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## Contribution to the Ichneumoninae (Hymenoptera, Ichneumonidae) of Southeastern Asia: 4. Platylabini, Eurylabini, and Oedicephalini

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**A b s t r a c t :** In this publication, distributional records are given for 36 species and subspecies of the tribes Platylabini, Eurylabini and Oedicephalini (Hymenoptera: Ichneumonidae, Ichneumoninae) from the Oriental region.

Two genera are described as new: *Aulojoppoides* nov.gen. and *Granulolabus* nov.gen. 19 species and subspecies are new for science: *Apaelecticus rufopetiolaris* nov.sp., *Aulojoppa spilocephala* ssp. *birmanica* nov.ssp., *Aulojoppoides mandibulator* nov.sp., *Ectopoides flavoverticilis* nov.sp., *Granulolabus maculatus* nov.sp., *Notosemus albimaculatus* ssp. *laoticus* nov.ssp., *Notosemus albimaculatus* ssp. *malayensis* nov.ssp., *Notosemus heinrichi* nov.sp., *Notosemus rufator* nov.sp., *Notosemus rufonotatus* nov.sp., *Paragenes rufocoxalis* nov.sp., *Poecilostictus decoratus* ssp. *laoticus* nov.ssp., *Platylabus flavomaculatus* nov.sp., *Platylabus laoticus* nov.sp., *Platylabus orientalis* nov.sp., *Pristicerops magnus* nov.sp., *Pristicerops nigricornis* nov.sp., *Pristicerops paraprincipalis* nov.sp., and *Satrius spinicoxis* nov.sp.

Also, the hitherto unknown male of *Notosemus albimaculatus* SHENG & SUN, 2016 is described. *Pyramidophorus flavoguttatus* TISCHBEIN, 1882 is newly reported from the Oriental region.

**K e y w o r d s :** Hymenoptera, Ichneumonidae, Ichneumoninae, Oriental, new genus, new species, new subspecies.

### Introduction

The subfamily Ichneumoninae represents a very large group of Ichneumonidae (Hymenoptera) parasitizing Lepidoptera. Although this group includes many large and colourful species, our knowledge of the taxonomy and biology of Oriental Ichneumoninae is still incomplete.

After sporadic descriptions of Ichneumoninae species from Southern and Southeastern Asia by earlier hymenopterologists such as P. Cameron and J. Tosquinet in the late 19<sup>th</sup> and early 20<sup>th</sup> century, a more comprehensive study of the Oriental Ichneumoninae fauna, mainly with his material from Sulawesi and Myanmar, had been published by G. Heinrich in the 20<sup>th</sup> century over many years in several publications.

Up to now, 647 species are listed for the Oriental region in a recent catalogue (YU et al. 2016), but many species remain undescribed yet.

After three previous publications dealing with the Oriental fauna of Ichneumoninae (RIEDEL 2011, 2013, 2017), this study continues the survey and presents new material of the tribes Platylabini, Eurylabini and Oedicephalini.

## Methods

For this publication, I was able to study Oriental Ichneumoninae from the collections of the Biozentrum Linz/Austria (Linz), the Zoologische Staatssammlung München/Germany (ZSM) including the G. Heinrich collection, the Senckenberg Deutsches Entomologisches Institut in Eberswalde/Germany (SDEI) and the Naturalis in Leiden/Netherlands (Leiden).

For descriptions, I use the nomenclature proposed by HEINRICH (1966-1968) for body structures of the Ichneumoninae except that the area posteromedia (of Heinrich) is named area petiolaris here. The distributional records were taken from the catalogue of YU et al. (2016) and my own publications (RIEDEL 2011, 2013, 2017).

For the measurements I used an Olympus SZX 7 stereo microscope with dividing eyepiece. The figures were taken with an Olympus SC 30 CCD-camera using the AnalySIS getIT software.

## Material and Results

### Tribe Platylabini

#### *Apaeleticus rufopetiolaris* nov.sp. (fig. 6, 26)

Holotypus: (♀) Laos, Hua Phan Prov., Phon-Pan, Umg. Ort Ban Saleui, 20°13'30"N 103°59'26"E, 1350-1900 m, 30.04.2014 KJa, leg. C. Holzschuh & natives (Linz).

Remark: This new taxon is closely related to *A. tonkinensis* RIEDEL (see description in RIEDEL 2009: 1561). It differs by its slightly lanceolate flagella and red color of hind coxae and first tergite.

#### Description:

Body length 6 mm. Flagella long, slightly lanceolate, with more than 30 flagellomeres (tips broken off); 1<sup>st</sup> flagellomeres length 3.8x width; 15<sup>th</sup> segment square; widest flagellomeres c.1.2x wider than long. Temples short and strongly narrowed behind eyes, length 0.25x eye width. Distance of lateral ocelli from eyes 0.9x their diameter. Frons and face with dense transverse striato-punctures, clypeus distinctly convex, almost smooth and shining, apical margin straight. Malar spaces as long as width of mandibular bases. Mandibles with two teeth, upper ones longer than lower teeth. Genal carinae slightly sinusoid ventrally, reaching mandibular bases. Hypostomal carinae not elevated.

Mesoscutum short, with dense coarse rugulo-punctures; notauli impressed in frontal third. Mesopleura densely punctate and with distinct longitudinal striae; sternauli distinctly impressed in frontal 0.5 and with small transversal ribs. Epicnemial carina slightly elevated, reaching subtegular ridges. Metapleura rugose, coxal carinae distinct. Scutellum strongly elevated, with strong complete lateral carinae, punctate. Propodeum with roundish spiracles. Area superomedia heart-shaped, about as long as wide, costulae in the middle; area petiolaris strongly impressed and with coarse transverse rugae. Hind coxae and femora finely and densely punctate; hind coxae without scopa; hind femora length 3.5x height; claws not pectinate. Areolets pentagonal, frontal distance of intercubiti 4x their diameter.

Metasoma amblypygous. Postpetiolus moderately widened, without dorsal carinae and fields, coarsely punctate. 2<sup>nd</sup> tergite length 0.9x width; gastrocoeli slightly impressed, with some fine striae; thyridiae transverse, as wide as their interval. 2<sup>nd</sup> and 3<sup>rd</sup> tergites

densely rugose-punctate, matte; 4<sup>th</sup> tergite punctate, shining; following tergites almost smooth. Ovipositor sheaths slender and strongly narrowed apically.

Colour: Black. Palps and scapes reddish ventrally. Ivory are stripes on flagellomeres 7-12, narrow facial and frontal orbits, frontal and upper margins of pronotum, subalar ridges, and scutellum. 1<sup>st</sup> tergite completely and 2<sup>nd</sup> and 3<sup>rd</sup> tergites basally and apically reddish, 5<sup>th</sup> to 7<sup>th</sup> tergites with narrow yellowish hind margins. Legs including all coxae and trochanters red. Hind femora in apical 0.2 and hind tibiae in apical 0.3 infusate. Apical tarsomeres of all tarsi blackish. Wings hyaline, pterostigmas brownish.

♂ and hosts unknown.

D i s t r i b u t i o n : Laos.

***Cratolabus formosanus* (UCHIDA, 1932)**

M a t e r i a l : Malaysia, Pahang, Cameron Highlands, Gurung Jasar Mt., 1600 m, N4°28'E 101°21', 1♂ IV.2009, leg. Pacholátko (Linz); NE India, Arunachal province, Etalin vicinity, 700 m, N 28°36' E 95° 53', 1♀ 15-25.V.2012, leg. O. Sausa (Linz); NE India, Arunachal, Hunli env., c.1300 m, 28°19.32'N 95°57.31'E, 1♀ 26-30.V.2012, leg. O. Sausa (Linz); Laos, Hua Phan Prov., Ban Saleui, Phon-Pan-Mt. 20°13'30"N 103°59'26"E, 1350-1900 m, 1♂ 27-28.IV.2010, 1♂ 30.V.2011, 1♂ 17.VI.2013, leg. C. Holzschuh & natives (Linz)

D i s t r i b u t i o n : Widespread in the Oriental region, new for Malaysia.

***Dentilabus birmanicus* HEINRICH, 1974**

M a t e r i a l : China, Sichuan, Emei Sahn, Jieyindian, N 29°53.7' E 103°33.1', 2400-2500 m, 1♂ 6.VII.2009, leg. Blank, Liston & Taeger (SDEI); NE India, Arunachal, Hunli env., c.1300 m, 28°19.32'N 95°57.31'E, 1♂ 26-30.V.2012, leg. O. Sausa.

D i s t r i b u t i o n : Known from India and Myanmar, new for China.

***Ectopoides flavoverticilis* nov.sp. (fig. 7)**

H o l o t y p u s : (♀) China, Yunnan, Pianma environment, N 25.973° E 98.683°, 3150 m, 3.VI.2009, leg. Blank, Liston & Taeger (SDEI).

**D e s c r i p t i o n :**

Body length 5.5 mm. Flagella slender, slightly lanceolate, with more than 26 segments (tips broken off); 1<sup>st</sup> flagellomeres length 5.0x width, widest flagellomeres 1.2x wider than long. Temples strongly and roundly narrowed behind eyes, length c.0.5x eye width. Distance of lateral ocelli to eyes 1.0x their diameter. Occiput with transversal granulation. Face, frons and clypeus with fine granulation and very fine punctation, matte. Inner margins of eyes slightly divergent ventrally. Clypeus strongly convex, with straight apical margin. Mandibles narrow and moderately bent inwards, with two teeth; lower teeth much smaller than upper ones. Malar spaces length 1.0x width of mandibular bases. Genal carinae joining hypostomal ones close to mandibular bases, obsolete ventrally; hypostomal carinae not elevated.

Mesosoma with fine whitish hairs. Sides of pronotum granulate, partly with very fine striae. Notauli impressed in frontal third of mesoscutum; mesoscutum and mesopleura completely and finely granulate and punctulate, matte. Sternauli slightly impressed. Metapleura with somewhat coarser punctures; coxal carinae weakly developed. Scutellum moderately elevated, punctate and granulate, with complete lateral carinae. Propodeum with roundish spiracles, completely carinate. Area superomedia hexagonal and about as long as wide; costulae in frontal seventh of area superomedia. Area petiolaris

with lateral carinae, rugulose, partly with transversal rugae. Outer dentiparal edges with apophyses, these as long as wide. Hind coxae densely and finely rugose-punctate, without scopa. Hind femora densely punctate, length 4.9x height; hind tibiae without dentiform spurs externally. Claws not pectinate. Areolets almost quadrangular, frontal distance of intercubiti about 1x their diameter; nervuli interstitial.

Metasoma amblypygous. Petiolus wider than high; postpetiolus slightly widened, width c.0.6x distance of apophyses, without dorsal carinae; median field not elevated, finely rugose. 2<sup>nd</sup> tergite as long as wide. Gastrocoeli not impressed; thyridiae slightly oblique, short, width 0.3x their interval. 2<sup>nd</sup> tergite and basal 2/3 of 3<sup>rd</sup> tergite granulate and matte; apical third of 3<sup>rd</sup> tergite and following tergites superficially granulate, shining.

Colour: Black. Ivory are stripes on flagellomeres 7-10, frontal spots on fore and middle coxae, apical margins of fore and middle trochanters and 2<sup>nd</sup> to 4<sup>th</sup> hind tarsomeres. Cream-yellow are labrum, palps, sides of clypeus, facial and frontal orbits, roundish spots on vertices, collare, frontal margins ventrally and upper margins of pronotum, stripes on subtegular ridges, apical spot on scutellum. Metasoma blackish, with diffuse dark reddish-brown suffusion; narrow hind margins of 2<sup>nd</sup> to 5<sup>th</sup> tergites yellowish-brown, hind margin of 6<sup>th</sup> tergite and complete 7<sup>th</sup> tergite yellow. Coxae and trochanters black; legs otherwise reddish-brown; hind femora diffusely darkened in apical half; hind tibiae black in apical 0.3. Wings hyaline, pterostigmas brownish.

♂ and hosts unknown.

**D i s t r i b u t i o n :** China (Yunnan).

### ***Granulolabus* nov.gen.**

Type species: *Granulolabus maculatus* nov.sp.

The new taxon described below shows several unusual morphological features that are completely different to all known genera of Platylabini and convinced me to create a new genus. The following features are characteristic for this new genus:

- All tergites from the 3<sup>rd</sup> one on with fine punctulo-granulation and matte,
- horizontal part of propodeum very short, area superomedia sickle-shaped and much wider than long,
- costulae and coxal carinae present, spiracles of propodeum long-oval (3x longer than wide),
- gastrocoeli distinctly impressed; thyridiae of moderate width, c.0.8x of their interval,
- hind metatarsi long and slender, following hind tarsomeres stout,
- clypeus slightly convex, apical margin straight,
- ovipositor sheaths distinctly surpassing the metasomal apex.

In the key of World Platylabini published by TERESHKIN (2009), this genus runs to couplet 27, but differs from the genera *Rhyssolabus* and *Hirtolabus* by the structural features mentioned above.

### ***Granulolabus maculatus* nov.sp. (fig. 27, 32)**

**H o l o t y p u s :** (♀) Laos, Hua Phan Prov., Phon-Pan, Umg. Ort Ban Saleui, 20°13'30"N 103°59'26"E, 1350-1900 m, 03.-05.04.2014 KJa, leg. C. Holzschuh & natives (Linz).

### Description:

Body length 6 mm. Flagella with 30 segments, slightly lanceolate; 1<sup>st</sup> flagellomeres length 4.8x width; widest segments 1.2x wider than long. Temples shortly parallel behind eyes, apically roundly and distinctly narrowed, length 0.65x eye width. Distances of lateral ocelli from eyes 1.2x their diameter. Head punctate; epistoma and frons centrally with some transverse striation. Clypeus punctate, slightly convex, with straight apical margin. Malar spaces length 0.7x width of mandibular bases. Mandibles with two teeth, lower one much shorter and moderately bent inwards. Palps not swollen. Genal carinae joining hypostomal ones close to mandibular bases; hypostomal carinae not elevated.

Mesosoma with short grey hairs. Notauli shortly impressed on frontal margin of mesoscutum; mesoscutum with dense and coarse punctures, shining. Mesopleura densely punctate, partly with some longitudinal punctulo-striation, specula smooth and shining. Metapleura punctate, partly rugose; coxal carinae present. Scutellum wider than long, moderately elevated, punctate, with strong complete lateral carinae. Propodeum with short horizontal part (area petiolaris 3x longer than areae basalis and superomedia combined); spiracles long-oval (3x longer than wide). Area superomedia strongly transverse, sickle-shaped, width 2.5x length; costulae distinct, reaching area superomedia in the middle. Area petiolaris widest in frontal third and continuously narrowed to apex, with transversal rugae. Outer edges of areae dentiparae bluntly tooth-shaped, but without distinct apophyses. Hind coxae with dense fine punctures, without scopa; hind femora densely punctate, length 4.5x height; hind metatarsi long and slender, length 0.55x length of hind tibiae and 1.25x length of 2<sup>nd</sup> to 5<sup>th</sup> hind tarsomeres combined; claws not pectinate. Fore wings with quadrangular areolets, short ramelli, and interstitial nervuli.

Metasoma completely amblypygous, hypopygium shortly surpassing tergal apex, short. Petiolus wider than high; postpetiolus moderately widened, width 0.7x distance of outer edges of dentiparal areae; median field somewhat elevated, smooth, with some scattered punctures; dorsal carinae absent. 2<sup>nd</sup> tergite length 0.7x width, 3<sup>rd</sup> tergite length 0.43x width. Gastrocoeli distinctly impressed and with some fine longitudinal rugae; thyridiae slightly oblique, width 0.8x width of their interval. 2<sup>nd</sup> tergite with coarse and very dense confluent punctures; all following tergites very finely granulate-punctulate, matte. Ovipositor sheaths distinctly surpassing metasomal apex, seen from dorsal as long as 3<sup>rd</sup> and 4<sup>th</sup> hind tarsomeres combined.

Colour: Black. Ivory are stripes on flagellomeres 8-13. Cream-yellow are palps, mandibles except teeth, clypeus, face except narrow black central stripe, frontal orbits up to vertices, wide genae and outer orbits, scapes ventrally, frontal and upper margins of pronotum, two short paramedian longitudinal stripes on mesoscutum, subtegular ridges, frontal and caudal spots and upper hind edges of mesopleura, apical half of metapleura and of propodeum (except black area petiolaris), wide apical bands on 1<sup>st</sup> to 3<sup>rd</sup> tergites, 4<sup>th</sup> to 7<sup>th</sup> tergites completely, fore and middle coxae and trochanters, apical and dorsal spots on hind coxae. Hind coxae and hind trochanters black; legs otherwise reddish; hind femora black in apical 0.2; hind tibiae black in basal 0.1 and apical 0.15; all tarsi blackish, metatarsi only at apices. Wings hyaline, pterostigmas blackish.

♂ and hosts unknown.

Distribution: Laos.

***Lamprojoppa caerulea* CAMERON, 1901**

**M a t e r i a l :** Laos, Hua Phan Prov., Phon-Pan, Umg. Ort Ban Saleui, 20°13'30"N 103°59'26"E, 1350-1900 m, 4 ♀ ♀ 17.IV.-2.V.2012, leg. C. Holzschuh & natives (Linz).

**D i s t r i b u t i o n :** Known from India, new for Laos.

***Linycus simulator* HEINRICH, 1974**

**M a t e r i a l :** China, Yunnan, Tengshong 35 km SE Gongshan, N 24.828° E 98.767°, 2200 m, 1 ♀ 28.V.2009, leg. Blank, Liston & Taeger (SDEI); Laos, Hua Phan Prov., Ban Saleui, Phon-Pan-Mt. 20°13'30"N 103°59'26"E, 1350-1900 m, 1 ♀ 22.IV.2012, 1 ♂ 4.VII.2013, 1 ♀ 21-25.IV.2014, leg. C. Holzschuh & natives (Linz); Thailand, Chiang Mai, Doi Southepp-Pui NP, N 18°50' E 98°45', 1 ♂ 14.III.1992, leg. E. Hüttinger (Linz).

**D i s t r i b u t i o n :** Known from Myanmar, new for China, Laos and Thailand.

***Notoplatylabus birmanicus* HEINRICH, 1974**

**M a t e r i a l :** N Vietnam, Tam-Dao NP, Tam-Dao, 900-1200 m, N 21°27' E 105°38', 2 ♀ ♀ VI.2011, leg. E. Jendek; Laos, Hua Phan Prov., Ban Saleui, Phon-Pan-Mt. 20°13'30"N 103°59'26"E, 1350-1900 m, 1 ♀ 1 ♂ 3-5.IV.2014, leg. C. Holzschuh & natives (Linz); NE India, Arunachal province, Etalin vicinity, 700 m, N 28°36' E 95° 53', 2 ♀ ♀ 15-25.V.2012, leg. O. Sausa (Linz); NE India, Arunachal, Hunli env., c.1300 m, 28°19.32'N 95°57.31'E, 1 ♀ 26-30.V.2012, leg. O. Sausa (Linz).

**D i s t r i b u t i o n :** Widespread in the Oriental region.

***Notoplatylabus birmanicus* var. *rufator***

**M a t e r i a l :** Laos, Hua Phan Prov., Ban Saleui, Phon-Pan-Mt. 20°13'30"N 103°59'26"E, 1350-1900 m, 1 ♀ 21.V.2010, leg. C. Holzschuh & natives (Linz).

**R e m a r k :** Body length 5mm. Scapes, pedicles, ventral sides of the two basal flagellomeres, caudal third of mesopleura, complete metapleura, apical half of propodeum, 1<sup>st</sup> tergite completely and 2<sup>nd</sup> tergite basally and apically reddish. Coloration otherwise typical.

This specimen differs from the other material of *N. birmanicus* by its extended reddish coloration only, structural differences are not visible. In my opinion, the specimen represents a colour-form of the common and widespread *N. birmanicus* HEINRICH.

***Pachyjoppa tibialis* CAMERON, 1901**

**M a t e r i a l :** China, Yunnan, Gongshan 40 km NW Dulong, N 27.984° E 98.324°, 1700 m, 1 ♀ 8.VI.2009, leg. Blank, Liston & Taeger (SDEI); China, Yunnan, Pianma environment, N 25.973° E 98.708°, 2500 m, 1 ♂ 3.VI.2009, leg. Blank, Liston & Taeger (SDEI); Laos, Hua Phan Prov., Phon-Pan, Umg. Ort Ban Saleui, 20°13'30"N 103°59'26"E, 1350-1900 m, multiple ♀ ♀ and ♂ ♂ 2011-2013, leg. C. Holzschuh & natives (Linz).

**D i s t r i b u t i o n :** Known from India and Myanmar, new for China and Laos.

***Pagarenes erythropus* CAMERON, 1903**

**M a t e r i a l :** NE India, Arunachal province, Etalin vicinity, 700 m, N 28°36' E 95° 53', 1 ♂ 15-25.V.2012, leg. O. Sausa (Linz); Laos, Hua Phan Prov., Ban Saleui, Phon-Pan-Mt. 20°13'30"N 103°59'26"E, 1350-1900 m, 1 ♂ 8.VI.2013, leg. C. Holzschuh & natives (Linz).

**D i s t r i b u t i o n :** Widespread in Southeastern and Southern Asia.

***Pagarenes rufocoxalis* nov.sp. (fig.8, 28)**

**H o l o t y p u s :** (♀) Laos, Hua Phan Prov., Phon-Pan (Mt.), Ban Saleui (village), 20°13'30"N 103°59'26"E, 1350-1900 m MSL, 08.06.2009, leg. C. Holzschuh and many locals (Linz).

**D e s c r i p t i o n :**

Body length 9 mm. Flagella slender, bristle-shaped, with 34 segments; 1<sup>st</sup> flagellomeres length 5.6x width, all flagellomeres longer than wide. Temples strongly and roundly narrowed behind eyes, length 0.55x eye width. Distances of lateral ocelli to eyes c.1.0x their diameter. Frons above antennae smooth. Face and clypeus punctate. Clypeus moderately convex, with rounded apical margin. Malar spaces short, length c.0.4x width of mandibular bases. Genal carinae joining hypostomal ones far from mandibular bases; hypostomal carinae slightly elevated.

Mesosoma with whitish hairs. Notauli not distinctly impressed; mesoscutum and metapleura punctate; mesopleura with dense and somewhat rugose punctation. Coxal carinae present. Scutellum moderately elevated, punctate, about as long as wide and with complete lateral carinae. Propodeum with short-oval spiracles (length 2x width). Area superomedia as long as wide, dome-shaped, with rounded frontal carina; costulae absent. Area petiolaris with lateral carinae, punctate. Apophyses distinct, about as long as wide. Hind coxae densely rugose-punctate, without scopa. Hind femora densely punctate, length 4.3x height. Areolets quadrangular, nervuli interstitial.

Metasoma amblypygous, egg-shaped, with blunt apex. Petiolus wider than high. Postpetiolus moderately widened, width c.0.7x distance of apophyses, without dorsal carinae; median field slightly elevated, coarsely rugose-punctate. 2<sup>nd</sup> tergite length 0.8x width; 3<sup>rd</sup> tergite length 0.5x width. Gastrocoeli impressed, with rugae. Thyridiae oblique, narrow, width 0.7x their interval. 2<sup>nd</sup> tergite with very coarse, dense punctures; 3<sup>rd</sup> tergite densely punctate; 4<sup>th</sup> tergite with fine granulation, shining. Ovipositor sheaths slightly surpassing metasomal apex.

Colour: Black. 1<sup>st</sup> and 2<sup>nd</sup> flagellomeres reddish ventrally. Ivory are stripes on flagellomeres 8-13, palps, mandibular bases, clypeus except apico-medial black spot, wide triangular facial orbits, frontal orbits up to lateral ocelli, narrow stripes on genae and outer orbits, scapes and pedicels ventrally, propleura ventrally, frontal and upper margins of pronotum, spots on tegulae and on subtegular ridges, scutellum and postscutellum, large caudal spots and upper hind edges of mesopleura; apical half of metapleura, apical half of propodeum (except area petiolaris), wide apical bands on postpetiolus (with reddish suffusion) and 2<sup>nd</sup> tergite, very narrow apical margins of 3<sup>rd</sup> and 4<sup>th</sup> tergites, and wide apical bands on following tergites, apical bands of 1<sup>st</sup> and 2<sup>nd</sup> sternites and hypopygium completely. Fore and middle coxae and trochanters ivory; hind coxae red, with small dorsal ivory spot; legs otherwise reddish; hind femora in apical 0.15; hind tibiae basally and in apical 0.2 and all apical tarsomeres blackish; hind tarsi except apical segments cream-yellow. Wings hyaline, pterostigmas dark brownish.

♂ and hosts unknown.

**D i s t r i b u t i o n :** Laos.

***Poecilostictus decoratus* ssp. *laoticus* nov.ssp. (fig. 31)**

**H o l o t y p u s :** (♀) Laos, Hua Phan Prov., Ban Saleui, Phon-Pan-Mt., 20°13'30"N 103°59'26"E, 1350-1900 m, 21.4.2010, leg. C. Holzschuh & natives (Linz).

**D e s c r i p t i o n :**

Body length 12 mm. Flagellum with 42 segments, slightly lanceolate. 1<sup>st</sup> flagellomeres length 4.1x width, widest flagellomeres c.1.2x wider than long. Flagellomeres 8-12 with yellow stripes.

The available ♀ is closely related to *P. decoratus* HEINRICH and probably represents a subspecies only. It differs from the original description of *P. decoratus* (HEINRICH 1974b: 189-190) by the presence of two short yellow stripes on lateral margins of mesoscutum beneath tegulae. The postpetiolus has a large central yellow spot on apex; 2<sup>nd</sup> to 4<sup>th</sup> tergites are black, without yellow markings; 5<sup>th</sup> and 6<sup>th</sup> tergites have narrow yellow membranous apical margins. Otherwise as described for *C. decoratus* HEINRICH. The ♂ which Heinrich mentioned in his description probably belongs to this new subspecies.

***Platylabus flavomaculatus* nov.sp. (fig. 9, 29, 33)**

**H o l o t y p u s :** (♀) N Vietnam, Tam-Dao NP, Tam-Dao, 900-1200 m, N 21°27' E 105°38', E. Jendek, 06.2011 (Linz).

**P a r a t y p u s :** (♂) N Vietnam, Tam-Dao NP, Tam-Dao, 900-1200 m, N 21°27' E 105°38', E. Jendek, 06.2011 (Linz).

**R e m a r k :** In the key of HEINRICH (1974b: 109-112), this new species runs to couplet 14, but differs from the other known Oriental *Platylabus* species by the colour pattern of the metasoma.

**D e s c r i p t i o n :**

♀: Body length 9.5 mm. Flagella slender, bristle-shaped, with 34 segments; 1<sup>st</sup> flagellomeres length 5.0x width, all flagellomeres longer than wide. Temples strongly and roundly narrowed behind eyes, length 0.35x eyes width. Ocelli large, distance of lateral ocelli to eyes c.0.75x their diameter. Frons ventrally smooth, dorsally finely granulate and punctate. Face and clypeus punctate. Clypeus moderately convex, with straight apical margin. Malar spaces length 0.4x width of mandibular bases. Genal carinae joining hypostomal ones far from mandibular bases; hypostomal carinae narrow.

Mesosoma with whitish hairs. Notauli not impressed; mesoscutum densely punctate; mesopleura and metapleura finely punctate, mesopleura rugose-punctate centrally, specula shining and with scattered puncture. Coxal carinae absent. Scutellum strongly elevated, almost pyramidal, with lateral carinae in its basal 0.7. Propodeum with long-oval spiracles (length 3x width). Area superomedia halfmoon-shaped, c.2x wider than long; costulae absent. Area petiolaris with lateral carinae and irregular coarse rugae. Outer dentiparal edges without apophyses. Hind coxae punctate, without scopa; hind femora densely punctate, length 3.9x height. Areolets almost quadrangular, nervuli interstitial.

Metasoma amblypygous. Petiolus wider than high. Postpetiolus moderately widened, width c.0.7x distance of dentiparal edges, without dorsal carinae; median field slightly elevated, with some rugae and punctures, shining. 2<sup>nd</sup> tergite length 1.0x width. Gastrocoeli impressed, rugose; thyridia large, slightly oblique, width 1.7x their interval. 2<sup>nd</sup> to 4<sup>th</sup> tergites very densely punctate and granulate, matte, 5<sup>th</sup> to 7<sup>th</sup> tergites finely granulate and shining.

Colour: Black. Ivory are stripes on flagellomeres 5-12. Yellowish are palps, mandibular bases, clypeus, malar spaces, facial and frontal orbits up to lateral ocelli, narrow stripes on outer orbits, scapes ventrally, ventral apices of propleura, frontal and upper margins of pronotum, two short longitudinal paramedian stripes on mesoscutum, spots on tegulae and on subtegular ridges, scutellum and postscutellum, mesopleura along epicnemial

carinae, large caudal spots on mesopleura, apical half of metapleura and propodeum (except black area petiolaris), base of 1<sup>st</sup> tergite, hind margin of postpetiolus, fore and middle coxae and trochanters. 2<sup>nd</sup> and 3<sup>rd</sup> tergites reddish (3<sup>rd</sup> tergite diffusely darkened centrally), 4<sup>th</sup> and 5<sup>th</sup> tergites with reddish apical bands. Hind coxae reddish-brown, with ivory spots apically and dorsally; legs otherwise reddish; hind femora reddish-brown; hind tibiae infusate in apical 0.4. Wings hyaline, pterostigmas brownish.

♂: Body length 9.5 mm. Flagella with 35 segments, slender, without tyloids; 1<sup>st</sup> flagellomeres length 3.3x width. Hind femora length 3.7x height; 2<sup>nd</sup> tergite length 1.05x width. Structure otherwise as described for the ♀. Flagella completely black. Face yellow; hind coxae blackish with apical and dorsal yellow spots; hind femora blackish, narrowly yellowish at base; hind tarsi completely black. Colour otherwise as described for the ♀.

**Distribution:** Vietnam.

***Platylabus lieftincki* HEINRICH, 1934**

**Material:** Laos, Hua Phan Prov., Phon-Pan, Umg. Ort Ban Saleui, 20°13'30"N 103°59'26"E, 1350-1900 m, 1♂ 10.V.2011, leg. C. Holzschuh & natives (Linz).

**Distribution:** Widespread in the Oriental region, new for Laos.

***Platylabus laoticus* nov.sp. (fig. 10, 30, 34)**

**Holotypus:** (♀) Laos, Hua Phan Prov., Phon-Pan, Umg. Ort Ban Saleui, 20°13'30"N 103°59'26"E, 1350-1900 m, 01.06.2011, leg. C. Holzschuh & natives (Linz).

**Paratypes:** all from same location. Collection dates: ♂ 10.05.2011, ♂ 01.05.2011, ♂ 06.05.2011, ♂ 04.05.2011, ♂ 07.05.2011, ♂ 04.05.2011, ♀ 03.-05.04.2014, ♀ 21.04.2012, ♀ 19-21.04.2014 (Linz and coll. Riedel).

**Remark:** The new species runs to *Platylabus pseudogoliath* HEINRICH in the key of HEINRICH (1974b: 109-112). It can be differentiated from *P. pseudogoliath* by the form of genal and hypostomal carinae, ivory flagellar rings in ♀♀ and the ivory color pattern of the head.

**Description:**

♀: Body length 11-12 mm. Flagella slender, bristle-shaped, with 38-39 segments; 1<sup>st</sup> flagellomeres length 5.0x width, all flagellomeres longer than wide. Temples long, slightly and roundly narrowed behind eye, length 0.8-0.9x eye width. Distance of lateral ocelli to eyes c.1.2x their diameter. Head coarsely granulate, matte; frons above antennae smooth. Clypeus moderately convex, with rounded apical margin. Malar spaces long, length c.1.3x width of mandibular bases. Genal carinae joining hypostomal ones far from mandibular bases, but obsolete ventrally; genae ventrally impressed; hypostomal carinae lamelliform elevated.

Mesosoma with fine grey hairs. Notauli slightly impressed frontally; mesoscutum densely granulate-punctate, matte; mesopleura and metapleura finely rugose-punctate, matte. Coxal carinae absent. Scutellum moderately elevated, rugose-punctate, with complete lateral carinae. Propodeum with long-oval spiracles (length 3x width). Area basalis without lateral carinae. Area superomedia longer than wide, rectangular; costulae absent. Area petiolaris without distinct lateral carinae, with coarse transverse rugae. Outer denticular edges with small apophyses. Hind coxae densely rugose-punctate, without scopa. Hind femora densely punctate, length 4.7x height. Areolets quadrangular; nervuli interstitial or slightly postfurcal.

Metasoma amblypygous, oval, apex blunt. Petiolus wider than high. Postpetiolus moderately widened, width c.0.75x distance of apophyses, without dorsal carinae; median field slightly elevated, rugose. 2<sup>nd</sup> tergite length 0.9x width. Thyridia very large, c.2.5x wider than their interval, interval 0.5x as wide as median field of postpetiolus. 2<sup>nd</sup> tergite and basal 2/3 of 3<sup>rd</sup> tergite densely punctate, centrally finely rugose, matte; caudal third of 3<sup>rd</sup> tergite and following tergites with smoothened structure, shining. Ovipositor sheaths not surpassing metasomal apex.

Colour: Black. Scapes sometimes reddish ventrally. Ivory are stripes on flagellomeres 9/10-13, mandibular bases, narrow facial and frontal orbits, small spots on vertices, narrow stripes on outer orbits, hind edges of pronotum, spots on tegulae and on subtegular ridges, and apical spot on scutellum. Coxae and trochanters black; legs otherwise reddish; hind femora narrowly black at apex; hind tibiae black, sometimes subbasally with diffuse dark reddish shine; all tarsi blackish. Wings hyaline, pterostigmas dark brownish.

♂: Body length 11 mm. Flagella with 37-38 segments; 1<sup>st</sup> flagellomeres length c.4x width; tyloids on flagellomeres 10-18, long-oval, on basal 0.6 of their segments. Temples moderately narrowed behind eyes. Hind tibiae with reddish-brown subbasal rings. Structure and coloration otherwise as described for the ♀.

D i s t r i b u t i o n : Laos.

***Platylabus occipitalis nov.sp.***

H o l o t y p u s : (♀) Taiwan, S-Nanton Co, Road No 21, Hoshier, ca. 23°35'N 120°53'E, ca. 1000 m, 19-21.V.2001, leg. W. Schacht et al. (ZSM).

R e m a r k : This small taxon belongs to the group of Oriental *Platylabus* species with blackish mesosoma and dark metasoma. It is mainly characterized by the rugose and transversely striated occiput.

**D e s c r i p t i o n :**

♀: Body length 6 mm. Flagella slender, slightly lanceolate, with 32 segments; 1<sup>st</sup> flagellomeres length 4.0x width, widest flagellomeres 1.1x wider than long. Temples moderately and roundly narrowed behind eyes, length c.0.6x eye width. Ocelli small, distance of lateral ocelli to eyes 1.4x their diameter. Occiput and dorsal part of frons with coarse transverse rugose-striation, matte. Face and clypeus punctate; epistoma partly rugose. Clypeus moderately convex, with straight apical margin. Malar spaces long, length c.1.2x width of mandibular bases. Genal carinae joining hypostomal ones far from mandibular bases, but obsolete ventrally; hypostomal carinae slightly elevated (by diameter of apical palpomeres).

Mesosoma with fine whitish hairs. Sides of pronotum rugose-punctate, with some irregular longitudinal striae ventrally. Notauli slightly impressed frontally; mesoscutum densely rugose-punctate, matte. Mesopleura including specula and metapleura coarsely rugose-punctate, matte. Coxal carinae absent. Scutellum distinctly elevated, punctate, with complete lateral carinae. Propodeum with short-oval spiracles (length 2x width). Area supermedia as long as wide, rectangular, rugose; costulae absent. Area petiolaris without lateral carinae, confluent with areae posteroexternae, with fine and partly transverse rugae. Outer dentiparal edges dentiform, without distinct apophyses. Hind coxae densely rugose-punctate, without scopa. Hind femora densely punctate, length 4.3x height. Claws not pectinate. Areolets almost quadrangular, nervuli slightly postfurcal.

Metasoma amblypygous, oval, apex blunt. Petiolus wider than high. Postpetiolus moderately widened, width c.0.65x distance of apophyses, without dorsal carinae; median field slightly elevated, somewhat rugose basally, with smoothened surface apically. 2<sup>nd</sup> tergite length 0.9x width; 3<sup>rd</sup> tergite length 0.65x width. Gastrocoeli slightly impressed; thyridia slightly oblique, width 1.0x their interval. 2<sup>nd</sup> and 3<sup>rd</sup> tergites superficially punctate, finely granulate, more or less shining; following tergites with fine granulation, shining. Ovipositor sheaths slightly surpassing metasomal apex.

Colour: Black. Metasoma with dark reddish-brown suffusion; postpetiolus apico-medially and hind margin of 2<sup>nd</sup> tergite reddish-brown; hind margin of 6<sup>th</sup> tergite and complete 7<sup>th</sup> tergite yellowish-brown. Ivory are stripes on flagellomeres 8-11, narrow facial and frontal orbits, short narrow stripes on outer orbits, and small spots on vertices opposite to lateral ocelli. Hind edges of pronotum, spots on subtegular ridges, frontal spots on fore coxae, and apical spot on scutellum yellowish. Coxae and trochanters black; legs otherwise reddish; hind femora at narrow apex and hind tibiae in apical 0.1 blackish; all apical tarsomeres brownish. Wings hyaline, pterostigmas ochreous.

♂ and hosts unknown.

D i s t r i b u t i o n : Taiwan.

### Genus *Pristicerops* HEINRICH

This genus seems to contain several closely related Oriental species which are difficult to differentiate in the available material. Therefore, the variability of morphological features and colour patterns is still questionable in some species. In addition to the newly described species, I have seen some other specimens probably representing other undescribed taxa of *Pristicerops*. For a detailed description and unequivocal separation of these species, more material has to be studied in the future.

#### *Pristicerops magnus* nov.sp. (fig. 11, 35, 42)

Holotypus: (♀) Laos, Hua Phan Prov., Phon-Pan, Umg. Ort Ban Saleui, 20°13'30"N 103°59'26"E, 1350-1900 m, 01.06.2011 KJa, leg. C. Holzschuh & natives (Linz).

Paratypus: (♂) Laos, Hua Phan Prov., Ban Saleui, Phon-Pan-Mt., 20°13'30"N 103°59'26"E, 1350-1900 m, 29.04.2012 KNo, leg. C. Holzschuh & locals (Linz).

R e m a r k : The taxon is larger than other species of this genus. Beside its large size, it is characterized by lanceolate flagella and ivory spots on lateral sides of prescutellar ridges.

#### D e s c r i p t i o n :

♀: Body length 15 mm. Flagella with 49 segments, distinctly lanceolate, about 15<sup>th</sup> flagellomeres square, widest ones 1.8x wider than long. Temples strongly and almost linearly narrowed behind eyes, length 0.55x eye width. Distance of lateral ocelli to eyes 1.1x their diameter. Frons almost smooth, face punctate. Clypeus flat, with scattered punctures. Malar spaces c.0.9x as long as width of mandibular bases. Genal carinae joining hypostomal ones close to mandibular bases, both carinae narrow.

Mesoscutum finely and densely punctate, notauli not impressed. Mesopleura and meta-pleura finely punctate, partly striate. Coxal carinae absent. Scutellum moderately elevated, about as long as wide, with complete lateral carinae. Propodeum with slit-shaped spiracles. Area superomedia hexagonal, about as long as wide; costulae distinct, in the middle. Area petiolaris with weak lateral carinae and fine transverse rugae. Dentiparal

edges with very small apophyses. Hind coxae densely punctate, without scopa; hind femora punctate, length 4.5x height. Areolets quadrangular, nervuli interstitial.

Metasoma amblypygous. Petiolus flattened. Postpetiolus moderately widened, width 0.7x distance between apophyses, median field slightly elevated, without dorsal carinae, finely rugulose. 2<sup>nd</sup> tergite length 0.8x width. Gastrocoeli impressed, with some fine longitudinal striae; thyridiae short, oblique, width 0.6x width of interval. 2<sup>nd</sup> and 3<sup>rd</sup> tergites coarsely punctate and finely granulate, but more or less shining; 4<sup>th</sup> tergite finely granulate, following tergites almost smooth.

Colour: Black; with some reddish suffusion on frons and on anterolateral parts of mesoscutum. Ivory are stripes on flagellomeres 7-15, scapes ventrally, palps, mandibles except teeth, clypeus and face except black central stripe, genae, wide orbits (narrowed on vertexes), propleura ventrally, frontal and upper margins of pronotum, two para-median longitudinal stripes on mesoscutum, lateral sides of prescutellar ridges, scutellum and postscutellum, two large confluent spots on mesopleura, upper hind edges of mesopleura, carinal triangles and spots on metapleura, apical half of propodeum except black area petiolaris, apical bands of all tergites, fore and middle coxae and trochanters, and hind coxae apically and dorsally. Middle trochantelli and hind trochanters black; femora, tibiae and tarsi reddish-yellow; fore and middle femora with apico-caudal black spots; hind femora black in apical 0.3; fore and middle tibiae blackish on outer sides; middle tibiae with subbasal yellow rings; hind tibiae yellow, blackish basally and apically; hind tarsi completely yellow-red. Wings hyaline, pterostigmas dark brownish.

♂: Body length 14 mm. Flagella with more than 32 segments (tips broken off), apical flagellomeres distinctly sub-serrate (as typical for this genus). 1<sup>st</sup> flagellomeres length 4.0x width. Tyloids long-oval, on flagellomeres 10-19, at most 0.9x as long as their segments. Hind femora length 4.9x height. Colour black and ivory, without reddish suffusion. Structure and coloration otherwise as described for the ♀.

D i s t r i b u t i o n : Laos.

### ***Pristicerops nigricornis* nov.sp. (fig. 12, 43)**

Holotypus: (♂) Laos, Hua Phan Prov., Phon-Pan, Umg. Ort Ban Saleui, 20°13'30"N 103°59'26"E, 1350-1900 m, 06.-11.04.2014 KJa, leg. C. Holzschuh & natives (Linz).

R e m a r k : This species differs from other known males of Oriental *Pristicerops* by the completely dark flagella and dark hind legs.

### **D e s c r i p t i o n :**

Body length 13.5 mm. Flagella with more than 41 segments (tips broken off), apical flagellomeres distinctly sub-serrate (as typical for this genus); 1<sup>st</sup> flagellomeres length 3.8x width. Tyloids bacilliform, on flagellomeres 11-18, the longest ones as long as their segments. Temples strongly and roundly narrowed behind eyes, length 0.4 eye width. Distance of lateral ocelli to eyes 1.2x their diameter. Frons almost smooth, face punctate. Clypeus almost flat, with scattered punctures. Malar spaces short, c.0.4x as long as width of mandibular bases. Genal carinae joining hypostomal ones close to mandibular bases, both carinae narrow.

Mesoscutum finely and densely punctate, notauli impressed in frontal fifth. Mesopleura and metapleura finely punctate, partly striate. Coxal carinae absent. Scutellum moderately elevated, about as long as wide, with complete and high lateral carinae. Propodeum with slit-shaped spiracles. Area superomedia heart-shaped, about as long as wide; costulae frontal to middle. Area petiolaris with lateral carinae and fine transverse rugae.

Dentiparal edges with very small apophyses. Hind femora densely punctate, length 4.7x height. Areolets quadrangular, nervuli interstitial.

Postpetiolus moderately widened, width 0.6x distance between apophyses, median field slightly elevated, without dorsal carinae, coarsely rugulose. 2<sup>nd</sup> tergite length 1.05x width. Gastrocoeli slightly impressed; thyridiae oblique, width 0.8x width of interval. 2<sup>nd</sup> and 3<sup>rd</sup> tergites granulate and with superficial punctures, matte; 4<sup>th</sup> tergite finely granulate and shining, following tergites almost smooth.

Colour: Black. Ivory are scapes ventrally, palps, mandibles except teeth, clypeus and face completely, genae (interrupted on malar spaces), wide orbits (narrowed on vertices), propleura ventrally, frontal and upper margins of pronotum, two longitudinal stripes on mesoscutum, small spots on lateral sides of prescutellar ridges, scutellum and postscutellum, two large spots on mesopleura (the frontal ones confluent with large mesosternal marks), upper hind edges of mesopleura, carinal triangles and spots on metapleura, apical half of propodeum (except black area petiolaris), narrow apical bands of all tergites, fore and middle coxae and trochanters, and hind coxae apically and dorsally. Trochantelli and hind trochanters black; fore and middle femora and tibiae brownish-red; femora apico-dorsal with yellow spots; tibiae with black stripes externally; hind femora blackish, with dark reddish suffusion ventro-medially; hind tibiae black, yellowish-brown internally; all tarsi black. Wings hyaline, pterostigmas black.

♀ unknown.

D i s t r i b u t i o n : Laos.

***Pristicerops paraprincipalis* nov.sp. (fig. 13, 40, 41)**

Holotypus: (♀) Laos, Hua Phan Prov., Phon-Pan, Umg. Ort Ban Saleui, 20°13'30"N 103°59'26"E, 1350-1900 m, 19.04.2012 KJa, leg. C. Holzschuh & natives (Linz).

Paratypus: (♀) Laos, Hua Phan Prov., Phon-Pan, Umg. Ort Ban Saleui, 20°13'30"N 103°59'26"E, 1350-1900 m MSL, 01.06.2011, leg. C. Holzschuh & natives (Linz).

R e m a r k : This new taxon is closely related to *Pristicerops principalis* HEINRICH. It differs by its wider temples, stouter hind femora, almost completely yellowish hind tibiae and black coloration of central clypeus and face.

**D e s c r i p t i o n :**

Body length 10-11 mm. Flagella with 46 (HT) or 40 (PT) segments, distinctly lanceolate, c.15<sup>th</sup> flagellomeres square, widest ones 1.5-2.0x wider than long. Temples slightly and roundly narrowed behind eyes, length 0.75x eye width. Distance of lateral ocelli to eyes 1.3x their diameter. Frons almost smooth, face densely punctate. Clypeus almost flat, with scattered punctures. Malar spaces c.0.8x as long as width of mandibular bases. Genal carinae joining hypostomal ones close to mandibular bases, both carinae narrow.

Mesoscutum finely and densely punctate, notauli not impressed. Mesopleura and metapleura densely punctate. Coxal carinae absent. Scutellum only slightly elevated, about as long as wide, with complete lateral carinae. Propodeum with slit-shaped spiracles. Area superomedial hexagonal, slightly wider than long; costulae distinct, caudal to middle. Area petiolaris with distinct lateral carinae and transverse rugae. Dentiparal edges with very small apophyses. Hind coxae densely punctate, without scopa; hind femora stout, punctate, length 3.8-3.9x height. Areolets quadrangular or narrowly pentagonal, nervuli interstitial or slightly antefurcal.

Metasoma amblypygous. Postpetiolus moderately widened, width 0.7x distance between apophyses, median field slightly elevated, without dorsal carinae, almost smooth and

shining. 2<sup>nd</sup> tergite length 0.75x width. Gastrocoeli slightly impressed, with some fine longitudinal striae; thyridiae short, oblique, width 0.7x width of interval. 2<sup>nd</sup> and 3<sup>rd</sup> tergites coarsely punctate and finely granulate, but more or less shining; 4<sup>th</sup> tergite finely granulate, following tergites almost smooth.

Colour: Black. Ivory are stripes on flagellomeres 8-13/15, scapes ventrally, palps, mandibles except teeth, sides of clypeus, wide triangular facial orbits, genae, wide orbits (narrowed on vertexes), frontal and upper margins of pronotum, two longitudinal paramedian stripes on mesoscutum and (in HT) small lateral stripes opposite to tegulae, scutellum and postscutellum, two large spots on mesopleura, upper hind edges of mesopleura, carinal triangles and spots on metapleura, apical areae dentiferae and complete areae posteroexternae, apical bands of all tergites, fore and middle coxae and trochanters, and hind coxae apically and dorsally. Middle trochantelli and hind trochanters black; femora, tibiae and tarsi reddish-yellow; fore and middle femora with apico-external yellow spots; fore and middle tibiae and tarsi with brown stripes externally; hind femora black in apical 0.25; hind tibiae almost completely yellow (in PT narrowly infusate on apex); hind tarsi yellow-red, apical hind tarsomeres blackish. Wings hyaline, pterostigmas dark brownish.

♂ unknown.

D i s t r i b u t i o n : Laos.

### ***Pristicerops principalis* HEINRICH, 1974**

M a t e r i a l : Laos, Hua Phan Prov., Ban Saleui, Phon-Pan-Mt. 20°13'30"N 103°59'26"E, 1350-1900 m, 1 ♀ 6.VII.2013, 1 ♂ 26-27.IV.2014, leg. C. Holzschuh & natives (Linz).

D i s t r i b u t i o n : Known from Myanmar and Vietnam, new for Laos.

### ***Pyramidophorus flavoguttatus* TISCHBEIN, 1882**

M a t e r i a l : Laos, Hua Phan Prov., Phon-Pan, Umg. Ort Ban Saleui, 20°13'30"N 103°59'26"E, 1350-1900 m, 1 ♂ 8.V.2010, 1 ♂ 9.V.2010, 1 ♂ 13.V.2011, 1 ♂ 16.V.2011, 1 ♂ 19.V.2011, 1 ♂ 26.V.2011, 1 ♀ 1 ♂ 10-14.V.2012, 2 ♂ ♂ 17.IV.2012, 1 ♂ 23.IV.2012, 1 ♀ 25.IV.2012, 4 ♂ ♂ 19-26.V.2012, 1 ♂ 30.VI.2013, leg. C. Holzschuh & natives (Linz and coll. Riedel).

R e m a r k : Although this species seems to be rather common in Laos, it has not been reported from the Oriental region so far. Comparing the European and Laotic material, I could not find any differences of morphology or coloration.

D i s t r i b u t i o n : Palaearctic region, new for Laos and the Oriental region.

## **Tribe E u r y l a b i n i**

### ***Eurylabus indolarvatus* HEINRICH, 1974 (fig. 44)**

M a t e r i a l : Laos, Hua Phan Prov., Ban Saleui, Phon-Pan-Mt., 20°13'30"N 103°59'26"E, 1350-1900 m, 1 ♀ 2.V.2012, leg. C. Holzschuh & natives (Linz).

R e m a r k : The coloration of the Laotic ♀ differs from the original description (HEINRICH, 1974a: 451-452) by smaller ivory spots on mesopleura and metapleura, ventrally black scapes, ivory sides of clypeus and face, and two longitudinal ivory stripes on central face. The available specimen is otherwise typical.

D i s t r i b u t i o n : Known from Myanmar, new for Laos.

## Tribe Oedicephalini

### *Aulojoppa spilocephala* ssp. *birmanica* nov.ssp.

**Material:** NE Myanmar, Maymo, 800 m, 1 ♀ XII.1937 (ZSM); S Vietnam: Dak Lak, Chu Yang Sin N.P. nr river, c. 750 m, 1 ♀ 1 ♂ 1-10.VI.2007, Mal. traps 3-5, leg. C. v. Achterberg and R. de Vries (Leiden); C Vietnam: Thua Thien Hué, Phong Dien N.R. nr base-camp c 50 m, 1 ♂ I.IV.2001, at light, leg. R. de Vries (Leiden); Laos, Hua Phan Prov., Phon-Pan, Umg. Ort Ban Saleui, 20°13'30"N 103°59'26"E, 1350-1900 m, 1 ♀ 27.VI.2013, 1 ♀ 4.VII.2013, leg. C. Holzschuh & natives (Linz and coll. Riedel); S India, Tamil Nadu, 1100 m, Nilgiri Hills, 11 km SE Kotagiri, Kunchappanai, N 11°24' E 76°56', 1 ♂ 3-15.V.2002, leg. P. Pacholátko (Linz).

**Remark:** In coll. Heinrich (ZSM), the specimen found in Myanmar was labeled as *Aulojoppa birmanica* by him but not published so far. However, *Aulojoppa spilocephala* CAMERON, 1907 seems to be a widespread species in Southern and Southeastern Asia that developed many colour variants or subspecies in its wide area of distribution (see also HEINRICH, 1934: 128-129). I therefore prefer to describe this taxon as a subspecies of *A. spilocephala* here.

**Colour:** ♀: Black. Basal flagellomeres red-brown, flagellomeres 7-15/16 with ivory stripes, apical flagellomeres blackish. Head black; ivory are large triangular spots on vertices, large halfmoon-shaped spots on facial orbits, stripes on outer orbits, clypeus and mandibles except teeth. Mesosoma black; ivory are frontal margins and upper margins of pronotum caudally, tegulae, subtegular ridges, ventro-caudal spots on mesopleura, scutellum and postscutellum, carinal triangles and large spots around dentiparal edges (sometimes covering apical half of propodeum except black area petiolaris). Metasoma black; 1<sup>st</sup> tergite red; postpetiolus with ivory apical band; 2<sup>nd</sup>, 3<sup>rd</sup>, 6<sup>th</sup> and 7<sup>th</sup> tergites with apical ivory bands, wider on 2<sup>nd</sup> and 6<sup>th</sup> tergites, narrow on 3<sup>rd</sup> tergite (but more or less widened laterally), sometimes 4<sup>th</sup> tergite with narrow apical ivory band, 7<sup>th</sup> tergite almost completely ivory. Legs reddish; fore and middle coxae and trochanters more or less ivory; hind femora blackish in apical 0.2; hind tibiae brown, with wide subbasal ivory band; hind tarsi ivory, apical tarsomeres brownish. Wings hyaline, pterostigmas ochreous.

Coloration of ♂♂ differ by ivory stripes on flagellomeres 9/10-19/21, dark brownish pterostigmas and fronto-medial blackish spots on scutellum.

**Distribution:** Known from Malaysia, Indonesia, and the Philippines, new for India, Laos and Vietnam.

### *Aulojoppoides* nov.gen.

Type species: *Aulojoppoides mandibulator* nov.sp.

The tribal position of this new genus is questionable. Although the sickle-shaped mandibles are an unusual feature for the tribe Oedicephalini, the structure and coloration of the head is typical for this tribe. In my opinion, this new genus should be included into the Oedicephalini. As already discussed by HEINRICH (1934: 118), *Nesostenodontus* CUSHMAN might also belong to the Oedicephalini, but has been placed in the tribe Ichneumonini so far (YU et al. 2016). A detailed analysis of the correct tribal status of both genera will be necessary in the future to solve the taxonomical problems.

Habitus and colour pattern of the type-species of *Aulojoppoides* strongly resembles *Aulojoppa spilocephala* CAMERON. It differs from *Aulojoppa* by the following features:

- Mandibles sickle-shaped, lower tooth very small and completely turned inwards,
- mesoscutum with notauli,
- propodeal spiracles short-oval, not slit-shaped,
- postpectal carinae widely interrupted in front of hind coxae,
- metasoma strongly oxypygous, ovipositor sheaths reaching widely beyond metasomal apex (by the length of hind metatarsi).

From *Notosemus* FÖRSTER and *Imeria* CAMERON it can be differentiated by the sickle-shaped mandibles which resemble the genus *Nesostenodontus* CUSHMAN. *Aulojoppoides* differs from *Nesostenodontus* CUSHMAN mainly by the wide genae, present epomia, and very large thyridia.

***Aulojoppoides mandibulator* nov.sp. (fig. 1, 3, 4)**

**H o l o t y p u s :** (♀) Laos, Hua Phan Prov., Phon-Pan, Umg. Ort Ban Saleui, 20°13'30"N 103°59'26"E, 1350-1900 m, 13.VI.2013 KJa, leg. C. Holzschuh & natives (Linz).

**D e s c r i p t i o n :**

Body length 10.5 mm. Flagella with 30 segments, almost filiform; 1<sup>st</sup> flagellomeres length 4.4x width, widest flagellomeres about square. Head large. Ocelli small, distance of lateral ocelli to eyes 1.9x their diameter. Temples wide, parallel behind eyes and slightly narrowed caudally, length c.0.7x eye width. Occiput strongly and concavely excised medially. Vertices and temples with scattered punctures, shining; frons with coarse rugose-punctuation medially. Face densely punctate, punctures more scattered laterally. Clypeus large, c.2x wider than long, moderately convex, with scattered punctures; apical margin sharp, slightly rugose (not dentate as in *Nesostenodontus*), almost straight. Clypeal grooves large. Mandibles strongly sickle-shaped; lower teeth very small and completely turned inwards. Genae wide, seen from lateral as wide as eyes, with very scattered punctures, strongly shining. Malar spaces length c.0.6x width of mandibular bases. Genal carinae reaching mandibular bases.

Mesosoma covered with short whitish hairs. Sides of pronotum almost smooth, upper margins strongly bulging, epomia present. Mesoscutum without notauli, coarse and densely punctate, smooth and shining between punctures. Mesopleura coarsely punctate, specula smooth; metapleura with finer punctures, coxal carinae present. Sternauli impressed in frontal 0.5 of mesopleura; epicnemial carina narrow, reaching center of mesopleura; postpectal carinae widely interrupted in front of hind coxae. Scutellum wider than long, moderately elevated, with very scattered punctures, without lateral carinae. Propodeum completely carinate, without apophyses; spiracles short-oval, c.1.5x longer than wide. Area superomedia halfmoon-shaped, wider than long, costulae in the middle. Area petiolaris slightly impressed, with strong transverse rugae. Hind coxae densely punctate, without scopa or carinae; hind femora densely punctate, length 4.2 height; hind tibiae long, narrowed in basal 0.2, inner apical spurs of hind tibiae c.0.34x as long as hind metatarsi; claws strongly bent apically, not pectinate. Areolets quadrangular, 2<sup>nd</sup> recurrent veins in their middle; nervuli interstitial.

Metasoma rather stout, strongly oxypygous; hypopygium very short. Petiolus slightly flattened. Postpetiolus slightly widened, punctate, without lateral or dorsal carinae. 2<sup>nd</sup> tergite 1.3x wider than long, 3<sup>rd</sup> tergite 2x wider than long. Gastrocoeli slightly impressed, with fine oblique striation; thyridia very large, oblique, width c.3x width of

their interval. 2<sup>nd</sup> to 5<sup>th</sup> tergites coarsely and densely punctate, punctation of 5<sup>th</sup> tergite superficial; 6<sup>th</sup> and 7<sup>th</sup> tergites almost smooth and shining. Ovipositor sheaths reaching widely beyond metasomal apex, seen from dorsal length about as long as 2<sup>nd</sup> hind tarsomeres.

Colour: Black. Flagella black; scapes, pedicels and 4 basal flagellomeres reddish brown; flagellomeres 7-13 with ivory stripes. Head black; ivory are palps, mandibles except teeth, clypeus except blackish upper margin, face except short blackish median stripe, frontal orbits, large triangular spots on vertices, malar spaces, wide genae and outer orbits. Mesosoma black; tegulae brownish; ivory are frontal and upper margins of pronotum, wing bases, subtegular ridges, ventral wide band on mesopleura, scutellum, carinal triangles, apical third of metapleura and apical half of propodeum except black area petiolaris. Metasoma black; 1<sup>st</sup> metasomal segment red, postpetiolus with ivory apical margin; 2<sup>nd</sup> tergite with narrow reddish frontal and caudal margins; 3<sup>rd</sup> tergite ivory except black caudal-median band, 6<sup>th</sup> and 7<sup>th</sup> tergites completely ivory. Legs reddish; fore and middle coxae and trochanters ivory; hind coxae red, with ivory spots dorsally; all tibiae and fore and middle tarsi reddish-brown; hind tibiae diffusely blackish basally and apically; hind tarsi ochreous, apical hind tarsomeres brown. Wings hyaline, pterostigmas dark brown.

♂ and hosts unknown.

**D i s t r i b u t i o n :** Only known from Laos.

### ***Imeria albomaculata* CAMERON, 1903**

**M a t e r i a l :** Taiwan, Taitung Prov., Schouchia env., 315 m, N 22°20.7' E 120°86.0', 1♂ 18.V.2012, leg. J. Halada (Linz); Laos, Hua Phan Prov., Phon-Pan, Umg. Ort Ban Saleui, 20°13'30"N 103°59'26"E, 1350-1900m, 1♀ 6.VI.2009, 1♀ 8.VI.2009, leg. C. Holzschuh & natives (Linz); N Vietnam, Tam-Dao NP, Tam-Dao, 900-1200 m, N 21°27' E 105°38', 2♂♂ VI.2011, leg. E. Jendek (Linz).

**D i s t r i b u t i o n :** Known from India, new for Laos, Taiwan and Vietnam.

### ***Imeria formosana* (UCHIDA, 1930)**

**M a t e r i a l :** Taiwan NW, Hueisuen exp. Forest, 600 m, 24°07'N 121°03'E, E Taichung, 1♀ 23-27.vi.2000, leg. W. Schacht (ZSM); Taiwan (ROC), Hueisuen exp. Forest Stn (700m), 24°05'N 121°02'E, 1♀ 3-8.ix.2002, leg. K. Schönitzer (ZSM).

**D i s t r i b u t i o n :** China and India, known from Taiwan.

### ***Notosemus albimaculatus* s.str. SHENG & SUN, 2016, new male (fig. 23, 39)**

**M a t e r i a l :** Taiwan, Meifeng, 2100 m, N 24°05', E 121°10', 1♂ 10-11.IX.2002, leg. K. Schönitzer (ZSM); S Taiwan, Kaohsiung Co., Tengir Endem. Sp. Res. St., 23°07'N 120°48'E, 2300-2600 m, 1♂ 8.VII.2000, leg. W. Schönitzer (ZSM).

**D e s c r i p t i o n :** of ♂:

Body length 5.5-6.3 mm. Flagella with 26-28 segments; 1<sup>st</sup> flagellomere length 4.3x width. Indistinct tyloids on flagellomeres 9-11/12, long-oval, on basal 0.6 of flagellomeres. Distance of lateral ocelli to eye 1.5x their diameter. Malar spaces length 0.5x width of mandibular bases. Scutellum wider than long, without lateral carinae. Spiracles of propodeum short-oval. Hind femora length 3.8x height. 1<sup>st</sup> tergite length 2.6x width, spiracles strongly bulging laterally. Postpetiolus slightly widened, smooth. 2<sup>nd</sup> tergite length 2.2x width, granulate and matte; following tergites granulate and with very fine

dense punctures, matte. Otherwise as described for the & (SHENG et al. 2016: 3-6).

Colour: Black. Scapes sometimes with ivory spots ventrally. Palps, mandibles except teeth, clypeus, face, malar spaces, genae and wide orbits ivory; ivory colour of frontal orbits shortly interrupted opposite to lateral ocelli. Mesosoma black; ivory are frontal and upper margins of pronotum, two paramedian stripes on mesoscutum, tegulae and subtegular ridges, ventral half of mesopleura and mesosterna completely, metapleura dorsal to coxal carinae, scutellum and postscutellum. Areae spiraculiferae reddish. Metasoma black; 2<sup>nd</sup> and following tergites with narrow ivory apical bands. Legs reddish-brown; all coxae and trochanters ivory; hind coxae and trochanters with brownish stripes laterally; hind tibiae diffusely blackish basally and apically; hind tarsi black. Wings almost hyaline, pterostigmas ochreous.

**Distribution:** Known from mainland China, new for Taiwan.

***Notosemus albimaculatus* ssp. *laoticus* nov.ssp.**

Holotypus: (♀) Laos, Phongsaly prov. 21°41'-2°N 102°06'-8°E, 28.v.-20.vi.2003, Phongsaly env., ~1500m, Vit Kubán leg. (Linz).

Paratypes: 2♀ 1♂ with identical labels (Linz and coll. Riedel).

**Remark:** This taxon resembles *Notosemus albimaculatus* s.str. SHENG & SUN in structure and main colour pattern. It differs by the reddish coloration of mesosoma and narrower malar spaces. In my opinion, these differences are not sufficient to separate two different species.

**Description:**

♀: Body length 6.5-7 mm. Flagella with 28 segments; 1st flagellomere length 5.8-6x width, 2nd flagellomere length 4.5-4.8x length. Head large, seen from dorsal width 1.75x length. Distance of lateral ocelli to eyes 1.75x their diameter. Temples slightly and roundly narrowed behind eyes, length 0.4x eye width. Malar spaces length 0.5-0.6x width of mandibular bases. Propodeum with smoothened sculpture in frontal third, with transverse striation in caudal 2/3; spiracles short-oval, c.1.5x longer than wide. Area superomedia hexagonal, c.1.3x wider than long, lateral carinae partly obsolete, costulae in frontal 0.2. Hind femora length 3.9x height. 6<sup>th</sup> and 7<sup>th</sup> tergites with large membranous concavities at caudal margins. Ovipositor sheaths about as long as height of metasomal apex, only slightly bent upwards in two specimens, strongly bent in one specimen. Structure otherwise as described for *N. albomaculatus* s.str.

Colour: Usually as described for *N. albimaculatus* s.str, but one specimen with completely ivory orbits, one other specimen with completely ivory face. Flagellomeres 7-11 with ivory stripes. Propleura yellowish; mesopleura and mesosterna, metapleura and propodeum reddish. 1<sup>st</sup> tergite mainly reddish, infusate basally.

♂: Body length 6 mm. Flagella with 29 segments; 1<sup>st</sup> flagellomere length 6x width. Indistinct tyloids on flagellomeres 9-11, long-oval, on basal 0.6 of flagellomeres. 1<sup>st</sup> tergite length 3.2x width, 2<sup>nd</sup> tergite length 2.2x width.

Colour: Face and wide orbits completely ivory; flagellomeres 11-16 with ivory stripes. Mesopleura behind epicnemial carina and mesosterna, metapleura and propodeum reddish; mesopleura with wide yellow stripes and blackish frontal and dorsal margins. 1<sup>st</sup> tergite and 4<sup>th</sup> to 7<sup>th</sup> tergites black in basal halves and reddish apically. Hind tarsi brownish, 3<sup>rd</sup> and 4<sup>th</sup> hind tarsomeres pale brownish-yellow. Coloration otherwise as in ♀.

**Distribution:** Laos.

***Notosemus albimaculatus* ssp. *malayensis* n.ssp.**

**H o l o t y p u s :** (♀) Malaysia, Pahang Tanah Rata, ~1800 m, S 04°48' E 101°36', E. Jendik, 03.2011 (Linz).

**R e m a r k :** This taxon represents another subspecies (or colour form) of *N. albimaculatus* SHENG & SUN.

**D e s c r i p t i o n :**

Body length 7.5 mm. Flagella with 27 segments, slightly widened beyond middle; 1<sup>st</sup> flagellomere length 5.5x width; widest flagellomeres c.1.1x longer than wide. Head large, seen from dorsal width 1.75x length. Distance of lateral ocelli to eyes 1.75x their diameter. Pronotum almost smooth; mesoscutum punctate, notauli impressed in the frontal 0.5; mesopleura punctate, partly rugose, specula smooth. Hind femora length 3.7 height. 1<sup>st</sup> tergite length 2.8x width. Postpetiolus with fine granulation, shining. 2<sup>nd</sup> tergite length 2.0x width. Ovipositor about as long as height of metasomal apex, strongly bent upwards.

Colour: Black. Cream-yellow are stripes on flagellomeres 7-12, palps, mandibles except teeth, clypeus, face, triangular spots on frontal orbits, large roundish spots on vertices, anterior and upper margins of pronotum, subtegular ridges and tegulae, H-shaped central spot on mesoscutum, longitudinal stripes on mesopleura, scutellum and postscutellum, fore and middle coxae, trochanters and trochantelli, hind coxae except brownish spot laterally. Face with pale brownish-yellow spot centrally. Scapes and pedicels reddish ventrally. Spot on specula, carinal triangles, metapleura dorsal to coxal carinae and propodeum yellowish-red. Legs reddish, hind femora and hind tibiae apically, and hind tarsi completely chestnut-red. 1<sup>st</sup> to 3<sup>rd</sup> tergites blackish; 2<sup>nd</sup> tergite around thyridia and in apical 0.2 yellow; 3<sup>rd</sup> tergite yellowish basally and apically; following tergites reddish-brown, 4<sup>th</sup> tergite with apical yellow band. Wings hyaline, pterostigmas mainly hyaline, with pale brownish margins.

**D i s t r i b u t i o n :** Malaysia.

***Notosemus heinrichi* nov.sp. (fig. 14, 19, 21, 38)**

**H o l o t y p u s :** (♀) Burma, Mt. Victoria Chin hills, 2200m, VI.38, leg. G. Heinrich (ZSM).

**R e m a r k :** This new species runs to couplet 7 in the key of SHENG et al. (2016), but can be separated from *N. albimaculatus* SHENG & SUN and *N. wugongicus* SHENG & SUN by the extensive yellow coloration of head and mesosoma and different structure and coloration of the metasoma.

**D e s c r i p t i o n :**

Body length 7.8 mm. Both antennae missing. Head large, seen from dorsal width 1.7x length. Distance of lateral ocelli to eyes 1.7x their diameter. Temples rather short, moderately and roundly narrowed behind eyes, length 0.4x eye width. Frons, vertices and temples granulate, matte. Face, clypeus and genae with very fine dense punctures. Clypeus 2.3x wider than long, slightly shining; apex rounded, rugose, without paramedian tubercles. Mandibles with two teeth, lower teeth c.0.5x as long as upper ones. Genae with very scattered punctures, shining. Genal carinae reaching mandibular bases. Mesosoma granulate, with fine punctures. Notauli slightly impressed in frontal 0.3 of mesoscutum; mesopleura with smooth specula. Epicnemial carina narrow; sternauli impressed in frontal 0.5 of mesopleura; metapleura with coxal carinae present. Scutellum moderately elevated, granulate, slightly wider than long, with lateral carinae in frontal

0.4. Propodeum with roundish spiracles. Area basalis without lateral carinae. Area superomedia heart-shaped, c.1.5x wider than long, costulae in frontal 0.3. Area petiolaris distinctly impressed, with smoothened microsculpture and obsolete lateral carinae. Hind coxae finely punctate, without scopa; hind femora finely and densely punctate, length 4.8x height; claws not pectinate. Areolets pentagonal, frontal distance of intercubiti 4x their diameter, 2<sup>nd</sup> recurrent veins in their middle; nervuli interstitial.

1<sup>st</sup> tergite length 2.3x width, postpetiolus moderately widened, without dorsal carinae, finely punctate. 2<sup>nd</sup> tergite length 1.65x width; with large but indistinct, almost rounded thyridia; thyridia c.3.x wider than their interval. 2<sup>nd</sup> to 4<sup>th</sup> tergites granulate, with scattered fine punctures, matte; 5<sup>th</sup> tergite with smoothened granulation; following tergites almost smooth and shining. 6<sup>th</sup> tergite with slightly concave caudal margin; 7<sup>th</sup> tergite strongly excised caudally. Ovipositor sheaths curved upwards

Colour: Head cream-yellow; black are mandibular teeth, frons medially, ocellar field and dorsal part of occiput. Mesosoma black; cream-yellow are propleura, pronotum except central transversal stripe, W-shaped central spot on mesoscutum, tegulae, subtegular ridges, mesopleura caudal to epicnemial carina, caudal-median spots on mesosterna, metapleura dorsal to coxal carinae and caudal 3/4 of propodeum except areae superomedia and petiolaris. Metasoma red; 1<sup>st</sup> tergite black; postpetiolus with reddish spot apically; 2<sup>nd</sup> and 3<sup>rd</sup> tergite with diffuse brownish suffusion laterally. Legs red; fore and middle coxae and trochanters cream-yellow; hind coxae with yellow spot dorsally, slightly infusate dorso-apically. Wings hyaline, pterostigmas ochreous.

♂ and hosts unknown.

**D i s t r i b u t i o n :** Only known from Myanmar.

### ***Notosemus polyambonios* KUSIGEMATI, 1986**

**M a t e r i a l :** Myanmar, Mt. Victoria Chin hills, 2400-2800 m, 1 ♀ v.1938, leg. G. Heinrich (ZSM).

**R e m a r k :** The specimen from Myanmar is smaller than the holotypus from Taiwan (7 mm instead of 11.4 mm). Its flagellum has 32 segments; 1<sup>st</sup> flagellomere length 5.6x width. Hind femora length 4.2x height. It is otherwise typical in structure and coloration.

**D i s t r i b u t i o n :** Known from Taiwan, new for Myanmar.

### ***Notosemus rufator* nov.sp. (fig. 15, 22, 24, 36)**

**H o l o t y p u s :** (♀) Laos, Hua Phan Prov., Ban Saleui, Phon Pan-Mt., 20°13'30"N 103°59'26"E, 1350-1900m, 24.04.2012, leg. C. Holzschuh & natives (Linz).

**P a r a t y p e s :** (2 ♀ ♀) Burma, Mt. Victoria Chin hills, 2200m, VI.38 leg. G. Heinrich (ZSM).

**R e m a r k :** This new species differs from the described ones by its extensive reddish coloration. It runs to *N. rufomaculatus* (CAMERON) in the key of SHENG et al. (2016), but can be differentiated by the mainly reddish color of head, cream-yellow palps and completely red hind tibiae.

**D e s c r i p t i o n :**

Body length 8.0 mm. Flagella with 29 segments, very slightly thickened beyond middle; 1<sup>st</sup> flagellomere length 6.9x width; 2<sup>nd</sup> flagellomere length 4.4x width; widest flagellomeres about square. Head large, seen from dorsal width 2.1x length. Distance of lateral ocelli to eyes 1.0x their diameter. Temples short, strongly and roundly narrowed behind eyes, length 0.33x eye width. Vertices granulate. Frons mainly granulate, smooth above antennae. Face and clypeus punctate. Clypeus 2.1x wider than long; apex rounded, with

two small blunt paramedian tubercles. Mandibles with two teeth, lower teeth c.0.5x as long as upper ones. Genae with very scattered punctures. Genal carinae reaching mandibular bases. Pronotum almost smooth. Mesoscutum granulate, matte; notauli impressed in the frontal 0.3; mesopleura superficially punctate, specula smooth. Epicnemial carina narrow, almost reaching subtegular ridges; sternauli impressed in frontal 0.5 of mesopleura. Metapleura finely striate in apical half, coxal carinae present. Scutellum slightly wider than long, slightly elevated, granulated, with lateral carinae in basal 0.7. Propodeum completely carinate; spiracles short-oval, c.1.5x longer than wide. Area superomedial hexagonal, c.1.2x wider than long, costulae in frontal 0.4. Area petiolaris with fine transverse striation. Dentiparal edges with elevated carinae, but without distinct apophyses. Hind coxae punctate, without scopa; hind femora punctate, length 4.3x height; claws not pectinate. Areolets pentagonal, frontal distance of intercubiti 3x their diameter, 2<sup>nd</sup> recurrent veins slightly proximal to their middle; nervuli interstitial.

1<sup>st</sup> tergite length 2.6x width. Postpetiolus moderately widened, without dorsal carinae, finely granulate and shining. 2<sup>nd</sup> tergite length 1.6x width; with large, almost rounded thyridia; thyridia c.2x wider than their interval. 2<sup>nd</sup> and 3<sup>rd</sup> tergites granulate, matte; 4<sup>th</sup> tergite finely granulate basally, mainly smooth and shining; 5<sup>th</sup> tergite smooth and strongly shining, with very scattered punctures. 6<sup>th</sup> and 7<sup>th</sup> tergites with strongly concave and membranous hind margins. Ovipositor sheaths about as long as height of metasomal apex, moderately bent upwards.

Colour: Reddish. Flagella black. Cream-yellow are stripes on flagellomeres 9-14, palps, bases of mandibles, clypeus, face, genae, wide orbits (interrupted on temples), frontal and upper margins of pronotum, subtegular ridges and tegulae, mesopleura behind epicnemial carina (except central reddish spot), scutellum and postscutellum, carinal triangles, large spot on metapleura, areae posteroexternae, fore and middle coxae and trochanters and trochantelli, hind trochanters, dorsal spot on hind coxae, and 2<sup>nd</sup> to 5<sup>th</sup> hind tarsomeres. Black are median frons above antennae, ocellar field, propleura, mesopleura frontal to epicnemial carina, prescutellar groove, and narrow margins of propodeum. Metasoma reddish; 1<sup>st</sup> tergite basally and 2<sup>nd</sup> to 6<sup>th</sup> tergites centrally more or less blackish. Wings hyaline, pterostigmas yellow.

The paratypes from Myanmar have a slightly different colour pattern: face with central reddish stripe, area petiolaris black, apical hind tarsomeres reddish-brown, and mesopleura with central blackish spots.

♂ and hosts unknown.

**D i s t r i b u t i o n :** Laos and Myanmar.

***Notosemus rufonotatus* nov.sp. (fig. 17, 20, 25, 37)**

**H o l o t y p u s :** (♀) Laos, Hua Phan Prov., Phon-Pan, Umg. Ort Ban Saleui, 20°13'30"N 103°59'26"E, 1350-1900 m, 28.06.2013 KJa, leg. C. Holzschuh & natives (Linz).

**R e m a r k :** This new taxon is characterized within the genus *Notosemus* by its large size, reddish mesoscutum having two ivory central stripes and ivory hind tarsi.

**D e s c r i p t i o n :**

Body length 10.5 mm. Flagella very long and slender, bristle-shaped, all segments longer than wide; 1<sup>st</sup> flagellomeres length 7.0x width. Temples short, strongly and roundly narrowed behind eyes, length 0.35x eye width. Distance of lateral ocelli to eye 1.4x their diameter. Occiput strongly and concavely excised, occipital carina complete. Face and

clypeus confluent, finely punctate and shining; apex of clypeus with two blunt paramedian tubercles. Frons finely punctate and granulate. Malar spaces c.0.4x as long as width of mandibular bases. Genal carinae reaching mandibular bases.

Mesosoma with short whitish hairs. Notauli distinctly impressed in frontal third of mesoscutum; mesoscutum with fine and dense punctation and granulation, matte. Mesopleura and metapleura finely punctate and granulate; specula punctate and shining. Sternauli strongly impressed in frontal 0.4 of mesopleura; epicnemial carina narrow, almost reaching subtegular ridges; coxal carinae present. Scutellum slightly elevated and wider than long, almost rectangular, with fine puncto-granulation; with lateral carinae in frontal 0.7. Propodeal spiracles oval. Area basalis without distinct lateral carinae. Area supero-media heart-shaped, about as long as wide; costulae in frontal fourth. Area petiolaris narrow, continuously widened apically, with transverse striation. Hind coxae with fine dense punctures, without scopa; hind femora densely punctate, length 4.0x height. Claws not pectinate, strongly bent (by 90°) apically. Areolets pentagonal, frontal distance of intercubiti 2x their diameter; nervuli interstitial.

Metasoma amblypygous, slender and almost parallel-sided. Petiolus as wide as high. Postpetiolus slightly widened; median field elevated, but without dorsal carinae, finely granulate and matte. 2<sup>nd</sup> tergite length 1.95x width; 3<sup>rd</sup> tergite length 1.15x width. Gastrocoeli indistinct; thyridia far from tergal base (2x their length), large, 2x as wide as their interval. Tergites granulate, apical ones with smoothened structure. 6<sup>th</sup> tergite with strong and 7<sup>th</sup> tergite with moderate concave excisions caudally. 2<sup>nd</sup> to 7<sup>th</sup> sternites with median membranous fold. Ovipositor sheaths shortly surpassing metasomal apex, moderately bent upwards.

Colour. Head black; ivory are palps, bases of mandibles, clypeus except narrow apical margin, face and wide complete orbits. Scapes ventrally and flagellomeres 9-14 dorsally with ivory stripes. Mesosoma black; mesoscutum chestnut-brown in frontal 2/3, mesosterna with chestnut-brown suffusion caudally. Ivory are propleura ventrally, pronotum except blackish central stripe, two short longitudinal paramedian stripes on mesoscutum, subtegular ridges, mesopleura except wide margins and specula, metapleura except margins, scutellum and postscutellum, carinal triangles, large stripes on areae dentiparae and areae posteroexternae. Metasoma black; 2<sup>nd</sup> tergite basally and apically with wide reddish bands; 3<sup>rd</sup> tergite with wide apical reddish band; following tergites with diffuse chestnut-brown coloration. Sternites reddish. Legs reddish; fore and middle coxae and trochanters ivory, hind coxae ivory in basal half, black apically; hind trochanters yellow ventrally and black dorsally; hind tibiae infusate in apical 0.3; fore and middle tarsi brownish; hind metatarsi in apical 0.5 and all following hind tarsomeres ivory. Wings hyaline, pterostigmas yellowish.

♂ and hosts unknown.

**D i s t r i b u t i o n :** Laos.

### ***Satrius bellus* (CUSHMAN, 1922)**

**M a t e r i a l :** Taiwan, Taichung Co. Taiwan Mts westside, Huesien Exper. Forest, ca 24°07'N 121°03' E, 600 m, 1♀ 3-8.ix.2002, leg. W. Schacht et al. (ZSM).

**R e m a r k :** CUSHMAN (1922: 552-554) published an extensive description and figures of this taxon. In the available specimen the flagella are lanceolate, with 29 flagellomeres; 1<sup>st</sup> flagellomere c.3.0x as long as wide. Hind coxae with distinct short oblique crest apically; hind femora c.3.2x as long as high. In contrast to the description of CUSHMAN

(1922), the Taiwanese specimen has ivory apical bands on 4<sup>th</sup> to 7<sup>th</sup> tergites and the apex of hind femora narrowly infusate.

**Distribution:** Known from China including Taiwan, India and Philippines.

***Satrius ornatus* TOSQUINET, 1903**

**Material:** Malaysia, Sabah, Kinabulu Park, N 6°5′ E 116°33′, Sorinsim, 1 ♀ 22.II.1997, leg. A. Floren (ZSM).

**Distribution:** Known from Sumatra, new for Malaysia

***Satrius spinicoxis* nov.sp. (fig. 5)**

**Holotypus:** (♀) Laos, Hua Phan Prov., Phon-Pan, Umg. Ort Ban Saleui, 20°13′30″N 103°59′26″E, 1350-1900 m, 16.06.2013 KJa, leg. C. Holzschuh & natives (Linz).

**Remark:** This new taxon differs from all known *Satrius*-species by its larger size, strong tooth of hind coxae and cream-yellow hind tarsi.

**Description:**

Body length 13.5 mm. Flagella with 43 segments, slightly lanceolate; 1<sup>st</sup> flagellomeres length 3.5x width, c.16<sup>th</sup> flagellomeres square; widest flagellomeres c.1.3x wider than long. Head large; temples long, slightly widened behind eyes and narrowed caudally, length 0.7x eye width. Frons, vertices and temples with very scattered punctures, shining; face and clypeus with denser punctation, punctures less dense on facial orbits. Clypeus large, moderately convex, with rounded, slightly rugose but sharp apical margin. Mandibles large, with large gap between teeth; lower teeth moderately smaller than upper ones, not turned inwards. Genal carinae joining hypostomal ones close to mandibular bases. Pronotum punctate dorsally, with coarse striae caudally, smoothend centrally, upper margins bulged; epomia strong. Mesoscutum without distinct notauli, but with coarse irregular rugae at notauli area and lateral margins, central and lateral fields with smoothened structure. Mesopleura coarsely punctate, specula smooth, frontal to specula with longitudinal striation; metapleura with coarse and longitudinal rugose-punctuation; coxal carinae present. Scutellum slightly elevated, about as long as wide, irregularly rugose, with lateral carinae in frontal 0.7. Area basalis very narrow; area superomedia large, hexagonal, slightly wider than long, costulae in caudal 0.7; 1<sup>st</sup> lateral area with transverse striae; area petiolaris slightly impressed, with strong transverse rugae. Hind coxae punctate, without scopa, but with strong triangular ventro-caudal teeth. Hind femora densely punctate, length 4.7x width. Claws not pectinate (hind claws missing). Fore wings with areolets quadrangular and nervuli postfurcal.

Metasoma semi-amblypygous, hypopygium covers basal third of ovipositor sheaths. Petiolus not flattened. Postpetiolus strongly widened, without dorsal carinae, punctate. Gastrocoeli narrowly impressed, with longitudinal ridges; thyridia large, slightly oblique, width 2x width of their interval. 2<sup>nd</sup> tergite length 0.85x width; 2<sup>nd</sup> and 3<sup>rd</sup> tergites densely and coarsely punctate, with more or less distinct longitudinal aciculation medially; following tergites with finer superficial punctures, 6<sup>th</sup> and 7<sup>th</sup> tergites almost smooth, shining. 2<sup>nd</sup> and 3<sup>rd</sup> sternites membraneous and with median folds; following sternites completely sclerotized. Ovipositor sheaths stab-shaped, reaching slightly beyond metasomal apex.

**Colour:** Black with extensive ivory colour pattern. Ivory are stripes on flagellomeres 8-20, palps, mandibles except teeth, clypeus, face except triangular black central spot, wide spots on frontal orbits, triangular spots on vertices, malar spaces, genae and outer orbits;

collare, frontal and upper margins of pronotum, spots on tegulae, lateral spots on mesoscutum opposite to tegulae, scutellum and postscutellum, caudal half of dentiparal areas, base of petiolus, triangular posterolateral spots on all tergites (narrowly confluent medially on 2<sup>nd</sup> and 4<sup>th</sup> to 7<sup>th</sup> tergites), median folds of 2<sup>nd</sup> and 3<sup>rd</sup> sternites and apical margins of all sternites, fore and middle coxae and all trochanters, ventral and dorsal spots on black hind coxae. Legs otherwise yellowish-red; fore and middle tarsi brownish apically; hind femora red, black in apical 0.3; hind tibiae yellow-red, black in apical 0.25; hind tarsi cream-yellow (apical tarsomeres missing). Wings with slightly yellowish tint, pterostigmas blackish.

♂ and hosts unknown.

**D i s t r i b u t i o n :** Laos.

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### Zusammenfassung

In der vorliegenden Arbeit werden Fundorte von insgesamt 36 Taxa der Triben Platylabini, Eurylabini und Oedicephalini (Hymenoptera: Ichneumonidae, Ichneumoninae) aus der orientalischen Region genannt.

Zwei Gattungen werden neu beschrieben: *Aulojoppoides* nov.gen. und *Granulolabus* nov.gen.

Außerdem sind 19 Arten und Unterarten neu: *Apaelecticus rufopetiolaris* nov.sp., *Aulojoppa spilocephala* ssp. *birmanica* nov.ssp., *Aulojoppoides mandibulator* nov.sp., *Ectopoides flavoverticalis* nov.sp., *Granulolabus maculatus* nov.sp., *Notosemus albimaculatus* ssp. *laoticus* nov.ssp., *Notosemus albimaculatus* ssp. *malayensis* nov.ssp., *Notosemus heinrichi* nov.sp., *Notosemus rufator* nov.sp., *Notosemus rufonotatus* nov.sp., *Paragenes rufocoxalis* nov.sp., *Poecilostictus decoratus* ssp. *laoticus* nov.ssp., *Platylabus flavomaculatus* nov.sp., *Platylabus laoticus* nov.sp., *Platylabus orientalis* nov.sp., *Pristicerops magnus* nov.sp., *Pristicerops nigricornis* nov.sp., *Pristicerops paraprincipalis* nov.sp. und *Satrius spinicoxis* nov.sp.

Auch wird das bisher unbekannte Männchen von *Notosemus albimaculatus* SHENG & SUN, 2016 beschrieben. *Pyramidophorus flavoguttatus* TISCHBEIN, 1882 wird erstmals aus der orientalischen Region gemeldet.

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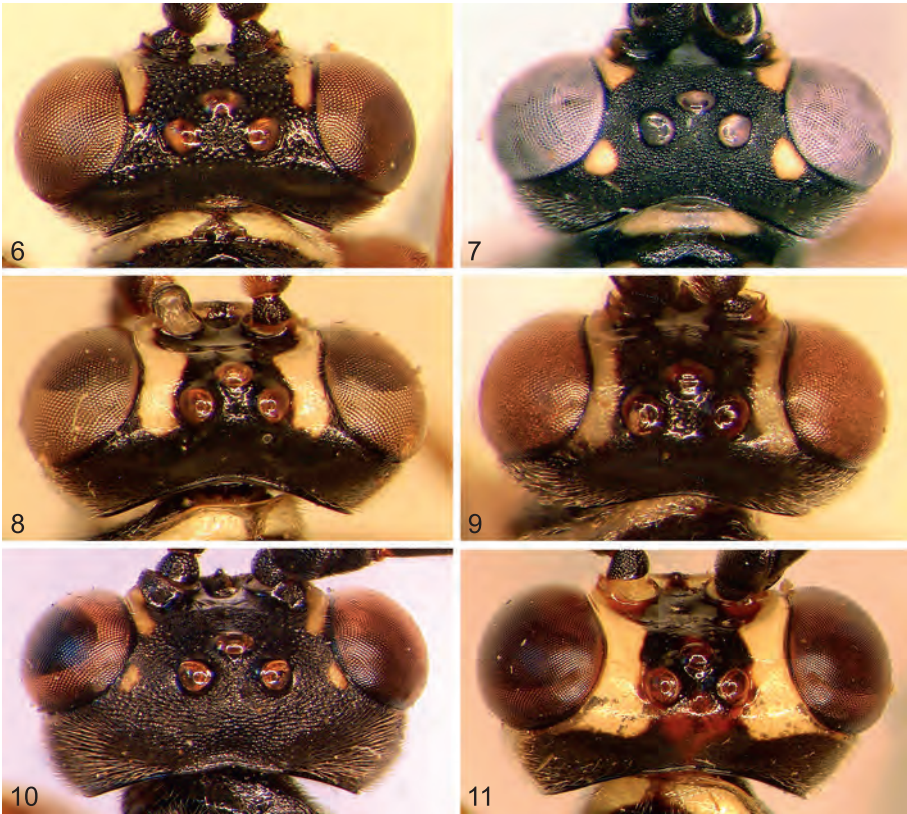
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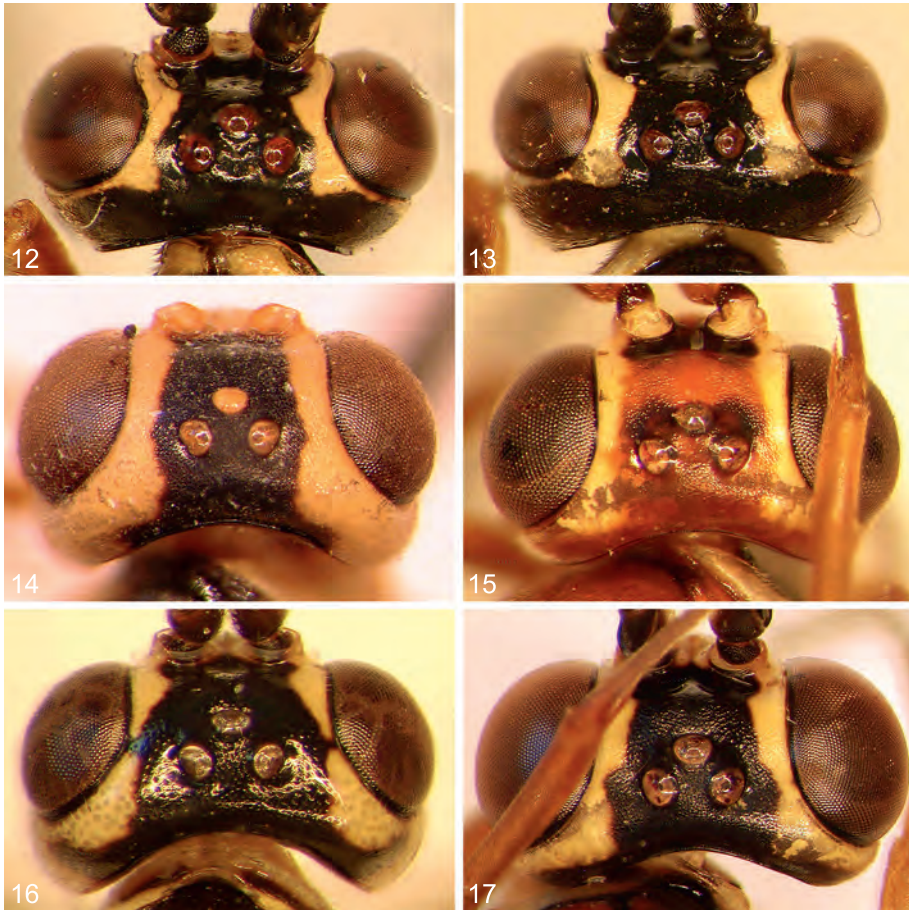
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**Fig. 1-2:** Heads from dorsal of (1) *Aulojoppoides mandibulator* nov.sp. HT; (2) *Aulojoppa spilocephala* CAMERON ♀. **Fig. 3-4:** *Aulojoppoides mandibulator* nov.sp. HT (3) habitus; (4) head from frontal with sickle-shaped mandibles. **Fig. 5:** Hind coxa of *Satrius spinicoxis* nov.sp. HT.



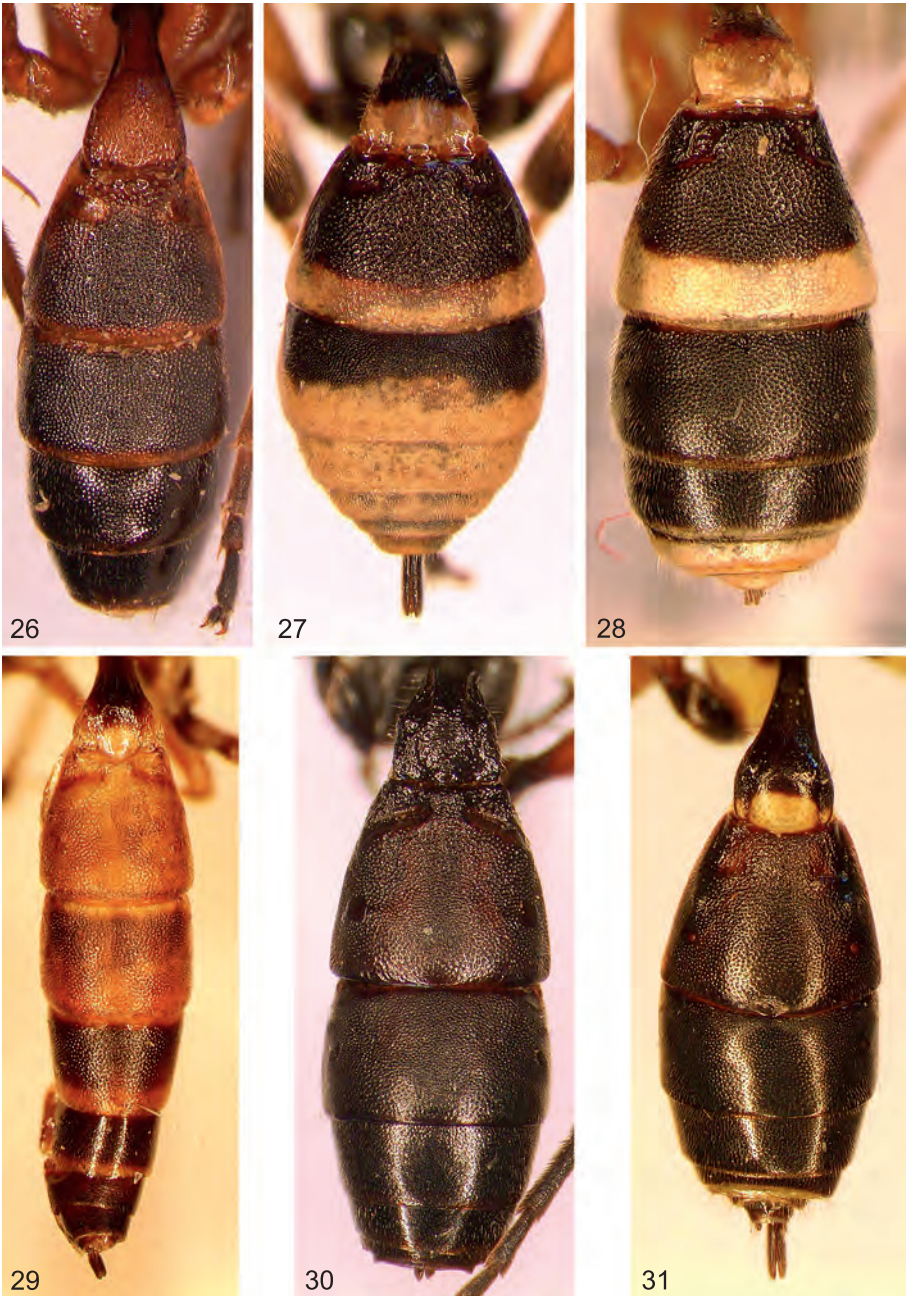
**Fig. 6-11:** Heads from dorsal of (6) *Apaelecticus rufopetiolaris* nov.sp. HT; (7) *Ectopoides flavoverticilis* nov.sp. HT; (8) *Paragenes rufocoxalis* nov.sp. HT; (9) *Platylabus flavomaculatus* nov.sp. HT; (10) *Platylabus laoticus* nov.sp. HT; (11) *Pristicerops magnus* nov.sp. HT.



**Fig. 12-17:** Heads from dorsal of (12) *Pristicerops nigricornis* nov.sp. HT; (13) *Pristicerops paraprincipalis* nov.sp. HT; (14) *Notosemus heinrichi* nov.sp. HT; (15) *Notosemus rufator* nov.sp. HT; (16) *Notosemus albimaculatus* SHENG & SUN ♂; (17) *Notosemus rufonotatus* nov.sp. HT.



**Fig. 18-19:** Face of (18) *Notosemus rufonotatus* nov.sp. HT; (19) *Notosemus heinrichi* nov.sp. HT. **Fig. 20-23:** Metasoma of (20) *Notosemus rufonotatus* nov.sp. HT; (21) *Notosemus heinrichi* nov.sp. HT; (22) *Notosemus rufator* nov.sp. HT; (23) *Notosemus albimaculatus* SHENG & SUN ♂. **Fig. 24-25:** Metasomal apex of (24) *Notosemus rufator* nov.sp. HT; (25) *Notosemus rufonotus* nov.sp. HT.



**Fig. 26-31:** Metasoma of (26) *Apaeleticus rufopetiolaris* nov.sp. HT; (27) *Granulolabus maculatus* nov.sp. HT; (28) *Pagarenes rufocoxalis* nov.sp. HT; (29) *Platylabus flavomaculatus* nov.sp. HT; (30) *Platylabus laoticus* nov.sp. HT; (31) *Poecilostictus decoratus* ssp. *laoticus* nov.ssp. HT.



**Fig. 32-35:** Propodeum of (32) *Granulolabus maculatus* nov.sp. HT; (33) *Platylabus flavomaculatus* nov.sp. HT; (34) *Platylabus laoticus* nov.sp. HT; (35) *Pristicerops magnus* nov.sp. HT.



**Fig. 36-39:** Propodeum of (36) *Notosemus rufator* nov.sp. HT; (37) *Notosemus rufonotatus* nov.sp. HT; (38) *Notosemus heinrichi* nov.sp. HT; (39) *Notosemus albimaculatus* s.str. SHENG & SUN ♂.



**Fig. 40-41:** *Pristicerops paraprincipalis* nov.sp. HT (40) propodeum and (41) metasoma.  
**Fig. 42-43:** Tyloids of (42) *Pristicerops magnus* nov.sp. PT; (43) *Pristicerops nigricornis* nov.sp.  
 HT. **Fig. 44:** Face of *Eurylabus indolarvatus* HEINRICH ♀.

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