WG).

**Distribution:** Known from Afrotropical Region, Australian Region, Pakistan, Nepal, India (Sikkim, Darjeeling, Uttar, Himachal and Arunachal Pradesh), SE Asia, China (Fukien, Kwantung, Kwangsi, Hainan, Hebei, Hongkong, Liaoning, Sichuan, Yunnan, Chekiang) and Taiwan (Lanyu and Lutao Isl.).

### **110) *Olenecamptus cretaceus* ssp. *marginatus* Schwarzer, 1925**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5. 2012, ex larva, 5 adults ex larva from 18.7. to 5.8.2012 (WG); Taiwan, Taitung prov., 20 km N

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Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 18 adults ex larva from 12.7. to 15.9. 2013 (WG); Taiwan, Nantou prov., 5 km NE Shuili, 23.71029°N 120.87933°E, 900 m, 23.5.2012, 1 adult (WG); Taiwan, Taitung prov., Wulu env., 23.12762°N 121.15394°E, 403 m, 31.5.2013, 26 adults ex larva from 12.7. to 15.9. 2013 (WG); Taiwan, Taitung prov., Wulu env., 23.12762°N 121.15394°E, 403 m, 8.6.2013, 1 adult (FČ).

**Distribution:** Known from SE Asia, continental China (Henan) and Taiwan.

### **111) *Olenecamptus formosanus* Pic, 1914**

**Material:** Taiwan, Yilan prov., 20 km S Yilan, 24.70017°N 121.64717°E, 95 m, 8.5.2012, 1 adult (WG); Taiwan, Taitung prov., Wulu env., 23.12762°N 121.15394°E, 403 m, 31.5.2013, 1 adult (WG); Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 2 adults (WG).

**Distribution:** Known from S Korea, Japan, SE Asia, continental China (Hubei, Chekiang) and Taiwan.

### **112) *Olenecamptus taiwanus* Dillon et Dillon, 1948**

**Material:** Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 1 adult (WG); Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 5 adults (WG, FČ).

**Distribution:** Known from Japan, China (Kwantung, Kwangsi, Hainan, Yunnan, Hongkong) and Taiwan.

## **Tribe Eunidiini**

### **113) *Eunidia taiwanensis* Hayashi et Nara, 1992**

**Material:** Taiwan, Taitung prov., Wulu env., 23.12762°N 121.15394°E, 403 m, 31.5.2013, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

## **Tribe Exocentrini**

### **114) *Exocentrus brevisetosus* Gressitt, 1938**

**Material:** Taiwan, Nantou prov., 5 km NE Shuili, 23.71029°N 120.87933°E, 900 m, 23.5.2012, 1 adult (WG).

**Distribution:** Known from SE Asia, continental China (Hubei, Yunnan) and Taiwan.

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**115) *Exocentrus immaculatus* Gressitt, 1951**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 1 adult (WG); Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**116) *Exocentrus pseudovariepennis* Kusama et Tahira, 1925**

**Material:** Taiwan, Nantou prov., Sun Moon Lake env. 23.82303°N 120.94062°E, 800 m, 24.5.2012, 1 adult (WG).

**Distribution:** Known from SE Asia and Taiwan.

**117) *Exocentrus seriatomaculatus* Schwarzer, 1925**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5. 2012, 26 adults ex larva from 11.7. to 14.10.2012 (WG); Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 3 adults (WG).

**Distribution:** Known from SE Asia and Taiwan.

**118) *Miaenia (Truncatomiaenia) botelensis* (Gressitt, 1951)**

**Material:** Taiwan, Lanyu Isl., 22.06827°N 121.56625°E, 22 m, 15.-17.5.2012, 1 adult (PK); Taiwan, Lutao Isl., 6.-7.6.2013, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan (Lanyu and Lutao Isl.).

**Tribe Homonoeini**

**119) *Bumetopia lanshuana* Hayashi, 1974**

**Material:** Taiwan, Lanyu Isl., 22.06827°N 121.56625°E, 22 m, 15.-17.5.2012, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan (Lanyu Isl.).

**120) *Bumetopia stolata* (Matsushita, 1931)**

**Material:** Taiwan, Lanyu Isl., 22.06827°N 121.56625°E, 22 m, 15.-17.5.2012, 4 adults (WG).

**Distribution:** This taxon is so far known only from Taiwan (Lanyu Isl.).

**Tribe Mesosini**

**121) *Agelasta (Dissosira) perplexa* Pascoe, 1858**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20670°N

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120.86034°E, 315 m, 18.5.2012, 1 adult (WG); Taiwan, Taitung prov., Wulu env., 23.12762°N 121.15394°E, 403 m, 31.5.2013, 5 adults (WG); Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 4 adults (WG); Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 2.6. 2013, 1 adult (WG); Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5.2012, 4 adults (WG).

**Distribution:** Known from Japan, South Korea (Gageodo Isl.), continental China (Fukien, Henan, Kiangsi, Liaoning, Chekiang) and Taiwan.

**122) *Agelasta (Dissosira) tonkinea ssp. tonkinea* Pic, 1925**

**Material:** Taiwan, Taitung prov., Wulu env., 23.12762°N 121.15394°E, 403 m, 31.5.2013, 1 adult ex larva 28.1.2014 (WG).

**Distribution:** Known from Nepal, SE Asia and Taiwan.

**123) *Coptops japonicus* Breuning, 1936**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5. 2012, 1 adult ex larva 5.9.2012 (WG); Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 2 adults (WG); Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 1 adult (WG); Taiwan, Hsinchu prov., 20 km NW Neiwan, 24.69140°N 121.31076°E, 1563 m, 28.5.2013, 1 adult (FC).

**Distribution:** This taxon is so far known only from Taiwan.

**124) *Mesoereis bifasciata* (Pic, 1925)**

**Material:** Taiwan, Taitung prov., Wulu env., 23.12762°N 121.15394°E, 403 m, 31.5.2013, 1 adult (WG); Taiwan, Hsinchu prov., 20 km NW Neiwan, 24.69140°N 121.31076°E, 1563 m, 28.5.2013, 1 adult (WG).

**Distribution:** Known from SE Asia, China (Fukien, Kwangsi, Hainan) and Taiwan.

**125) *Mesosa (Aplocnemia) latifasciata* (White, 1858)**

**Material:** Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 1 adult (WG).

**Distribution:** Known from Vietnam, China (Fukien, Gansu, Kwantung, Kweichow, Kwangsi, Hainan, Hebei, Kiangsu, Kiangsi, Sichuan, Shanxi, Chekiang) and Taiwan.

**Tribe Monochamini**

**126) *Acalolepta grossescapa* (Breuning 1942)**

**Material:** Taiwan, Taitung prov., Wulu env., 23.12762°N 121.15394°E, 403 m, 31.5.2013, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**127) *Acalolepta (Dihammus) rusticator* ssp. *formosensis* Breuning et K. Ohbayashi, 1966**

**Material:** Taiwan, Lanyu Isl., 22.06827°N 121.56625°E, 22 m, 15.-17.5.2012, 3 adults (WG).

**Distribution:** This taxon is so far known only from Taiwan (Lanyu and Lutao Isl.).

**128) *Acalolepta (Dihammus) rusticator* ssp. *rusticator* (Fabricius, 1801)**

**Material:** Taiwan, Taitung prov., Wulu env., 23.12762°N 121.15394°E, 403 m, 31.5.2013, 2 adults (WG).

**Distribution:** Known from SE Asia and Taiwan.

**129) *Acalolepta sublusca* ssp. *maculihumera* (Matsushita, 1933)**

**Material:** Taiwan, Hsinchu prov., 20 km NW Neiwan, 24.69140°N 121.31076°E, 1563 m, 15.6.2013, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**130) *Anoplophora albopicta* (Matsushita, 1933)**

**Material:** Taiwan, Taipei prov., Pinglin env., 24.97280°N 121.77214°E, 436 m, 16.-19.6.2013, 1 adult (PK).

**Distribution:** This taxon is so far known only from Taiwan.

**131) *Anoplophora horsfieldii* ssp. *taiwanensis* (Hope, 1842)**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 2.6. 2013, 1 adult (PK).

**Distribution:** This taxon is so far known only from Taiwan.

**132) *Anoplophora macularia* (Thomson, 1865)**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5. 2012, 7 adults (WG); Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 1 adult (WG); Taiwan, Nantou prov., Sun Moon Lake env. 23.82303°N 120.94062°E, 800 m, 24.5.2012, 1 adult (WG); Taiwan, Yilan prov., Ssuchi (Siji) env., 24.50907°N 121.43788°E, 675 m, 26. 5.2012, 1 adult (WG); Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 2 adults (WG, FC); Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 8.6.2013, 1 adult (FC); Taiwan,

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Lutao Isl., 6.-7.6.2013, 2 adults (FČ).

**Distribution:** Known from Japan (Ryukyu Isl.), SE Asia, China (Fukien, Kwantung, Kwangsi, Hainan, Henan, Kiangsu, Sichuan, Chekiang, Northeast Territory) and Taiwan.

**133) *Astynoscelis degener* (Bates, 1873)**

**Material:** Taiwan, Taichung prov., 15 km W Lishan, 24.25830°N 121.21086°E, 1413 m, 25.5.2012, 1 adult (WG).

**Distribution:** Known from Russia (Far East), Japan, South Korea, continental China (Fukien, Gansu, Kwantung, Kweichow, Kwangs, Heilongjiang, Hubei, Hunan, Kiangsu, Kirin, Kiangsi, Nei Mongol, Sichuan, Shaanxi, Shandong, Yunnan, Chekiang) and Taiwan.

**134) *Blepephaeus succinctor* (Chevrolat, 1852)**

**Material:** Taiwan, Nantou prov., 5 km NE Shuili, 23.71029°N 120.87933°E, 900 m, 23.5.2012, 1 adult (WG).

**Distribution:** Known from India (Arunachal Pradesh, Sikkim, Darjeeling), Nepal, SE Asia, China (Kwantung, Kwangsi, Hainan, Hongkong, Hunan, Kiangsu, Kiangsi, Sichuan, Shaanxi, Shanghai, Tibet, Yunnan, Chekiang) and Taiwan.

**135) *Epepeotes ambigenus* ssp. *formosanus* Gressitt, 1951**

**Material:** Taiwan, Lanyu Isl., 22.06827°N 121.56625°E, 22 m, 15.-17.5.2012, 1 adult (WG); Taiwan, Lutao Isl., 6.-7.6.2013, 2 adults (WG, FČ).

**Distribution:** This taxon is so far known only from Taiwan (Lanyu and Lutao Isl.).

**136) *Pelephaeus decoloratus* (Schwarzer, 1925)**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 1 adult (WG); Taiwan, Nantou prov., 5 km NE Shuili, 23.71029°N 120.87933°E, 900 m, 23.5.2012, 1 adult (WG); Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5.2012, 1 adult (WG); Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 1 adult (WG); Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 2.6.2013, 1 adult (WG); Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 2 adults (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**137) *Psacothea hilaris* ssp. *hilaris* (Pascoe, 1857)**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N

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121.28433°E, 248 m, 11.-12.5.2012, 2 adults (WG); Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 12 adults (WG); Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 1 adult (WG); Taiwan, Nantou prov., Sun Moon Lake env., 23.82303°N 120.94062°E, 800 m, 24.5.2012, 1 adult (WG); Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 2.6.2013, 4 adults (WG, FC); Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 1 adult (WG); Taiwan, Kaoshiung prov., Baolai env., 21.10487°N 120.72800°E, 845 m, 10.6.2013, 3 adults (WG, FC); Taiwan, Taitung prov., Siangyang, 23.24774°N 120.98602°E, 2342 m, 31.5.-1.6.2013, 1 adult (FC).

**Distribution:** Known from France, Italy, Japan, South Korea, SE Asia, China (Anhwei, Fukien, Gansu, Kwantung, Kweichow, Kwangsi, Hainan, Hebei, Henan, Hubei, Hunan, Kiangsu, Kiangsi, Northeast Territory, Sichuan, Shaanxi, Yunnan, Chekiang) and Taiwan.

### **138) *Uraecha angusta* (Pascoe, 1856)**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 1 adult (WG); Taiwan, Taitung prov., Wulu env., 23.12762°N 121.15394°E, 403 m, 31.5.2013, 1 adult (WG).

**Distribution:** Known from SE Asia, continental China (Anhwei, Pekung, Fukien, Kwantung, Kweichow, Kwangsi, Hebei, Henan, Hubei, Hunan, Kiangsu, Kiangsi, Sichuan, Shaanxi, Tibet, Chekiang) and Taiwan.

## **Tribe Phytoeciini**

### **139) *Obereopsis kankauensis* (Schwarzer, 1925)**

**Material:** Taiwan, Yilan prov., Ssuchi (Siji) env., 24.50907°N 121.43788°E, 675 m, 26.5.2012, 1 adult (WG).

**Distribution:** Known from continental China (Fukien, Sichuan) and Taiwan.

### **140) *Oberea flavipennis* Kurihara et N. Ohbayashi, 2007**

**Material:** Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**141) *Oberea formosana* Pic, 1911**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5. 2012, 5 adults (WG); Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 1 adult (WG); Taiwan, Kaoshiung prov., Baolai env., 21.10487°N 120.72800°E, 845 m, 10.6.2013, 1 adult (FC).

**Distribution:** Known from Nepal, SE Asia, China (Anhwei, Fukien, Kwantung, Kweichow, Kwangsi, Hainan, Henan, Hubei, Hunan, Kiangsu, Kiangsi, Sichuan, Shaanxi, Chekiang) and Taiwan.

**Tribe Pteropliini**

**142) *Desisa variabilis* (Schwarzer, 1925)**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5. 2012, 16 adults (WG); Taiwan, Taitung prov., Wulu env., 23.12762°N 121.15394°E, 403 m, 31.5.2013, 12 adults ex larva from 10.2. to 26.3.2014 (WG); Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 23 adults ex larva from 8.6 to 27.7.2013 (WG, FC); Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 2 adults (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**143) *Egesina (Nijimaia) fuscolaterimaculata* Hayashi, 1971**

**Material:** Taiwan, Chiayi prov., Shihtzulu (Shizhuo), 23°28'N 120°41'E, 1350 m, 23.5.2012, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**144) *Pterolophia (Hylobrotus) annulata* (Chevrolat, 1845)**

**Material:** Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 2 adults (WG); Taiwan, Lanyu Isl., 22.06827°N 121.56625°E, 22 m, 15.-17.5.2012, 3 adults (WG); Taiwan, Nantou prov., Sun Moon Lake env., 23.82303°N 120.94062°E, 800 m, 24.5.2012, 1 adult (WG); Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5.2012, 2 adults (WG); Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 2.6.2013, 1 adult (WG); Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 1 adult (WG).

**Distribution:** Known from Nepal, India (Sikkim, Darjeeling), S

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Korea, Japan, SE Asia, China (Fukien, Kwantung, Kweichow, Kwangsi, Hainan, Hebei, Henan, Hongkong, Hubei, Hunan, Kiangsu, Kiangsi, Sichuan, Shaanxi, Yunnan, Chekiang) and Taiwan.

**145) *Pterolophia bigibbera* (Newman, 1842)**

**Material:** Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 1 adult (WG); Taiwan, Lanyu Isl., 22.06827°N 121.56625°E, 22 m, 15.-17.5.2012, 4 adults (WG); Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 2.6.2013, 2 adults (WG); Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 1 adult (WG); Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 2 adults (WG).

**Distribution:** Known from Japan (Ogasawara Isl.), Philippines and Taiwan.

**146) *Pterolophia kaleea* ssp. *kaleea* (Bates, 1866)**

**Material:** Taiwan, Taitung prov., 20 km N Taitung, 22.87112°N 121.16184°E, 424 m, 13.5.2012, 1 adult (WG); Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5.2012, 3 adults (WG).

**Distribution:** Known from Japan (Ryukyu Isl.), China (Kweichow, Hainan) and Taiwan.

**147) *Pterolophia (Hylobrotus) latefascia* Schwarzer, 1925**

**Material:** Taiwan, Yilan prov., Chingshui env., 24.62943°N 121.57557°E, 257 m, 29.-30.5.2013, 1 adult (WG).

**Distribution:** Known from Japan (Ryukyu Isl.) and Taiwan.

**148) *Pterolophia lateralia* (Schwarzer, 1925)**

**Material:** Taiwan, Taitung prov., 20 km N Taitung, N 22.87112° E 121.16184°, 424 m, 13.5.2012, 1 adult (PK).

**Distribution:** This taxon is so far known only from Taiwan.

**149) *Pterolophia obscura* Schwarzer, 1925**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5. 2012, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**150) *Pterolophia reduplicata* Gressitt, 1951**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 2.6.2013, 1 adult (WG).

**Distribution:** Known from continental China (Hubei) and Taiwan.

**Tribe Saperdini**

**151) *Epiglenea comes* ssp. *formosana* (Schwarzer, 1925)**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5. 2012, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**152) *Glenea chrysomaculata* Schwarzer, 1925**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5. 2012, 1 adult (WG); Taiwan, Taitung prov., Wulu env., 23.12762°N 121.15394°E, 403 m, 31.5.2013, 1 adult (WG).

**Distribution:** Known from central China (Kweichow, Kwangsi) and Taiwan.

**153) *Glenea lineata* ssp. *sauteri* Schwarzer, 1925**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 3 adults (WG).

**Distribution:** Known from continental China (Kwantung, Yunnan) and Taiwan.

**154) *Glenea nanshanchiana* Hayashi, 1978**

**Material:** Taiwan, Taitung prov., Taiyuan env., 23.08212°N 121.28433°E, 248 m, 11.-12.5. 2012, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**155) *Glenea relicta* ssp. *formosensis* Breuning, 1960**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20477°N 120.86710°E, 259 m, 3.-5.6.2013, 1 adult (WG).

**Distribution:** This taxon is so far known only from Taiwan.

**156) *Paraglenea swinhoei* ssp. *swinhoei* Bates, 1866**

**Material:** Taiwan, Taitung prov., Schouchia env., 22.20670°N 120.86034°E, 315 m, 18.5.2012, 4 adults (WG); Taiwan, Chiayi prov., Shihtzulu (Shizhuo), 23°28'N 120°41'E, 1350 m, 23.5.2012, 1 adult (WG); Taiwan, Yilan prov., Chingshui env., 24.62943°N 121.57557°E, 257 m, 29.-30.5.2013, 4 adults (WG, FČ).

**Distribution:** This taxon is so far known only from Taiwan.

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**A new species of the genus *Pogonocherus* Dejean, 1821  
(Coleoptera: Cerambycidae) from China with a  
redescription of poorly known *P. pilosipes* (Pic, 1907) as a  
bases of a new subgenus *P. (Neopogonocherus* subgen. n.)**

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**Key words:** Coleoptera, Cerambycidae, new subgenus, new species, taxonomy, Gansu, Sichuan, China.

**Abstract:** *Pogonocherus* (s. str.) *paradimidiatus* sp. n. close to *P. (s. str.) dimidiatus* Blessig, 1873 is described from China (Gansu and Sichuan provinces). The distinguishing characters are discussed. *P. (s. str.) dimidiatus* Blessig, 1873 is recorded from Gansu and Sichuan. A new subgenus is proposed: *P. (Neopogonocherus* subgen. n.) with type species *Pogonochaerus pilosipes* Pic, 1907. *Pogonocherus* (*N.*) *pilosipes* (Pic, 1907) is redescribed.

## **Introduction**

The genus *Pogonocherus* included only 3 Chinese species up to now. *P. (Pityphilus) fasciculatus* (DeGeer, 1775) distributed from Europe to Eastern Asia and 2 *Pogonocherus* (s. str.). *P. (s. str.) dimidiatus* Blessig, 1873 is very common in Russia (from Amur Region to Kuril Islands), all around Korean Peninsula and widely distributed in China to Sichuan Province southwards. *P. (Neopogonocherus* subgen. n.) *pilosipes* (Pic, 1907) is a poorly known species described after a single specimen from “Chine Orientale” without exact locality designation and sex determination. Two specimens of new species *Pogonocherus* (s. str.) *paradimidiatus* sp. n. described bellow were collected in Gansu and Sichuan by I. Belousov and I. Kabak in 2006 and 2012, one specimen was collected in Sichuan by S. Murzin in 2001.

## **Materials and methods**

All photographs were taken with Canon PowerShot G10 digital camera equipped with Cannon Zoom lens 5X IS 6.1 - 30.5 mm 1:2.8

## M.A. Lazarev

- 4.5 and microscope AmScope SM745NTP. The illustration were edited with Adobe Photoshop 7.0 and Helicon Focus 3.2.

### **Results**

*Pogonocherus* (s. str.) *paradimidiatus* sp. n.

Figs 1-2

Three females only are available; body black, strongly attenuated posteriorly; head with very fine, short recumbent pubescence, without erect setae; frons slightly exposed, strongly transverse; genae wide, about as wide as width of lower eye-lobes; eyes strongly emarginated, about totally divided; the distance between dorsal eye-lobes a little more than apical width of the 1<sup>st</sup> antennal joint; antennae with numerous oblique setae; antennae reaching elytral apex; 1<sup>st</sup> antennal joint widened at middle; 2<sup>nd</sup> joint elongated; 2<sup>nd</sup> - 11<sup>th</sup> joints reddish basally; 4<sup>th</sup> joint half red; 3<sup>rd</sup> antennal joint about as long as 4<sup>th</sup> or a little shorter; 5<sup>th</sup> joint nearly 2 times shorter.

Prothorax transverse, about 1.25 times wider than long, as wide anteriorly as posteriorly, with large lateral tubercles; pronotum with a pair of oblique short central protuberances, depressed in the middle; scutellum semicircular, with black pubescence and contrast white stroke.

Elytra about 1.8 times longer than basal width with long outer apical spines typical for *Pogonocherus* (s. str.); internal angles of elytral apices totally obliterated; dorsal elytral surface with large irregular punctuation along middle; large white transverse bend reaching epipleurae does not reach anterior elytral margin; a pair of central anterior tubercles with several short black setae; humeral and external elytral carinae anteriorly distinct; a pair of central elongated protuberances beyond the middle reddish, bear 2 or 3 black setae tufts each; elytral apices with bright white setae spots before apical spines.

Legs without erect setae; all tibiae with white setae bands and reddish bases.

Abdomen with exposed 5<sup>th</sup> visible sternite bearing deep small hollow near posterior margin.

Body length: 5.0-7.0 mm, width: 1.9-2.7 mm.

**Differential diagnosis.** The new species is very close to *P. (s.str.) dimidiatus* Blessig, 1873 widely distributed in East Asia because of long elytral spines and bright white elytral band, but in *P. dimidiatus* white elytral band reaches anterior elytral margin; white small spots of fine setae scattered over elytra and legs; hollow of the last visible abdominal sternite in females is reduced to emargination of its posterior border.

*P. (s. str.) paradimidiatus sp. n.* is similar to European *P. (s.str.) hispidulus* (Piller, Mitterpacher, 1783), distributed to the East up to Orenburg Region, as white elytral band in *P. hispidulus* does not reach elytral bases; but elytral spines in *P. hispidulus* much shorter, hollow of the last visible abdominal sternite in females is reduced to emargination of its posterior border; internal angle of elytral apices well developed.

Another China species of *Pogonocherus* - *P. pilosipes* (Pic, 1907) is known on the bases of holotype and original description. It has strongly elongated pale-brown body similar to *P. perroudi* Mulsant, 1839, but without elytral setae tufts.

**Type material.** Holotype, female, China, Southern Gansu, NNW Kaba vill., 34°11'06"N, 103°22'52"E / 34°11'17"N, 103°22'49"E, 3640-3680 m, 15.06.2006, I. Belousov and I. Kabak leg. - author's collection; 2 paratypes: female, China, Northern Sichuan, WNW Jiuzhalgou, 33°22'26"N, 103°48'08"E, 3320 m, 22.06.2012, I. Kabak leg. - author's collection; female, China, Sichuan prov., 40 km W Zhangla, 3600-3700 m, 12-14.7.2001, S. Murzin leg. - collection of S. Murzin (Moscow).

**Additional material used for comparison.**

*Pogonocherus dimidiatus*: 1 female (fig. 8), Gansu, SSW Woshan 3000 m 34°30'23"N, 104°49'48"E, 17.6.2005, S. Murzin leg. - author's collection; 1 female (fig. 7), S. Gansu, Tochizi, S. Wudu, 2400 m, 21-24.5.1997, S. Murzin leg. - collection of S. Murzin (Moscow); 1 male (fig. 5), Sichuan, W Heishui, 2500 m, 32°2'47.40"N, 103°1'0.48"E, 3-10.6.2012, S. Murzin leg. - author's collection; 1 male (fig. 6), Shaanxi, Zhouzhi, Taibaishan nat. park, 1350 m, 30.5.1999, M. Murzin leg. - collection of S. Murzin (Moscow); 1 ex., Primorsky Region, Kamenushka, 25.5.1992, S. Khvylya leg. - collection of V. Ustinov (Moscow); 1 ex., Primorsky Region, Kavalerovo, N. Luzhki 1.7.1997 - collection of

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V. Ustinov (Moscow); 1 male (fig. 3), Primorsky Region, Lazo, 9.5.2001, D. Kochetkov leg. - collection of M. Smirnov (Ivanovo); 28 specimens from the collection of Zoological Museum of Moscow State University (Moscow): 1 ex., Sibir or.; 4 ex., Primorsky Region, The upper reaches of the Lyanchikhe (new name Bogataya) River, 12.5.1947, from A. Kurentsova; 1 ex., Primorsky Region, Shkotovo, V-VI.1932; 1 ex., Suchansk distr., Freyzovka, from T. Samoylov; 2 ex., Ussuri, Ossinovka, 30.5.1917, P. Elsky; ex., Ussuri, Okeanskaia, 4.6.1925; 1 ex., Ussuri, Ossinovka, 7.6.1917, P. Elsky; 1 ex., Ussuri, Ossinovka, 15.6.1917, P. Elsky; 1 ex., Ussuri, Ossinovka, 17.6.1917, P. Elsky; 1 ex., Ussuri, Ossinovka, 1.7.1917, P. Elsky; 1 ex., Ussuri, Ossinovka, 4.7.1917, P. Elsky; 2 ex., Ussuri, Ossinovka, 6.7.1917, P. Elsky; 1 ex., Ussuri, Ossinovka, 8.7.1917, P. Elsky; 1 ex., Ussuri, Ossinovka, 6.9.1917, P. Elsky; 4 ex., Mandshuria, circ. Charbin, Siaolin, 5.5.1940, V. Alin; 1 ex., Japan, Sapporo, Tamanuki; 40 specimens from the collection of M. Danilevsky (Moscow): 1 male, 1 female, Primorsky Region, Gorno-Tayozhnaya Station, 19-20.7.1958, Filippov leg.; 1 male, Vladivostok; 4 males, 1 female, Vladivostok env. 26 km, 6.6.1958, Filippov leg.; 1 female, Primorsky Region, Ugolnaya Station, 27.5.1960, Anufriev leg.; 4 males, 5 females, Suchan [Partizansk] 10.6.1934; 5 males, 4 females, Khabarovsk env., Bychikha, 9.7.1975 ex larv. Aralia, M.Danilevsky leg.; 1 female (fig. 4), Khabarovsk env., Bychikha, 24.5.1976, Aralia, A. Kompantsev leg.; 1 female, Suputinsky Nat. Res. 22.5.1947; 2 males, 1 female, Sakhalin Is., Kholmsk Distr., Kalinino, 24.9.1984, M. Nesterov leg.; 1 female, Kunashir Is., Mendeleevo, 15.9.1976, A. Kompantsev leg.; 1 male, 1 female, Lyanchihe, 12.5.1947; 1 male, 3 females (fig. 9), South Korea (GW), Cheorwon-gun, Munhye-ri, 127.37°E / 38.17°N, 5.4.2010, S.H. Oh leg.; 1 male, Japan, Sapporo, Tamanuki leg.; 12 specimens from the collection of S. Murzin (Moscow): 3 males, 3 female, Primorsky Region, Kamenushka River, 15.6.1990, S. Khvylya leg.; 1 male, Primorsky Region, Suputinsky Nat. Res., 31.5.1969, M. Chernyakhovsky leg.; 3 males, 2 females, Primorsky Region, Osinovka, 17.6.1917, P. Elsky leg.



**Figs 1-2.** *Pogonocherus* (s. str.) *paradimidiatus* sp. n.:  
1 - Holotype, female; 2 - Paratype, female, China, Northern Sichuan,  
WNW Jiuzhalgou, 33°22'26"N, 103°48'08"E, 3320 m, 22.06.2012,  
I. Kabak leg.



**Figs 3-6.** *Pogonocherus* (s. str.) *dimidiatus* Blessig, 1873: 3 - male, Primorsky Region, Lazo, 9.5.2001, D. Kochetkov leg. (photo by M. Smirnov); 4 - female, Khabarovsk env., Bychikha, 24.5.1976, Aralia, A. Kompartsev leg.; 5 - male, Sichuan, W Heishui, 2500 m, 32°2'47.40"N, 103°1'0.48"E, 3-10.6.2012, S. Murzin leg.; 6 - male, Shaanxi, Zhouzhi, Taibaishan nat. park, 1350 m, 30.5.1999, M. Murzin leg.



**Figs 7-9.** *Pogonocherus* (s. str.) *dimidiatus* Blessig, 1873: 7 - female, S. Gansu, Tochizi, S. Wudu, 2400 m, 21-24.05.1997, S. Murzin leg.; 8 - female, Gansu, SSW Woshar 3000 m 34°30'23"N, 104°49'48"E, 17.06.2005, S. Murzin leg.; 9 - female, South Korea (GW), Cheorwon-gun, Munhye-ri, 127.37"E / 38.17"N, 5.4.2010, S.H. Oh leg.

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*Pogonocherus (Neopogonocherus subgen. n.)*

**Type species.** *Pogonochaerus pilosipes* Pic, 1907

**Diagnosis.** The taxon is characterized by elongated body, elytra without setae tufts; elytral apices without spines, but roundly emarginated with distinct outer angles sharpened; female antennae longer than body; prothorax with big lateral tubercles sharpened apically; elytra without distinct transverse or onlique bands, but with diffused pale pubescent areas. All other known *Pogonocherus* have more or less distinct elytral setae tufts.

The new taxon includes a single Chinese species *P. (N.) pilosipes* (Pic, 1907).

**Etymology.** the name is composed of two words: Latin *neo* (new) and *Pogonocherus*; gender masculine.

*Pogonocherus (Neopogonocherus) pilosipes* (Pic, 1907)

Figs 10-11

*Pogonochaerus pilosipes* Pic, 1907: 21 [incorrect original spelling] - “Chine orientale”.

*Pogonocherus* (s. str.) *pilosipes*, Aurivillius, 1923: 332 - “Ostchina”; Winkler, 1929: 1210 - China orientalis; Hua, 1982: 112; Lin, Tavakilian, 2019: 361 - “China”; Danilevsky, 2020: 448 - “Chine orientale”.

*Pogonocherus* (s. str.) *pilosipes*, Plavilstshikov, 1926: 155, 161 - West-China [incorrect original spelling].

*Ponogocherus* (s. str.) *pilosipes*, Gressitt, 1951: 516 - “E.China” [misprint in the genus name; incorrect original spelling for species name].

*Pogonocherus (Eupogonocherus) pilosipes*, Breuning, 1963: 519 - Chine or.; 1975: 28 - Chine orientale.

*Pogonocherus pilosipes*, Hua, 2002: 225 (attribute to “Pic, 1923”) - China: E. China; Hua et al., 2009: 465 (attribute to “Pic, 1923”); Löbl, Smetana, 2010: 31 - “Chine orientale”.

**Remark.** *Pogonocherus pilosipes* (Pic, 1907) was a poorly known species. The holotype was never depicted before. A photo of the holotype-male (fig. 11) from Pic’s collection was kindly sent to me by G. Tavakilian.

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*Pogonochaerus pilosipes* n. sp. Modérément allongé, à peine brillant, fauve, en partie revêtu de pubescence grise avec les élytres faiblement mouchetés de brun foncé, sans fascicules pileux, orné de poils dressés plus ou moins longs, surtout sur les membres; antennes assez longues, testacées avec le sommet des articles courtement rembruni; prothorax court, à dent latérale saillante, orné sur le milieu du disque de 2 gibbosités saillantes, déprimé sur les parties antérieure et basale; écusson large, pubescent de gris; élytres un peu plus larges que le prothorax, à épaules marquées, mais arrondis, progressivement atténués postérieurement, tronqué-échancrés au sommet avec l'angle externe assez saillant en pointe, un peu déprimés sur leur milieu et ornés sur les côtés de 2 côtes distinctes étendues presque de la base au sommet, à coloration générale fauve avec une vague fascie grisâtre oblique placée avant le milieu; pattes moyennes, testacées, hérisssées de longs poils clairs. Long. 8 millimètres, Chine Orientale (coll. Pic).

Resssemble un peu à *Perroudi* Muls., forme plus allongée, élytres dépourvus de fascicules pileux, etc.

**Fig. 10.** Original description of *Pogonochaerus pilosipes* Pic, 1907.

Body relatively narrow, attenuated posteriorly, covered by dense, brownish recumbent pubescence, with numerous pale long erected setae; antennae much longer than body, reaching elytral apices by 8<sup>th</sup> joint; joints 1-3 dark brown, other joints reddish-brown, darkened apically; 4<sup>th</sup> antennal joint is the longest, longer than 1<sup>st</sup>; 3<sup>rd</sup> joint shorter than 1<sup>st</sup>; 3<sup>rd</sup> and 4<sup>th</sup> joints with very long erected pale setae.

Prothorax about as wide anteriorly as posteriorly, about 1.2 times shorter than basal width; with anterior and posterior constrictions; with big lateral tubercles; pronotum with a pair of central carinae; scutellum small, transverse, with pale-grey pubescence.

Elytra about 2 times longer than basal width; with numerous pale erect setae and wide lateral yellowish stripes, without elytral setae tufts (a unique character in the genus); yellowish oblique stripes are situated before middle and near apices; very narrow dark-brown short strokes are distinct at middle; elytral apices with shallow emargination, with distinct outer angles, but without spines.

Legs also with numerous pales, long erect setae, with strongly clavate femora; apical joint of posterior tarsi longer than 2<sup>nd</sup>-3<sup>rd</sup> joints combined.

Body length: 7.5 mm.

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**Material.** Holotype, male with a label: “Chine Orient. / (ou Tonkin ?)” - Pic’s collection (Muséum National d’Histoire Naturelle, Paris).

**Taxonomy remark.** The genus *Pogonocherus* Dejean, 1821 (type species: *Cerambyx hispidus* Linnaeus, 1758) was traditionally regarded consisting of two subgenera: the nominative and subgenus *Pityphilus* Mulsant, 1862 (type species: *Cerambyx ovatus* Goeze, 1777). Subgenus *Pogonocherus* s. str. was characterized by elytral epical spines, while in subgenus *Pityphilus* Mulsant, 1862 elytral apices were rounded or truncated, but without spines. In reality this division was not exact as several species demonstrated intermediate situation and were arbitrary placed to one subgenus or another. For example, *P. sturanii* Sama, Schurmann, 1982 with emarginated elytral apex and distinct outer apical elytral angle was accepted by Vives, Alonso-Zarazaga (2000) in *P. (s. str.)*, while *P. ehdenensis* Sama, Rapuzzi, 2000 with about same elytral apex was placed to *Pogonocherus (Pityphilus)* Muls. by Cocquempot et al. (2016). That is why many of modern authors gave up the divisions of *Pogonocherus* into subgenera (Sama, 2003; Hasegawa, 2007; Miroshnikov, 2009; Löbl, Smetana, 2010). While others accept two subgenera up to now (Vives, Alonso-Zarazaga, 2000; Vitali et al., 2011; Shapovalov, 2012; Cocquempot et al., 2016; Doychev et al., 2017, Lin, Yang, 2019; Danilevsky, 2020). Sometimes both subgenera were upgraded to genus rank (Villiers, 1978; Bílý, Mehl, 1989).

Here I accept three subgenera; 4 species with truncated (or feebly emarginated) elytral apices must be included in subgenus *Pityphilus* Mulsant, 1862: *P. (Pityphilus) ehdenensis* Sama & Rapuzzi, 2000; *P. (Pityphilus) ovatoides* Rapuzzi & Sama, 2014; *P. (Pityphilus) ressli* Holzschuh, 1977; *P. (Pityphilus) sturanii* Sama & Schurmann, 1982.

**Note.** Wang (2014: 983) used the name “*Pogonocherus pilosipes* Pic, 1923” for another depicted taxon (without lateral thoracic tubercles), which does not belong to the genus *Pogonocherus*.



**Fig. 11.** *Pogonocherus (Neopogonocherus) pilosipes* (Pic, 1907):  
Holotype, male (photo by G. Tavakilian).

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**Four new combinations in the genus *Anaches* Pascoe, 1865  
(Coleoptera, Cerambycidae, Lamiinae, Pteropliini)\***

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**Key words:** Coleoptera, Cerambycidae, taxonomy, new combinations, China, Asia.

**Abstract:** Four species, including *Paramesosella medioalba* Breuning, 1956, *Pterolophia albanina* Gressitt, 1942, *Sthenias cylindricus* Gressitt, 1939, and *S. murzini* Lazarev, 2020 are newly combined into the genus *Anaches* Pascoe, 1865, increasing the number of species in this genus to eight.

## **Introduction**

*Anaches* Pascoe, 1865 was described for *Sthenias dorsalis* Pascoe, 1858, then it was treated as a synonym of the genus *Pterolophia* Newman, 1842 for a long time (Breuning, 1961; Breuning, 1965a; Rondon & Breuning, 1970; Weigel, 2006). Holzschuh & Lin (2013) reinstated the genus, moved *Sthenias semicylindricus* Hayashi, 1974 to this genus and described two new species from Taiwan, China. There were four species in the genus *Anaches* Pascoe, 1865, all distributed in China (Lin & Yang, 2019). Here four species are newly combined into this genus, increasing the number of species to eight.

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## **Materials and Methods**

Specimens are deposited in the following institutions, museums or collections; abbreviations as shown in the text:

BMNH (= NHML): Natural History Museum, London, UK.

CMLR: Collection of M. Lazarev, Moscow, Russia.

IZCAS (= IZAS): Institute of Zoology, Chinese Academy of Sciences, Beijing, China.

MNHN: Muséum National d'Histoire Naturelle, Paris, France.

MNST: Museum of Natural Science, Taichung, Taiwan, China.

OSAKA: Osaka Museum of Natural History, Osaka, Japan.

ZFMK: Zoologisches Forschungsmuseum "Alexander Koenig", Bonn, Germany.

## **Taxonomy**

### **Genus *Anaches* Pascoe, 1865**

*Anaches* Pascoe, 1865: 160. Type species: *Sthenias dorsalis* Pascoe, 1858, by original designation.

**Diagnosis.** *Anaches* Pascoe, 1865 differs from *Pterolophia* Newman, 1842 by the following characters: 1) body slender, elytra more than three times length of pronotum, while the elytra in *Pterolophia* less than three times length of pronotum; 2) prothorax strongly narrower at both base and apex, with the pronotum swollen, while not so or only feebly narrower in *Pterolophia*; 3) in males, first ventrite with long sexual setae at apex, which covering two sexual setal patches on second ventrite, while no such long sexual setae and sexual setal patches in *Pterolophia*; 4) antennae slender and longer, both male and female with antennae longer than body, while antennae in *Pterolophia* stouter, female antennae shorter than body; 5) the fifth antennal segment subequal to the fourth in length, while fifth plus sixth subequal to the fourth in *Pterolophia*.

*Anaches* Pascoe, 1865 differs from *Sthenias* Dejean, 1835 by the following characters: 1) body slender, elytral length more than three times length of pronotum, while the elytral length less than three times length of pronotum in *Sthenias*; 2) prothorax strongly narrower at both base and apex, with pronotum swollen, while not so or only feebly narrower in *Sthenias* (however, *Sthenias (Albostenias) partealbicollis* Breuning, 1968 has similar prothorax with *Anaches*); 3) each elytron with one tubercle with

tufted hairs before basal one fifth, while such tubercle missing in *Sthenias*; 4) antennae slender and longer, both male and female with antennae longer than body, while antennae in *Sthenias* stouter, female antennae shorter than body; 5) the fifth antennal segment subequal to the fourth in length, while fifth much shorter than fourth in *Sthenias*; 6) antennal fringed hairs beneath not as dense as in *Sthenias*, especially on the apical segments.

**Remarks.** Based on these characters, 4 species are newly combined into this genus, increasing the number of species to 8.

Holzschuh & Lin (2013) had published such opinion “Außer den drei folgenden Arten, gehören sicherlich noch etliche unter der Gattung *Sthenias* Castelnau, 1848 beschriebenen Arten zu *Anaches* transferiert, wie z.B. *S. cylindricus* Gressitt, 1939, *S. gracilicornis* Gressitt, 1937, *S. gracilis* Breuning, 1938, *S. pictus* Breuning, 1938, *S. pseudodorsalis* Breuning, 1938 oder *S. yunnanus* Breuning, 1938.”. However, all subsequent colleagues did not pay attention to this paragraph and kept all those species in the genus *Sthenias* Dejean, 1835 (Lin, 2014; Lingafelter et al., 2014; Lin, 2015; Lin, Yang, 2019; Lazarev, 2019), so did the Titan database website (access on December 22, 2020). Here we officially publish the new combination of *Anaches cylindricus* (Gressitt, 1939) comb. nov. based on type specimen study, while others will be researched in detail by A. Weigel (personal communication).

**Distribution.** China, Vietnam, Laos, Thailand, India, Kashmir, Nepal, Bangladesh.

### **1. *Anaches albaninus* (Gressitt, 1942) comb. nov.**

*Pterolophia albanina* Gressitt, 1942: 85, pl. I, fig. 5. **TL** China: Zhejiang.  
**TD** IZCAS.

*Pterolophia (Hylobrotus) albanina*: Breuning, 1961: 252.

**Specimens examined.** 1 female, holotype, Zhejiang, T'enmushan, 1937-V-21, leg. O. Piel (IZCAS, IOZ(E) 217646); 1 male, Shaanxi, Foping, Longcaoping, alt. 1256 m, 2008-VII-3, leg. Ming Bai (IZCAS); 1 female, Shaanxi, Zhouzhi, Houzhenzi, alt. 1280 m, 2008-V-5-6, leg. Hao Huang (IZCAS); 1 female, Anhui, Huangshan, 1936-VI-24 (IZCAS); 1 male 1 female, Zhejiang, T'ienmushan, 1936-VI-25, leg. O. Piel (IZCAS); 1 female, Tianmushan, 1937-VII-19 (IZCAS); 1 female, Zhejiang, Anji, Longwangshan, alt. 490 m,

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1996-VI-12, leg. Xing-Ke Yang (IZCAS); 1 female, Zhejiang, Lishui, Yujikengbaohuzhan, alt. 1371 m, 27°41'41.77"N, 119°35'26.50"E, 2017-VII-10, leg. Yan-Dong Chen (IZCAS); 1 male, Jiangxi, Ku-ling, 1935-VII-25, leg. O. Piel (IZCAS); 1 male, Fujian, Chong'an, Guadun, 1973-VI-11, leg. Pei-Yu Yu (IZCAS); 1 male 1 female, Fujian, Jianyang, Aotou, 1973-V-27-28, leg. Pei-Yu Yu (IZCAS).

**Distribution** China: Heilongjiang, Hebei, Henan, Shaanxi, Gansu, Jiangsu, Anhui, Zhejiang, Hubei, Jiangxi, Hunan, Fujian, Guangxi, Sichuan.

### **2. *Anaches cylindricus* (Gressitt, 1939) comb. nov.**

*Sthenias cylindricus* Gressitt, 1939: 114, pl. III, fig. 7. **TL** China: Zhejiang. **TD** IZCAS.

**Specimens examined.** 1 male, holotype, Zhejiang, T'ienmushan, 1937-V-31, leg. O. Piel (IZCAS, IOZ(E) 217659).

**Distribution.** China: Zhejiang, Hunan, Fujian.

### **3. *Anaches dorsalis* (Pascoe, 1858)**

*Sthenias dorsalis* Pascoe, 1858: 251. **TL** India. **TD** BMNH.

*Anaches dorsalis*: Pascoe, 1865: 160.

*Anaches albonotatus* Pic, 1932: 25. **TL** Northern Vietnam (Tonkin). **TD** MNHN. Synonymized by Breuning, 1965a: 203.

**Specimens examined.** 1 male, Zhejiang, Tianmushan, alt. 350 m, 1999-VI-5, leg. Ming-Yuan Gao (IZCAS, IOZ(E) 1896988); 1 female, Fujian, Huangkeng, 1965-VII (IZCAS); 1 female, Fujian, Jianxi, 1981-IV-21 (IZCAS); 1 male, Sichuan, Emeishan, Qingyinge, alt. 800-1000 m, 1957-VII-4, leg. Fuxing Zhu (IZCAS); 1 female, Guangxi, Jinxiu, Fenzhan, alt. 800 m, 1999-V-13, leg. Hui Xiao (IZCAS, IOZ(E) 1896989); 1 female, Guizhou, Guiyang, Huaxi, 2011-VI (IZCAS).

**Distribution.** China: Shaanxi, Zhejiang, Fujian, Hong Kong, Guangxi, Chongqing, Sichuan, Guizhou, Yunnan. Vietnam, Laos, Thailand, India (Himachal Pradesh), Kashmir, Nepal, Bangladesh.

### **4. *Anaches medioalbus* (Breuning, 1956) comb. nov.**

*Paramesosella medioalba* Breuning, 1956: 234. **TL** China: Fujian. **TD** ZFMK.

**Specimens examined** (through pictures). Holotype, female, Kwangtseh-Fukien, 1937-VIII-19 (ZFMK).

**Distribution.** China: Fujian.

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**Remarks.** The type locality, Kwangtseh-Fukien, should be translated as Guangze, Fujian, which is nowadays located in Hangchuan zhen, Guangze county, Nanping, Fujian Province (Lampe et al., 2006). It is very similar to *Anaches semicylindricus* (Hayashi, 1974).

**5. *Anaches murzini* (Lazarev, 2020) comb. nov.**

*Sthenias* (s. str.) *murzini* Lazarev, 2020: 57, figs. 1-3. **TL** China: Sichuan.  
**TD** CMLR.

**Specimens examined.** Holotype, male, China, Sichuan prov., Qingcheng Hou Shan Mts., 70 km NW Chengdu, 1450 m, 2004-VIII-15, leg. S. Murzin (CMLR).

**Distribution** China: Sichuan.

**Remarks.** This species is very similar to *Anaches dorsalis* (Pascoe, 1858), but can be easily distinguished by the elytral apex with different shape and the narrow curved white line near apical third with the peak near suture much higher than the peak near lateral margin.

**6. *Anaches semicylindricus* (Hayashi, 1974)**

*Sthenias semicylindricus* Hayashi, 1974: 45. **TL** China: Taiwan. **TD** OSAKA.  
*Anaches semicylindricus*: Holzschuh & Lin, 2013: 152.

**Distribution.** China: Taiwan.

**7. *Anaches wenhsini* Holzschuh & Lin, 2013**

*Anaches wenhsini* Holzschuh & Lin, 2013: 152, figs. 8, 9. **TL** China: Taiwan.  
**TD** MNST.

**Specimens examined.** 1 male, paratype, Taiwan, Pingtung County, Mt. Dahan, 2007-VII-28, leg. Wenhsin Lin (IZCAS, IOZ(E) 1905281).

**Distribution.** China: Taiwan.

**8. *Anaches yitingi* Holzschuh & Lin, 2013**

*Anaches yitingi* Holzschuh & Lin, 2013: 154, fig. 10. **TL** China: Taiwan.  
**TD** MNST.

**Specimens examined.** 1 male 1 female, paratypes, Taiwan, Pingtung County, Mt. Dahan, 2007-V-26, leg. Wenhsin Lin (IZCAS, IOZ(E) 1905283-84).

**Distribution** China: Taiwan.

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***Engisoptera ivanae* sp. n. (Megasecoptera: Engisopteridae)  
a new fossil insect from the Lower Permian of Obora, Czech Republic**

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**Key words:** taxonomy, new species, fossil, Megasecoptera, Engisopteridae, Czech Republic.

**Abstract:** A new fossil megasecopteran of the family Engisopteridae, *Engisoptera ivanae* sp. n., from Lower Permian is described. The species is based upon a separated wing with the distinctive venation patterns and with apparent coloration, found in Bohemian massif, Boskovice furrow, in the Obora village. Locality is formed by the deposits whose age is determined about 295-290 MA. Both counterparts were found.

## **Introduction**

The paleontological locality of Obora is placed in the Boskovice furrow in the Bohemian massif. The locality is formed mainly by deposits of grey to greenish grey table-disintegrating claystones and bituminous marlstones whose age is determined about 295-290 MA (Havlena et Špinar, 1961). The locality was found by Havlata in 1957 and is known for more than 100 species of Lower Permian insect (Štamberg et Zajíč, 2008; Zajíč, 2014). Among others, about ten species of megasecopterans were described from this locality (Štamberg et Zajíč, 2008).

The order Megasecoptera is closely related to the Paleozoic orders Palaeodictyoptera, Diaphanopteroidea and Permothemistida. Differences, which are visible on the separated wings, between these orders are described in the shape of the wings, the wing venation and in the structure of the wing base too, while the wing base is preserved.

The Megasecoptera differs from the Palaeodictyoptera in the shape of the wings by having nearly homonomous, elongate, basally narrowed wings (Kukalová-Peck, 1972; 1975), in the more pronounced crowding of Sc and R towards the costal margin (Kukalová-Peck, 1974a) and in the structure of the wing base, where the subcostoanal axillary plate is missing and the axillary sclerites are

largely fused (Kukalová-Peck, 1975). The order Diaphanopterodea differs from the Megasecoptera in a simple MA vein and in the ability to flex the wings backwards over the abdomen (Grimaldi et Engel, 2005, Kukalová-Peck, 1974b). And finally the Permothemistida has well-developed pterostigma in the fore wings, only few cross-veins are present and representatives of this order have hind wings extremely reduced or entirely lost (Wootton et Kukalová-Peck, 2000).

Wing venation nomenclature used in this paper is according to Kukalová-Peck (1991) states following abbreviations: C - costa; Sc - subcosta; MA/MP - media anterior/posterior; RA/RP - radius anterior/posterior; CuA/CuP - cubitus anterior/posterior.

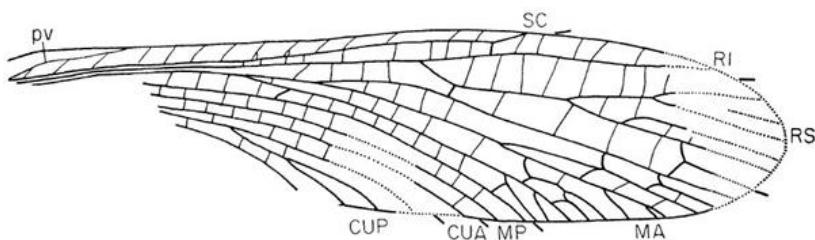
### Description of new taxon

Determination within the order Megasecoptera is based on Kukalová-Peck (1975) due to the fact, that the family Engisopteridae Kukalová-Peck, 1975 as well as genus *Engisoptera* Kukalová-Peck, 1975 were monotypic as yet. Only one known species of this genus is *Engisoptera simplices* Kukalová-Peck, 1975, which is described by the wing fragment (Fig. 1).

Kukalová-Peck (1975) defines the family Engisopteridae: "Wings: narrow, but not petiolate, almost uniformly broad in distal half; posterior margin not undulated. Postcostal vein present; Sc terminating shortly before mid-wing, subcostal area relatively broad; Rs short; ma area large and rich in long branches, MP area narrow; CuA simple, CuP with long branches. Cross veins numerous, intercalated sectors present."

And genus *Engisoptera* is defined in the same study: "Wings: more or less elongate-oval in shape, narrowed across the anal area. C, Sc and RI equidistant from each other in the distal half of the wing; Sc terminating on C; Rs very remote from RI, sending off two short branches; MA, MP, and CuP branches originating very anteriorly. Cross veins almost regular. The most conspicuous character of this new genus is the branches of the main veins originating very anteriorly in the wing.", where RI means RA, and RS means RP.

Above mentioned characteristics classify herein studied wing fragment into the genus *Engisoptera* Kukalová-Peck, 1975. But there are significant differences from the only one known species *E. simplices* Kukalová-Peck, 1975 (Fig. 1), as described below.



**Figure 1.** *Engisoptera simplices* Kukalová-Peck, 1975. Picture taken from Kukalová-Peck, 1975. Megasecoptera From the Lower Permian of Moravia.

### Taxonomy classification

Superorder: Palaeodictyopteroida Bechly, 1996

Order: Megasecoptera Brongniart, 1885

Family: Engisopteridae Kukalová-Peck, 1975

Genus: *Engisoptera* Kukalová-Peck, 1975

### *Engisoptera ivanae* sp. n.

Fig. 2

**Description.** Separated wing, length of preserved part 11.5 mm, width 4 mm. The wing is narrow, uniformly wide, the posterior margin is not undulated. A postcostal vein is evident at the edge of the preserved part of the wing. Sc vein is short, terminating on C shortly behind mid-wing. Subcostal area is relatively broad with a series of Sc branches. C, Sc and RA are approximately equidistant from each other. RP is very remote from RA and sending off two short branches, RP area is small, triangular. RP separates from RA just behind a mid-wing at the level where Sc vein terminates. MA area is large and rich in long branches. The anterior branch of MA leads up directly towards the RS area before which it is sharply deflected backwards and then is divided into two parallel branches that continue in this deflected direction. MP consists of two parallel veins. MA and probably the MP veins originate anteriorly from the wing base. There is also well evident coloration of the veins and apical area of the wing.

**Diagnosis.** *Engisoptera ivanae* sp. n. differs from the only one

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known species of family Engisopteridae, *Engisoptera simplices* (Fig. 1) in a several characters. *E. ivanae sp. n.* has wider subcostal area, RP separates from RA at the level where Sc terminates into C. In *E. simplices* RS separates from RA closer to the wing base, than Sc terminates into C. MA area has different arrangement of veins. In both species MA is divided into two long branches and the anterior of these is divided into two others. But in *E. ivanae sp. n.* anterior of these veins is branched, posterior one is simple. On the other hand in *E. simplices* anterior of these veins is simple, posterior is branched. *E. ivanae sp. n.* has evident coloration of the veins and apical area of the wing (Fig. 2: a, b).

**Preservation.** The species is based upon a separated, very delicate wing with the anal, cubital and partly radial area missing. Both positive and negative counterparts were found.

**Material.** Holotype: Separated wing, found in The Czech Republic, Obora village, South - Moravian region. Locality coordinates: 49°27'34''N, 16°36'08''E. Lower Permian deposits of the Boskovice furrow. Both counterparts were found. The holotype is retained by the author with the intent of offering in to the National Museum in Prague (NMPC) in the future.

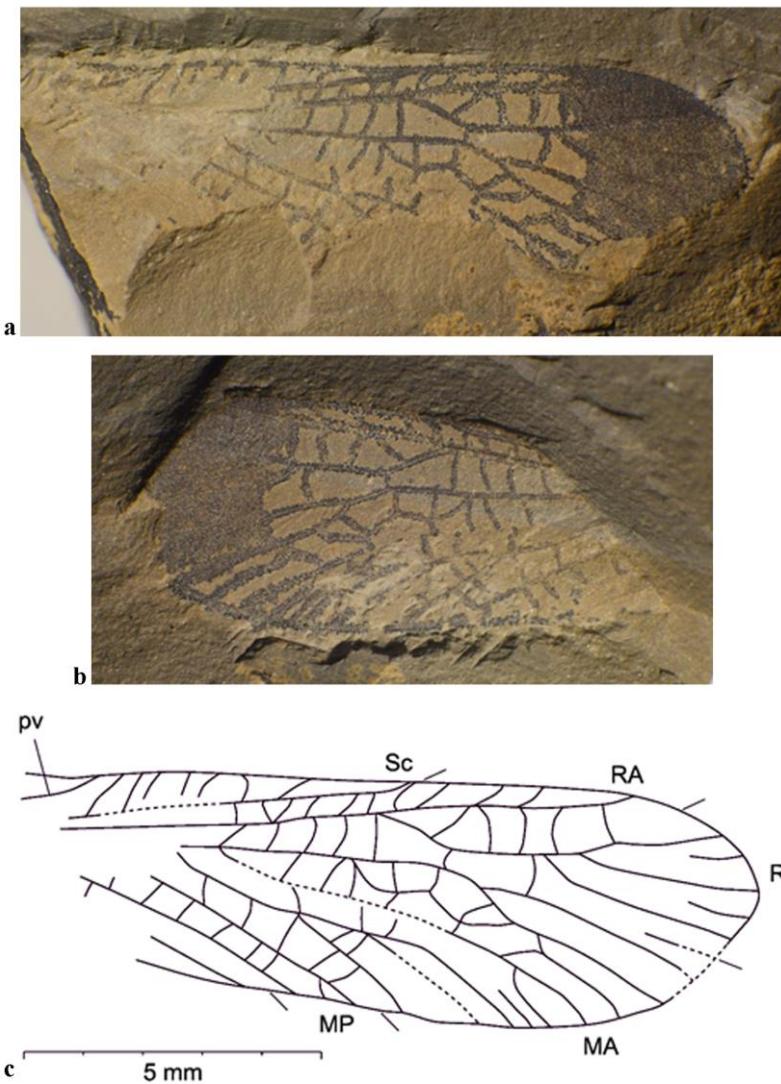
**Etymology.** This species is named in honor of my wife, Mrs. Ivana Jařabáčová, who richly supports my work.

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**Figure 2.** *Engisoptera ivanae* sp. n., wing fragment, length 11.5 mm, width 4 mm. Habitus: (a) and (b) holotype counterparts, (c) interpretative drawing compiled both counterparts of the holotype, pv = postcostal vein.

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## О ЖУРНАЛЕ

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