

Subgenus *Hemihesperosoma* HAYASHI of *Hesperosoma* SCHEERPELTZ reinstated and revised (Coleoptera: Staphylinidae: Staphylininae)

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Abstract

The subgenus *Hemihesperosoma* HAYASHI, 2002 (Coleoptera: Staphylinidae: Staphylininae), previously treated as a synonym of *Paramichrotus* NAOMI, 1982, of the genus *Hesperosoma* SCHEERPELTZ, 1965, is reinstated and revised. Four species are new to science: *H. (Hemihesperosoma) brunkei* (Laos, Myanmar), *H. (Hemihesperosoma) laosense* (Laos), *H. (Hemihesperosoma) chrisaueri* (Thailand), *H. (Hemihesperosoma) signaticolle* (W-Malaysia). New synonymies: *Hesperosoma (Hemihesperosoma) HAYASHI*, 2002 (= *H. (Euhesperosoma) HAYASHI*, 2002 **syn.n.**; = *H. (Paramichrotus) NAOMI*, 1982 **syn.n.**), *H. vietnamense* ITO, 2011 (= *H. yasuhikoi* ITO, 2011 **syn.n.**), *H. elegans* CAMERON, 1920 (= *Amichrotus bryanti* CAMERON, 1937 **syn.n.**), and *H. jacobsoni* BERNHAUER, 1915 (= *Amichrotus picticollis* CAMERON, 1937 **syn.n.**). The aedeagi of all species represented by males are illustrated as well as some representative body details. The habitus of most species and additional body details, which are essential for identification are depicted by color photographs. A key to species of the subgenus *Hemihesperosoma* and distribution maps are provided.

Key words: Coleoptera, Staphylinidae, Staphylininae, Staphylinini, Anisolinina, *Hesperosoma*, *Hemihesperosoma*, *Paramichrotus*, *Euhesperosoma*, new species, new synonyms, taxonomy, key, zoogeography.

Introduction

The subgenus *Paramichrotus* was described by NAOMI (1982) as a subgenus of *Amichrotus* SHARP, 1889 (typus subgeneris: *Amichrotus miwai* BERNHAUER, 1943). Naturally, the diagnostic characters given served to separate the subgenus from *Amichrotus* (s.str. at that time) and not *Hesperosoma*. The correct generic assignment was later recognized by HAYASHI (1993a), who transferred *Amichrotus miwai* to *Hesperosoma* and synonymized *Paramichrotus* with *Hesperosoma* because of *Paramichrotus* CAMERON, 1932, without further discussing the homonymy problem. Some years later, HAYASHI (2002) removed *Paramichrotus* from synonymy and raised it to subgenus rank, and, according to his interpretation of the ICZN 1999 (Art. 11.6.1), renamed it *Hemihesperosoma*, now explicitly following the opinion of BLACKWELDER (1952) who treated *Paramichrotus* CAMERON, 1932 as a valid name and as a synonym of *Thoracostrongylus* BERNHAUER, thus rendering *Paramichrotus* NAOMI homonymous. The situation was later reversed by SCHILLHAMMER (2004), based on Art. 13., which says that genus group names published after 1930 are invalid when no type species is designated. However, what was not recognized by both Hayashi and myself, by subsequently designating *Ontholestes javanus* BERNHAUER as type species of *Paramichrotus* CAMERON, BLACKWELDER (1952: 291) made the name available and became the author of this taxon (ICZN 1999: Art. 50.1 and 67.12). Therefore, *Hemihesperosoma* HAYASHI has to be reinstated with *Paramichrotus* NAOMI, 1982 (nec BLACKWELDER, 1952) as a synonym. Another subgenus described by HAYASHI (2002), *Euhesperosoma*, is synonymized with *Hemihesperosoma* herein.

The nominate subgenus has been treated in detail by SCHILLHAMMER (2004), and, as only two more species have been added since, it will be treated in this paper only marginally. The subgenus *Hemihesperosoma*, however, has never been subject to a comprehensive revision. Therefore this paper will focus solely on this subgenus, putting together all information that was pub-

lished in numerous separate papers, and revising the species of the *elegans* group for the first time.

Acknowledgement and abbreviations

The material treated in this paper is deposited in the following institutional and private collections. The cooperation and help of the affiliated curators and colleagues is greatly appreciated.

| | |
|--------|---|
| ASC | Coll. A. Smetana, deposited at the National Museum of Nature and Science, Toshiba, Japan |
| BMNH | Natural History Museum, London, UK (R. Booth) |
| CRO | Coll. G. de Rougemont, Oxford, UK |
| CSB | Coll. M. Schülke, Berlin, Germany |
| CZW | Coll. H. Zettel, Vienna, Austria |
| FMC | Field Museum of Natural History, Chicago, USA (J. Boone, R.J. Shuman Baquiran, A.F. Newton) |
| IRSNB | Institut Royal des Sciences Naturelle, Bruxelles, Belgium (Y. Gerard) |
| IZ-CAS | Institute of Zoology, Chinese Academy of Sciences, Beijing, China (H. Zhou) |
| KUM | Kyushu University Museum, Fukuoka, Japan (M. Maruyama) |
| MHNG | Muséum d'Histoire Naturelle, Genève, Switzerland (G. Cuccodoro) |
| NHMB | Naturhistorisches Museum Basel, Switzerland (M. Brancucci, M. Geiser) |
| NMW | Naturhistorisches Museum Wien, Austria |
| OMNH | Osaka Museum of Natural History, Japan (S. Shiyake) |
| ZMUC | Zoological Museum, University of Copenhagen, Denmark (A. Solodovnikov) |

In addition, I thank Lee Herman for digging into the nomenclatural problem again, and Adam Brunke for carefully proofreading the manuscript and for fruitful discussions on the higher systematics of this and related groups.

Imaging methods

Photographs were taken with a Nikon D4 (in combination with a Novoflex bellows) tethered to a PC and controlled with Nikon Camera Control Pro. A reverse mounted Rodenstock 50/2.8 Apo-Rodagon N lens was used for the habitus images and a Mitutoyo 10/0.25 Apo ELWD for the body details. Resulting images are focus stacks, aligned and stacked with Zerene Stacker and then postprocessed in Adobe Photoshop CS 4 and CS 5. Habitus images have been extracted from the background with the Photoshop plugin Fluid Mask.

Note on a character of the head

The ventral face of the head in many Staphylinini shows a pair of, usually diverging, shallow “lines” each extending anteriad from mostly rudimentary infraorbital ridges (Figs. 21–22). These lines vanish in the anterior half of the head but often reach almost as far as the base of the mandibles, sometimes leading so close towards the postmandibular ridge that they seem to merge with them. In the revision of *Algon* SHARP (SCHILLHAMMER 2006), I erroneously homologized these lines with the infraorbital ridge, which is not correct. Therefore, and because they are not lines in the strict sense, they are herein termed “infraorbital furrow”. The phylogenetic value has not been tested yet, but they serve as a useful diagnostic character.

Hesperosoma subg. *Hemihesperosoma* HAYASHI, 2002 stat.n.

Hemihesperosoma HAYASHI 2002: 172; SCHILLHAMMER 2004: 260
Paramichrotus NAOMI 1982: 38 (nec BLACKWELDER 1952: 291) **syn.n.**
Euhesperosoma HAYASHI 2002: 172 **syn.n.**

Typus subgeneris: *Amichrotus miwai* BERNHAUER, 1943.

DIAGNOSIS: The major differences to separate this subgenus from *Hesperosoma* s.str. are the symmetrical aedeagi and the lack of blue metallic color on the fore body, which is always with a certain amount of reddish color, either on the elytra or elytra and pronotum.

The secondary sexual characters, in particular on the male sternite VII, male sternite VIII, male sternite IX and gonocoxites of the female genital segment, do not appreciably differ from those of *Hesperosoma* s.str., therefore, they are neither described nor illustrated.

REMARK: The subgenus *Euhesperosoma* HAYASHI, 2002 (type species *H. excellens*) was mainly based on the presence of a short anteromedian carina on the mesoventrite. This character is also present in a very few other species of the miwai group, which are definitely more closely related to other species without such a carina (notably *H. meghalayense* SCHILLHAMMER, *H. brunkei* sp.n.). In addition, this character is subject to a certain degree of intraspecific variability. As a consequence, the subgenus *Euhesperosoma* is synonymized with *Hemihesperosoma*. In the elegans group, the carina is rather well developed in all species. This species group, however, raises different questions at the generic level – see “Discussion” below.

List of species

miwai group:

- Hesperosoma* (*Hemihesperosoma*) *alexpuchneri* SCHILLHAMMER, 2009
Hesperosoma (*Hemihesperosoma*) *brunkei* sp.n.
Hesperosoma (*Hemihesperosoma*) *distinctum* (CAMERON, 1932)
Hesperosoma (*Hemihesperosoma*) *excellens* (BERNHAEUER, 1939)
Hesperosoma (*Hemihesperosoma*) *hasuoi* ITO, 2011
Hesperosoma (*Hemihesperosoma*) *klapperichi* SCHILLHAMMER, 2004
Hesperosoma (*Hemihesperosoma*) *laosense* sp.n.
Hesperosoma (*Hemihesperosoma*) *meghalayense* SCHILLHAMMER, 2004
Hesperosoma (*Hemihesperosoma*) *miwai* (BERNHAEUER, 1943)
Hesperosoma (*Hemihesperosoma*) *pedersenii* SCHILLHAMMER, 2009
Hesperosoma (*Hemihesperosoma*) *ruficolle* (CAMERON, 1932)
Hesperosoma (*Hemihesperosoma*) *vietnamense* ITO, 2011
Hesperosoma (*Hemihesperosoma*) *yunnanense* SCHILLHAMMER, 2009

elegans group:

- Hesperosoma* (*Hemihesperosoma*) *chrisaueri* sp.n.
Hesperosoma (*Hemihesperosoma*) *elegans* (CAMERON, 1920)
Hesperosoma (*Hemihesperosoma*) *jacobsoni* (BERNHAEUER, 1915)
Hesperosoma (*Hemihesperosoma*) *merritti* (BERNHAEUER, 1912)
Hesperosoma (*Hemihesperosoma*) *signaticolle* sp.n.

Key to species of *Hesperosoma* (subg. *Hemihesperosoma*)

- | | | |
|---|---|---------------------------|
| 1 | Elytra entirely dark, always with distinct metallic blue or greenish blue lustre; aedeagus at least weakly asymmetrical..... | <i>Hesperosoma</i> s.str. |
| – | Elytra not metallic, with at least some reddish coloration, usually extensive, rarely reduced to shoulders; aedeagus symmetrical (subgenus <i>Hemihesperosoma</i>) | 2 |
| 2 | Eyes about as long as tempora or shorter, rarely slightly (about 1.15 times) longer (<i>miwai</i> group) | 3 |
| – | Eyes much longer than tempora, at least 1.8 times (<i>elegans</i> group)..... | 14 |
| 3 | Pronotum black, procoxae partly and lateral parts of mesoventrite dark brown to black..... | 4 |
| – | Pronotum entirely rufous, rarely with darker markings, if mostly dark then margins narrowly reddish; procoxae and mesoventrite reddish..... | 9 |

- 4 Elytra predominantly black, reddish color confined to shoulders and adjacent parts of hypomera; Vietnam *vietnamense*
 – Elytra with at least anterior third entirely reddish, rarely with black spots in basal depressions 5
- 5 Elytra with black marking occupying more than posterior half of each elytron, elevated, reddish sutural stripe in contact with black marking for at least half of its length; China, Vietnam *yunnanense, hasuoi*
 – Elytra with black marking occupying at most posterior half of each elytron, usually less, marking not reaching elevated reddish sutural stripe or only narrowly, at the postero-sutural angle 6
- 6 Pronotum narrowed toward posterior angles in straight line; eyes small, tempora 1.4 times as long as eyes; black marking on elytra larger, occupying almost entire posterior half of elytra; Myanmar *distinctum*
 – Pronotum narrowed toward posterior angles in shallow concave arc; eyes on average larger, tempora less than 1.3 times as long as eyes; China, Taiwan 7
- 7 All tibiae predominantly black; Taiwan *miwai*
 – Tibiae predominantly reddish 8
- 8 Aedeagus as in Figs. 33–35; China (Hubei, Fujian) *klapperichi*
 – Aedeagus as in Fig. 40; China (Sichuan) *alexpuchneri*
- 9 Elytra, except for yellow posterior margin, almost entirely black, reddish color confined to very narrow area at base; Myanmar *ruficolle*
 – Elytra with at least anterior third reddish 10
- 10 Legs entirely reddish to yellowish red 11
 – At least meso- and metafemora with a dark dorsal marking subdistally 12
- 11 Eyes slightly longer than tempora; Laos *pedersenii*
 – Eyes distinctly shorter than tempora; Laos *laosense*
- 12 Proximal antennomeres 3–4 bright reddish *excellens*
 – Proximal antennomeres 3–4 at least partly blackish 13
- 13 Aedeagus as in Fig. 43; Laos, Myanmar *brunkei*
 – Aedeagus as in Fig. 44; NE-India *meghalayense*
- 14 Neck reddish, tergite V with a pair of large, round, silvery tomentose patches; Philippines *merritti*
 – Neck black, tergite V without silvery tomentose patches 15
- 15 Distance between oblique carinae at base of tergite III slightly smaller than distance between each carina and lateral margin of tergite; black patches at base of tergites III–V occupying at most half the width of space between paired oblique carinae; tergite VI with pair of very short basal carinae; W-Malaysia *signaticolle*
 – Distance between oblique carinae at base of tergite III wider than distance between each carina and lateral margin of tergite; black patches at base of tergites III–V entirely or almost entirely occupying space between paired oblique carinae 16
- 16 Eyes comparatively smaller, less than twice as long as tempora; Thailand *chrisaueri*
 – Eyes distinctly more than twice as long as tempora (2.4 times and more) 17
- 17 Pronotum entirely reddish; widespread in the Oriental Region *elegans*
 – Pronotum with variable anchor-shaped dark marking; Java *jacobsoni*

***Hesperosoma miwai* group**

The species group is characterized by the comparatively small, moderately prominent eyes, which are usually shorter than the tempora, rarely as long or even very slightly longer (up to about 1.1 times), by the infraorbital furrow distinctly separated from the postmandibular ridge (Fig. 21). The median lobe of the aedeagus is often fan-shaped, and the paramere bears numerous peg setae and is at least apically notched but often bilobed or variably deeply bifurcate. The species of this group are confined to the subtropical and tropical parts of mainland Asia.

***Hesperosoma (Hemihesperosoma) miwai* (BERNHAEUER, 1943)**

Amichrotus miwai: BERNHAUER 1943: 177

Hesperosoma miwai: HAYASHI 1993a: 290

Hesperosoma miwai nashanchiana HAYASHI, 1993b: 123; SCHILLHAMMER 2009: 86

Hesperosoma sakoi HAYASHI, 1993b: 124; SCHILLHAMMER 2009: 86

TYPE MATERIAL: The species was described from a single ♂ (TAIWAN: Arisan). The type material has not been studied; the opinion on the status of this name by earlier authors has been accepted as the original description perfectly matches the studied material.

REDESCRIPTION (Habitus: Fig. 1): 9.5–14.2 mm long (4.7–6.7 mm long, abdomen excluded). – Head and pronotum black; antennae black, segment 2 narrowly reddish proximally, segments 8–10 creamy white; elytra brick-red, with very narrowly, sharply delimited yellow posterior margin, posterior third with a large black marking, shortly extending onto hypomeron; abdominal segments III–V reddish, segment VI black with narrowly reddish anterior margin, segment VII black with narrowly yellowish red anterior margin and more broadly yellowish posterior margin, segment VIII with anterior half yellowish and posterior half black, styli of tergite IX black with very narrowly reddish base, tergite X brown, sternite IX with unpigmented proximal portion and pale brownish distal portion; legs dark reddish to dark brown, tibiae usually darker than femora, almost blackish, tarsi reddish.

Head trapezoidal, markedly transverse, 1.55–1.65 times as wide as long in large males (about 1.30 in small males), head of females subrectangular, about 1.3 times as wide as long; eyes moderately large, tempora 1.13–1.28 times as long as eyes in males, hardly longer than eyes in females; surface matt due to very dense punctation, punctures almost contiguous, clypeus narrowly impunctate along anterior margin; antennae with segments 4–7 (4–6 in small specimens) oblong, segments 8–10 about as long as wide; pronotum 1.09–1.17 times as long as wide, widest at level of large lateral seta, narrowed toward base in concave arc; surface as densely punctate as head, with indication of a short impunctate midline in posterior half; elytra along sides much longer than pronotum along midline, surface flat, in males even slightly depressed in some places; males with distinct lateral carina that in large males is slightly sinuate; suture slightly elevated; punctation as dense as on head and pronotum, pubescence short, decumbent, color matching that of the integument underneath.

Aedeagus (Fig. 33) with fan-shaped median lobe; paramere (Fig. 33c) bifurcate, medial margins of lobes with a rather broad transparent lamella, virtually all peg setae visible in ventral view.

ADDITIONAL MATERIAL EXAMINED:

T A I W A N: “Taiwan, Fenchihu, 1400 m, 8.V.1977, leg. J. u. S. Klapperich” (CSO); “Taiwan, Fenchihu, 1400 m, 13.VI.1977, leg. J. u. S. Klapperich” (CSO); “Taiwan, Taitung Hsien, Hsinkangshan above Chengkung 850m 26.IV.1995, A. Smetana [T166]” (CSO); “Taiwan: Nantou, Shitou, 7.IV.2005, leg. C.-F. Lee” (TARI, NMW); same locality but “12.V.2005” (TARI, NMW).

DISTRIBUTION: The species is at present known only from the island of Taiwan, where it is most likely endemic.

Hesperosoma (Hemihesperosoma) klapperichi* SCHILLHAMMER, 2004Hesperosoma klapperichi* SCHILLHAMMER 2004: 260

Holotype ♂: "CHINA: SE - Hubei, Mufu Shan, Jiugongshan forest park, 29.4N 114.6E, up to 1000 m, 3.5./18.6.2002, leg. J. Turna" (NMW). – **Paratypes** (3 exs.): 1 ♀ with same data as holotype (NMW); 1 ♂: "Kuatun (2300 m) 27.40 n.Br. 117.40 ö.L. J. Klapperich 24.4.1938 (Fukien)" (NMW); 1 ♂: "Kuatun, Fukien, China, 15.7.46, leg. Tschung-Sen" (NMW).

REDESCRIPTION (Habitus: Fig. 2): 12.0–13.2 mm long (6.0–6.5 mm, abdomen excluded). – Head and pronotum black; antennae black, four distal segments creamy white, bases and tips of proximal segments sometimes narrowly reddish; palpi dark reddish-brown, last segments usually paler reddish; elytra brick-red, each elytron with large black spot in posterior half, spot rounded medially, not reaching suture, posterior margin of elytra pale yellowish; abdominal segments III–V reddish, segment VI black, elevated area in front of basal line reddish, segment VII likewise but posterior margin broadly (about one fifth of tergite length) yellowish; segment VIII with basal half yellowish, posterior half black; tergite X yellowish, slightly obscured posteriorly; styli of tergite IX black, narrowly yellowish basally; legs reddish yellow, posterior half of dorsal faces of femora and tibiae blackened.

Head rounded trapezoidal to almost rounded quadrangular, 1.34–1.48 times as wide as long; eyes moderately protruding; tempora regularly convex, slightly (1.03–1.10 times) longer than eyes; surface densely punctate, punctures contiguous except for a small area on vertex where a bit of glossy surface may be discerned between punctures; frons with pair of wide, very shallow depressions; antennae with segments 4–7 oblong, segment 8 about as long as wide, segments 9 and 10 inconspicuously transverse; pronotum 1.11–1.13 times as long as wide, widest at level of large lateral seta, narrowed toward base in wide concave arc; punctuation of surface even slightly denser than on head, with a tiny rudiment of an impunctate midline in front of base; scutellum densely and very coarsely punctate, punctures partly confluent, forming small rugae; elytra very densely, slightly asperately punctate, with only a very narrow impunctate portion in basal depression; pubescence reddish-golden, except on black spots where pubescence is black; large males with sharp and distinct lateral carina occupying posterior two thirds, carina rather weak and indistinct in smaller males; tergite III with large almost pit-like punctures arranged in transverse row at about midlength, very base almost impunctate, basal half of second and third visible tergite with large but rather flat and not pit-like punctures; posterior halves of first three visible tergites and entire remaining tergites with dense and fine punctuation and pubescence.

Aedeagus (Figs. 34–35) with fan-shaped median lobe; paramere (Fig. 35c) bilobed, lobes broad and short. The aedeagus is slightly variable, especially the median lobe.

DIAGNOSIS: The species is very similar to *H. miwai* from Taiwan but may be distinguished by the finer punctuation at the base of the fourth visible tergite and by the paler, almost entirely reddish tibiae. The main distinguishing character, however, is the aedeagus. In *H. miwai* the median lobe is much broader and the lobes of the paramere are slender and long.

REMARK: The single male from Hubei has a slightly different aedeagus, which might indicate a specific or subspecific difference. More material would be needed to see whether or not this difference is stable or a manifestation of intraspecific variability.

DISTRIBUTION: The species is at present known only from a rather restricted area in Southeast China (southeastern Hubei and northwestern Fujian).

Hesperosoma (Hemihesperosoma) vietnamense* ITO, 2011Hesperosoma (Paramichrotus) vietnamense* ITO, 2011: 57*Hesperosoma (Paramichrotus) yasuhikoi* ITO, 2011: 60 **syn.n.**

TYPE MATERIAL: **Holotype** ♂: “Vietnam, Sapa District, Tram Ton, 1900 m, 4.V.2009, Tateo Ito leg.” (OMNH).

Hesperosoma yasuhikoi: **Holotype** ♂: “Vietnam, Sapa District, Tram Ton, 1900 m, 4.V.2009, Tateo Ito leg.” (OMNH).

REDESCRIPTION (Habitus: Fig. 6): 10.8–12.0 mm long (5.7–6.6 mm, abdomen excluded). – Head (including neck) and pronotum black; antennae with segments 1–3 reddish but darkened to various extent, segments 4–7 black, segments 8–11 creamy white; mandibles and palpi reddish to reddish brown, palpi generally paler than mandibles; elytra black, each elytron with a large, slightly oblong, reddish humeral spot extending onto hypomeron and reaching ventro-lateral border of elytron, suture very narrowly reddish, posterior margin rather broadly yellowish confluent medially with reddish sutural stripe; scutellum black; abdominal segments III–V reddish, segment VI black, very narrowly reddish at base, segment VII black with posterior two thirds yellowish, segment VII with proximal two thirds yellowish and distal third black; styli of tergite IX black, tergite X and sternite IX brownish, with narrow semitransparent distal portion; legs entirely reddish, metafemora inconspicuously darkened dorso-posteriorly.

Head trapezoidal, 1.5 times as wide as long in larger male (HT of *H. vietnamense*), 1.28 times in smaller male (HT of *H. yasuhikoi*); tempora convergent in straight line for short distance behind eyes, then almost regularly rounded toward neck, 1.08 (small male) –1.27 (large male) times as long as eyes; dorsal surface of head densely punctate, punctural grooves almost contiguous, a rather narrow portion along anterior margin of clypeus impunctate; antennae with segments 4–5 markedly oblong, segments 6 and 7 slightly oblong, segments 8–10 about as long as wide; pronotum 1.13–1.16 times as long as wide, widest at level of large lateral seta, narrowed toward base in shallow concave arc; surface of pronotum as densely and strongly punctate as head, with very faint indication of an impunctate midline; pubescence of head and pronotum short, decumbent, greyish to yellowish; scutellum slightly less densely punctate than pronotum, surface between punctures with fine, transverse microsculpture; elytra of male with short and rather weakly developed lateral carina in posterior half, that of smaller male even weaker; extremely densely, slightly asperately punctate, with narrow impunctate portion in basal depression; pubescence moderately long, decumbent, color corresponding with color of integument underneath; basal depressions of abdominal tergites III–V with coarse, almost fossulate punctation, gradually changing to the finer uniform punctation on posterior half of tergites; subsequent tergites with fine and dense, uniform punctation.

Aedeagus (Fig. 38) with characteristic fan-shaped median lobe; paramere (Fig. 38c) also distinctly widened distally, divided into two short acutely pointed (in ventral view) lobes.

DIAGNOSIS: Among the species with a black pronotum, *H. vietnamense* may be easily recognized by the almost entirely dark elytra.

DISTRIBUTION: The species is at present known only from the type locality in northwestern North Vietnam.

REMARK: The description of *H. yasuhikoi* was based on subtle differences in the setation of the mesoventrite, a character that has proven to be slightly variable. All other characters as well as the aedeagi of both species are identical.

Hesperosoma (Hemihesperosoma) alexpuchneri SCHILLHAMMER, 2009

Hesperosoma (Paramichrotus) alexpuchneri SCHILLHAMMER 2009: 87

TYPE MATERIAL: **Holotype** ♂: “CHINA: SICHUAN (78-80), rd. Ya’an to Hanyuan, Ypansan pass, 1480-1740m, leg. Puchner, V.-VI.2007” (NMW).

REDESCRIPTION (Habitus: Fig. 3): 12.9 mm long (6.1 mm, abdomen excluded). – Head, pronotum and scutellum black; mandibles and palpi reddish, segment 2 of labial palpi slightly

infusate medio-basally; antennae black, distal four segments creamy white, segment 1 narrowly, segments 2 and 3 more broadly reddish at base; elytra with basal half and suture ferruginous red, each elytron with round black spot in apical half, apical margin narrowly yellow; abdominal tergites III–V bright reddish, tergite VI black with narrowly reddish anterior margin, tergite VII black with posterior margin broadly yellowish, tergite VIII with yellow basal half and black apical half, styli of tergite IX and tergite X with yellow basal half and dark brown to black apical half; legs reddish, distal halves of femora obscurely brownish.

Head trapezoidal, 1.5 times as wide as long, with pair of broad and shallow depressions between eyes; tempora almost regularly rounded, 1.1 times as long as eyes; disc of head very densely and rather coarsely punctate, without a trace of an impunctate midline, punctural grooves contiguous; antennae with segments 4–6 moderately oblong, segments 7–9 about as long as wide but decreasing in length distad, segment 10 slightly transverse; pronotum 1.13 times as long as wide, widest at level of large lateral seta, narrowed toward base in distinct concave arc; punctuation as on head, also without any indication of an impunctate midline; head with dark yellowish to brown pubescence, that of pronotum golden; elytra very densely, slightly asperately punctate, except for narrow smooth portion in depression at base; along lateral margin carinate; pubescence reddish to golden on red portions, black on dark spots; tergites III–V with broad impunctate portion at base (extended till end of pair of oblique carinae), except for a few large, almost fossulate punctures; remaining parts of tergites and entire tergites VI–VIII densely and finely punctate and covered with golden pubescence on red surface, black pubescence on black surface.

Aedeagus (Fig. 40) with moderately dilated fan-shaped median lobe, paramere (Fig. 40c) entire, with acutely pointed apex resting between pair of distinct gibbosities at apex of median lobe.

Female unknown.

DIAGNOSIS: Externally, *H. alexpuchneri* is virtually identical with *H. klapperichi*, from which it may be distinguished only by the shape of the aedeagus.

DISTRIBUTION: The species is at present known only from the type locality.

Hesperosoma (Hemiheperosoma) yunnanense SCHILLHAMMER, 2009

Hesperosoma (Paramichrotus) yunnanense SCHILLHAMMER 2009: 88

TYPE MATERIAL: **Holotype** ♂: "CHINA: Yunnan [CH07-17], Baoshan Pref. mountain range 25 km S Tengchong, 1900 m, 24°48'28"N 98°32'03"E, dev. primery [sic!] decid. forest, litter, fungi, sifted, M. Schülke" (CSB). – **Paratype** ♀: "CHINA, Yunnan Prov., Longling Co., Longjiang, Xiaoheishan, tree and log, 24.83671°N, 98.76185°E \ 2067 m, 2005.V.28 day, Liang H.B., Guo K.J., California Academy & IOZ., Chinese. Acad. Sci. \ IOZ(E) 1771174" (IZ-CAS).

REDESCRIPTION (Habitus: Fig. 4): 10.8 mm long (5.5 mm, abdomen excluded). – Head, pronotum and scutellum black; mandibles reddish-brown, palpi black, segments 1 and 4 of maxillary palpi and tip of last segment of labial palpi reddish; antennae black, distal four segments creamy white, basal third of segment 2 reddish; elytra with basal third and suture ferruginous red, each elytron with large roundish black spot in apical two thirds, and a smaller black spot in each basal depression, apical margin narrowly yellow; abdominal segments III–V bright reddish, segment VI black, segment VII black with posterior margin broadly and anterior margin narrowly yellowish, segment VIII with yellow basal half and black apical half, styli of tergite IX black with yellow base; legs reddish, profemora black, distal third to half of meso- and metafemora obscurely brownish.

Head 1.26 times as wide as long; tempora 1.12–1.16 times as long as eyes, distinctly narrowed toward broadly rounded hind angles in almost straight line; surface matt due to very dense punctuation, punctures contiguous, clypeus narrowly impunctate along anterior margin; female

paratype with extremely thin and short indication of an impunctate midline; frons with pair of shallow depressions; antennae with segments 4–6 oblong, segments 7–10 about as long as wide; pronotum 1.1 times as long as wide, widest at level of large lateral seta, narrowed toward base in shallow concave arc; surface as densely punctate as head, male holotype without any indication of an impunctate midline, female paratype with extremely thin and short indication of an impunctate midline; elytra as densely punctate as head and pronotum, punctation appearing slightly asperate; with weak indication of a lateral carina.

Aedeagus (Fig. 36) with distinctly fan-shaped median lobe; paramere (Fig. 36c) very broad, shallowly bilobed, apical portion thus almost heart-shaped.

DIAGNOSIS: Externally, the species is very similar to *H. miwai*, *H. klapperichi* and *H. alexpuchneri* both in coloration and shape, and differs mainly in the much larger black elytral spot, occupying the apical two thirds of each elytron.

DISTRIBUTION: The species is at present known only from two places in Yunnan province (China).

Hesperosoma (Hemihesperosoma) hasuoi ITO, 2011

Hesperosoma (Paramichrotus) hasuoi ITO, 2011: 62.

TYPE MATERIAL: **Holotype** ♀: “Vietnam, Sapa District, Tram Ton, 1900 m, 5.V.2009, A. Hasuo leg.” (OMNH).

DIAGNOSIS: Externally, the single holotype of this species hardly differs from *H. yunnanense*, except that it is larger, 12.0 mm long (6.3 mm, abdomen excluded), and has slightly longer tempora, which might be explained by the larger body size. As long as no male from the type locality is available, it is impossible to judge whether or not it is a synonym of *H. yunnanense*.

DISTRIBUTION: The species is at present known only from the type locality.

Hesperosoma (Hemihesperosoma) distinctum (CAMERON, 1932)

Thoracostrongylus distinctus CAMERON 1932: 215

Amichrotus distinctus: HAMMOND 1984: 194–195

Hesperosoma distinctum: SCHILLHAMMER 2014: 208

TYPE MATERIAL: **Holotype** ♂ (by monotypy): “Birmah, Ruby M⁶⁸ \ Doherty \ Fry Coll. 1905.100 \ Type [round label with red margin] \ T. distinctus Cam. TYPE” (BMNH).

REDESCRIPTION (Habitus: Fig. 5): 12.8 mm long (6.3 mm, abdomen excluded). – Head and pronotum black, anterior margin of pronotum narrowly, obscurely reddish; antennae black, four distal segments creamy white, segment I narrowly reddish proximally and distally; mouthparts reddish brown, last segment of maxillary and labial palpi paler than remaining palpomeres; elytra with anterior half, suture and hypomera reddish testaceous, posterior half black with very slight violaceous hue, black color shortly extending onto hypomeron, posterior margin yellow; scutellum dark reddish testaceous with darker anterior portion; abdominal tergites III–V reddish, respective sternites darker in middle, segment VI black, segment VII black with posterior fourth yellowish, elevated anterior margin of tergites VI and VII reddish, more reddish yellow on sternites, segment VIII with anterior half reddish-yellow and posterior half black, styli of tergite IX black with obscurely reddish bases, sternite IX with transparent basal portion and pale brownish apical portion, tergite X brownish; legs with femora dark reddish testaceous, tibiae markedly darker than femora, almost black, tarsi dark brown, tarsomere 5 reddish.

Head trapezoidal, 1.42 times as wide as long; eyes small, moderately protruding, shorter than tempora, tempora 1.40 times as long as eyes; entire surface of head with dense and coarse, contiguous punctation, anterior margin of clypeus extremely narrowly impunctate, frontoclypeal area

with shallow depression; antennae with segments 4–7 markedly oblong, segment 8 weakly oblong, segments 9 and 10 about as long as wide, segment 11 with shorter side about as long as segment 10; pronotum about 1.1 times as long as wide, widest at level of large lateral seta, narrowed towards base in almost straight line; punctation very dense and coarse, almost areolate, sharp interstices partly forming longitudinal ridges, a very thin, interrupted glossy midline is weakly indicated; elytra flat, matt, with short but distinct lateral carina in posterior half; punctation dense, punctures separated by about half a puncture diameter, appearing somewhat asperate; pubescence black on dark parts, yellowish on reddish/yellow parts of elytra; scutellum as densely and coarsely punctate as elytra; abdominal tergites III–V with distinct transverse depression, and with pairs of distinct oblique carinae at base, distance between carinae on tergite III slightly less than half of tergite width, that on subsequent tergites becoming gradually narrower; punctation on tergites III–V coarse and rather dense, but anterior third almost impunctate (tergite III) or with scattered larger punctures, tergites VI–VIII almost uniformly, moderately finely punctate, punctation along anterior margin coarse with slightly oblong punctural grooves; pubescence black on dark portions and golden-yellow on paler portions of tergites.

Aedeagus (Fig. 39) with rather simple median lobe in ventral view; lateral view showing a blunt tooth-like extension on the parameral face; apex of paramere (Fig. 39c) with V-shaped excision.

DIAGNOSIS: Among the species with a black pronotum, the species differs in the sides of the pronotum, which are narrowed towards the base in a straight line, the small eyes and in the shape of the aedeagus.

DISTRIBUTION: The species is at present known only from the type locality: Mogok Township, Mandalay Region, Myanmar.

***Hesperosoma (Hemihesperosoma) laosense* sp.n.**

TYPE MATERIAL: **Holotype** ♂: “NE-LAOS: prov. Hua Phan, Ban Saluei, Phou Pan, 1.-31.5.2011, 20°12'N 104°01'E, 1500-1900 m, leg. Holzschuh” (NMW).

Paratypes (6 exs.): 1 ♂, 3 ♀♀: same data as holotype (NMW); 1 ♂: “LAO-NE, Hua Phan Prov., 20°12.328'N 104°00.621'E, Phu Phan Mt., 17.v.-3.vi.2007, ~ 1750 m, Vit. Kubáň leg. \ NHMB Basel, expedition to Laos 2007” (NMB); 1 ♀: “Laos-NE, Huoa Phan prov., 20°13'09-19"N 103°59'54"-104°00'03"E, 1480-1550 m, Phou Pane Mt., 1.-16.vi.2009, Zdeněk Kraus leg. \ NHMB Basel, NMPC Prague Laos 2009 Expedition: M. Brancucci, M. Geiser, Z. Kraus, D. Hauck, V. Kubáň” (NMB).

DESCRIPTION (Habitus: Fig. 7): 10.5–13.5 mm long (6.0–6.6 mm, abdomen excluded). – Head black, antennae with basal three segments reddish to reddish-brown, segment 3 usually slightly darker than 1 and 2, segments 4–7 black, 8–11 creamy white; mandibles and palpi reddish to reddish brown; pronotum variably colored, either black with narrow obscurely reddish margins or reddish color more extensive or even entire pronotum obscurely reddish; elytra with anterior third and elevated suture reddish, posterior two thirds occupied by black spot, posterior margin narrowly yellowish; elytral hypomera reddish in anterior half, black in posterior half, black color not reaching deflexed lateral margin of elytra; abdominal segments III–V reddish, segment VI black with narrowly reddish anterior margin, segment VII black with broadly yellowish posterior margin, segment VIII yellowish in anterior half, black in posterior half; legs entirely reddish to brownish-red.

Head slightly trapezoidal, 1.22–1.33 times as wide as long, eyes rather small, tempora broadly rounded, 1.30–1.38 times as long as eyes; surface matt due to very dense punctation, punctures contiguous, clypeus narrowly impunctate along anterior margin; antennae with segments 4–6 oblong, segment 7 slightly oblong, segments 8–9 about as long as wide, segment 10 slightly transverse; pronotum about 1.1 times as long as wide, widest at level of large lateral seta, narrowed toward base in shallow concave arc; surface as densely punctate as head, without

indication of an impunctate midline; elytra as densely punctate as head and pronotum but slightly less coarsely; males with a hardly perceptible indication of a lateral carina in posterior third; female tergite X (Fig. 31) with rather blunt apex, showing a very indistinct indication of a nipple-like extension.

Aedeagus (Fig. 37) very similar to that of *H. yunnanense*, but median lobe slightly longer in relation to paramere; paramere (Fig. 37c) also similarly shaped but with different arrangement of peg setae.

DIAGNOSIS: Rare specimens with almost entirely reddish pronotum may be separated from *H. pedersenii* by the size of the eyes, which in *H. laosense* are markedly shorter than the tempora, and by the more trapezoidal head.

DISTRIBUTION: The species is at present known only from Mt. Phou Phan in northeastern Laos.

ETYMOLOGY: The name of the species refers to the country of origin.

Hesperosoma (Hemihesperosoma) ruficolle (CAMERON, 1932)

Thoracostrongylus ruficollis CAMERON 1932: 216

Amichrotus ruficollis: HAMMOND 1984: 194

Hesperosoma ruficolle: SCHILLHAMMER 2014: 208

TYPE MATERIAL: **Holotype** ♂ (by monotypy): "Birmah, Ruby M⁸⁸ \ Doherty \ Fry Coll. 1905.100 \ Type [round label with red margin] \ T. ruficollis Cam. TYPE" (BMNH).

REDESCRIPTION (Habitus: Fig. 8): 12 mm long (6 mm long, abdomen excluded). – Head and neck black; antennae with segments 1 and 3–7 black, segment 1 narrowly, obscurely reddish proximally and distally, segment 3 with basal fourth reddish, segments 6 and 7 very narrowly reddish at base, segments 8–11 creamy white; mouthparts reddish-brown, mandibles somewhat darker in basal half; pronotum reddish; elytra black with weak violaceous hue, along scutellum and suture narrowly, sharply delimited reddish brown, apical margin narrowly reddish yellow, hypomera broadly reddish in anterior half, posterior half very narrowly reddish to reddish-yellow; abdominal tergites III–V black, posterior margins narrowly, obscurely reddish, becoming more distinctly and slightly more broadly reddish to reddish-yellow laterally; tergite VI entirely black, tergite VII black with posterior fifth reddish-yellow, more broadly at sides than in middle; abdominal sternites III–VII with posterior margin broadly and distinctly reddish to reddish yellow, more obscurely on sternite VI; abdominal segment VIII with black basal half and yellow apical half; styli of tergite IX pale brown in basal half, black in apical half; male sternite IX with semi-membranous, transparent basal portion and brownish apical portion; male tergite X yellowish, indistinctly darkened posteriorly (most likely more distinctly in fresh specimens); legs dark brown to black (difficult to interpret due to age of specimen), femora narrowly indistinctly reddish distally, tibiae reddish to reddish-yellow in proximal third, pale color extending toward half length laterally; tarsi reddish.

Head trapezoidal, 1.38 times as wide as long; eyes prominent, about as long as convergent tempora; dorsal surface of head very densely and coarsely punctate, leaving hardly any interstices between punctural grooves, with very narrowly impunctate midline; anterior margin of clypeus broadly impunctate, but surface slightly rugose and with microsculpture; frontoclypeal area with shallow depression; antennae slender, segments 4–7 markedly oblong, segment 8 weakly oblong, segments 9 and 10 about as long as wide; pronotum rather short, 1.05 times as long as wide, widest in anterior third, narrowed toward base in weak concave arc; surface as densely as and slightly more coarsely punctate than head, with an extremely narrow indication of an impunctate midline in posterior half; elytra finely and densely punctate,

punctures separated by about half a puncture diameter, entire elytra appearing somewhat matt; elytra of males with weak indication of a longitudinal carina along sides; pubescence black but with a silvery fascia in anterior third and yellow pubescence along suture and apical margin; scutellum densely, coarsely, irregularly punctate, punctural grooves partly confluent; abdominal tergites III–V with distance between basal carinae on tergite III about half of tergite width, that on subsequent tergites becoming gradually narrower; punctation on tergites III–V coarse and rather dense, but anterior third almost impunctate (tergite III) or with scattered larger punctures, tergites VI–VIII almost uniformly, rather finely punctate, somewhat coarser along anterior margin; pubescence black on dark portions and golden-yellow on paler portions of tergites; male sternite VIII with very shallow medio-apical emargination.

Aedeagus (Fig. 41) with fan-shaped apical portion of median lobe, paramere (Fig. 41c) deeply bifurcate, prongs slender but with rounded apices, peg setae numerous.

DIAGNOSIS: Among the species with a reddish pronotum, *H. ruficollis* may be easily recognized by the dark first three visible abdominal segments.

DISTRIBUTION: The species is at present known only from the type locality: Mogok Township, Mandalay Region, Myanmar.

***Hesperosoma (Hemihesperosoma) pedersenii* SCHILLHAMMER, 2009**

Hesperosoma (Paramichrotus) pedersenii SCHILLHAMMER 2009: 86

TYPE MATERIAL: **Holotype** ♂: “LAOS: Champasak prov.: Bolaven plateau, Muang Paxong, Ban Thongvay, 15°14.741'N 106°31.916'E, 1300m, 9-16.VI.2008, leg. A. Solodovnikov & J. Pedersen \ disturbed primary rainforest, fruit baited trap on ground; ZMUC collection” (ZMUC).

Paratypes: 2 ♀ ♀ with same data as holotype (ZMUC, NMW).

REDESCRIPTION (Habitus: Fig. 11): 12.0–13.2 mm long (6.1–6.5 mm, abdomen excluded). – Head and neck black, mandibles and palpi reddish, antennae black, distal four segments creamy white, base and apex of segment 1 and base of segment 2 narrowly reddish; pronotum and scutellum brighter or darker ferruginous red; elytra with anterior half and suture ferruginous red, each elytron with a round black spot occupying posterior half, posterior margin narrowly reddish yellow; abdominal segments III–V bright reddish, segment VI black with anterior margin moderately broad red, segment VII black, anterior margin very narrowly reddish, apical margin broadly reddish-yellow, segment VIII with anterior half pale yellow, posterior half black, segments IX and X dark brown to black, narrowly, obscurely reddish at base; legs almost entirely reddish, dorsal faces of femora with a short, poorly delimited, brownish patch.

Head rounded quadrangular, 1.24–1.29 times as wide as long, tempora subparallel, eyes large, 1.07–1.16 times as long as tempora, slightly protruding; disc very densely and rather coarsely punctate, a narrow portion behind fronto-clypeal area and an exceedingly narrow, sharply delimited midline impunctate; antennae with segments 4–6 markedly oblong, segment 7 slightly oblong in male, as long as broad in female, segment 10 as long as broad in male, slightly transverse in female; pubescence of head short, black; pronotum 1.11–1.15 times as long as wide, widest at level of large lateral seta, narrowed toward base in shallow concave arc, disc very densely and rather coarsely punctate, without any trace of an impunctate midline; pubescence of pronotum short, decumbent, reddish to golden; elytra with very deep depressions at base, punctation as on pronotum, except for small impunctate portion in basal depressions; pubescence longer and more conspicuous than on pronotum, reddish-golden on red portions, black on dark spots; scutellum with punctation similar to that on elytra and pronotum; first three visible tergites with moderately broad impunctate portion at base (extended until apex of pair of oblique carinae), except for a few larger punctures; remaining parts of tergites and entire tergites VI–VIII

densely and finely punctate and covered with golden pubescence on red surface, black pubescence on black surface; female tergite X (Fig. 29) with very long and slender, sharply pointed apical extension.

Aedeagus (Figs. 42) with rather simple median lobe, showing a somewhat irregular outline; paramere (Fig. 42c) very conspicuous, deeply bifurcate.

DIAGNOSIS: Among the species with a red pronotum, *H. pedersenii* may be recognized by the entirely reddish legs.

DISTRIBUTION: The species is at present known only from the type locality in southern Laos.

Hesperosoma (Hemihesperosoma) brunkei sp.n.

TYPE MATERIAL: **Holotype** ♂: “NE-LAOS: prov. Hua Phan, Ban Saluei, Phou Pan, 1.-31.5.2011, 20°12'N 104°01'E, 1500-1900 m, leg. Holzschuh” (NMW).

Paratypes (9 exs.): 5 ♀♀: same data as holotype (NMW); 1 ♂: same data as holotype but “7.4.-25.5.2010” (NMW); 1 ♀: same data as holotype but “3.-30.4.2014” (NMW); 1 ♂, 1 ♀: “MYANMAR: Mandalay Reg., Mogok Township, S Panlin vill., Mt. Taung Mae, west slope, 1710-1750 m \ ca. 22°58'09"N 96°27'13"E, 10.-18.VI.2014, FIT, leg. Brunke & Schillhammer (MBS 201C)” (NMW).

DESCRIPTION (Habitus: Fig. 9): 10.0–12.9 mm long (5.0–6.2 mm, abdomen excluded). – Head black, pronotum reddish brown to brick red; antennae with segments 1–3 dark brown, segments 1 and 2 variably narrowly reddish proximally and distally, segments 4–7 black, four distal segments creamy white; mouthparts reddish-brown, basal two segments of maxillary palpi and basal segment of labial palpi sometimes dark brown; elytra with anterior half, suture and hypomera reddish testaceous, posterior half black with very slight violaceous hue, black color hardly extending onto hypomeron, posterior margin yellow; scutellum dark reddish testaceous with darker lateral margin; abdominal segments III–V reddish, segment VI black with narrowly reddish anterior margin, segment VII black with posterior fifth yellowish, elevated anterior margin of tergites VI and VII reddish, segment VIII with anterior half reddish yellow and posterior half black, styli of tergite IX black with yellowish bases, tergite X brownish; legs reddish, femora usually darker than tibiae, meso- and metafemora only distally, tarsi reddish.

Head rounded quadrangular, about 1.25 times as wide as long, eyes rather large, as long as or insignificantly longer than subparallel tempora; surface of head with dense and coarse, contiguous punctation, with very narrow indication of an impunctate midline, anterior margin of clypeus narrowly impunctate; antennae with segments 4–7 oblong (segment 7 indistinctly), segments 8–10 about as long as wide; pronotum 1.14–1.18 times as long as wide, widest at level of large lateral seta, narrowed toward base in shallow concave arc, punctation as that on head, without impunctate midline; elytra as densely punctate as head and pronotum but punctation slightly asperate; scutellum similarly densely punctate but very base impunctate; female tergite X (Fig. 30) with long and slender, sharply pointed apical extension but differently shaped than in *H. pedersenii*.

Aedeagus (Fig. 43) with median lobe rather simple, rod-like; paramere (Fig. 43c) hardly dilated apicad, shortly narrowed toward subtruncate apex.

DIAGNOSIS: Externally, the species hardly differs from *H. meghalayense*, but may be distinguished by the very different aedeagus, and, to some extent, geographically. From *H. excellens* it differs in the blackish basal segments of the antennae.

DISTRIBUTION: The species is at present known only from the type locality in northeastern Laos and from Mogok Township (Mandalay Region) in Myanmar.

ETYMOLOGY: The species is named in honour of my friend and colleague Adam Brunke, who participated in one of my trips to Myanmar (where part of the type series was collected). In addition, he is a major driving force in revolutionizing the systematics of Staphylinini.

***Hesperosoma (Hemihesperosoma) meghalayense* SCHILLHAMMER, 2004**

Hesperosoma (Euhesperosoma) meghalayense SCHILLHAMMER 2004: 262

TYPE MATERIAL: **Holotype** ♂: “NE-INDIA: Meghalaya W Garo Hills Nokrek NP; ca. 1100 m \ 25°29.6'N 90°19.5'E 9. - 17.5.1996 leg. Jendek & Sausa” (NMW).

REDESCRIPTION (Habitus: Fig. 10): 13.0 mm long (6.0 mm, abdomen excluded). – Head including neck black, pronotum reddish, elytra with basal third reddish, posterior two thirds black, black color extending onto hypomeron but not reaching lateral margin, suture reddish, posterior margin narrowly reddish-yellow; abdominal segments III–V red, segments VI and VII black, posterior margin of segment VII rather broadly yellowish (about one fifth of length), segment VIII with anterior half yellowish and posterior half black; styli of tergite IX blackish in middle, base and apex dark reddish-brown; genital segment pale brownish; antennae black, four distal segments creamy white, basal two segments narrowly reddish at base; mandibles entirely reddish, palpi dark reddish-brown, last segments markedly paler; femora black with yellow basal halves, tibiae yellowish with black apices, black color more distinctly extending basad on middle tibiae, tarsi reddish.

Head rounded quadrangular, 1.25 times as wide as long; eyes moderately protruding, comparatively large, 1.12 times as long as slightly convergent tempora; surface of head with dense and coarse, almost umbilicate punctation, punctural grooves forming rather sharp ridges on frons; anterior margin and narrow midline impunctate; antennae with segments 4–6 more or less oblong, segments 7–10 about as long as wide; pronotum rather strongly vaulted, 1.15 times as long as wide, widest at level of large lateral seta, narrowed toward base in almost straight line, shortly, indistinctly sinuately emarginate in front of base; surface very densely, coarsely punctate, punctures almost umbilicate, contiguous, interstices forming sharp polygonal ridges; without any indication of an impunctate midline; scutellum very densely, coarsely, asperately punctate; elytra (including basal depression) also very densely punctate (except basal depression where punctation is somewhat finer), punctation asperate; ground pubescence black, but with ring of golden pubescence around black elytral patches; all tergites densely and coarsely punctate, punctures larger at base of tergites, particularly in basal depressions of tergites III–V.

Aedeagus (Fig. 44) long and slender, apex of median lobe slightly hooked (ventrad), paramere (Fig. 44c) long and flat, apex slightly emarginate, face adjacent to median lobe with numerous peg setae mostly irregularly arranged along midline.

DIAGNOSIS: In coloration the species almost exactly resembles *H. brunkei*. As in that species, it may be separated from *H. excellens* by the blackish basal segments of the antennae.

DISTRIBUTION: The species is at present known only from the type locality.

***Hesperosoma (Hemihesperosoma) excellens* (BERNHAEUER, 1939)**

Amichrotus excellens BERNHAEUER 1939: 100

Hesperosoma (Euhesperosoma) excellens: HAYASHI 2002: 178

TYPE MATERIAL: The type material of this species was already studied and illustrated by HAYASHI (1995).

REDESCRIPTION (Habitus: Fig. 12): 12.5–15.0 mm long (6.1–7.1 mm, abdomen excluded). – (Note: the population from Vietnam looks slightly different. These differences are pointed out at the end of the redescription). Head black, pronotum and scutellum brick-red to red, elytra reddish

with large black spot occupying posterior three fifths, black spot with weak blue metallic hue, suture reddish to yellowish red, posterior margin yellowish, abdominal segments III–V reddish, segment VI black with anterior margin narrowly reddish to yellowish and posterior margin even more narrowly obscurely reddish, segment VII black with anterior margin reddish to yellowish as in segment VI, posterior margin more broadly yellowish, segment VIII with proximal 2/3 yellowish and distal 1/3 black; styli of tergite IX and tergite X dark brown to blackish, narrowly yellowish at base; antennal segments 1–4 reddish, 5–7 black, 8–11 creamy white; legs reddish-yellow, all femora partly darkened to various extent in apicodorsal third.

Head rounded quadrangular, 1.25 (in small males and females) –1.35 (larger males) as wide as long; eyes moderately to more distinctly prominent, about as long as the parallel to slightly convergent tempora; surface of head densely punctate, punctural grooves contiguous, with extremely narrow impunctate midline; antennae with segments 4–7 oblong, segments 8–10 about as long as wide; pronotum 1.14–1.18 times as long as wide, widest at about level of large lateral seta, narrowed toward base in very shallow concave arc or almost straight line; surface as densely punctate as head, rarely a faint indication of an impunctate midline may be recognized in posterior half; elytra with punctation as dense as that on head and pronotum but somewhat finer and slightly asperate; larger males rarely with a very weak indication of a short lateral carina in posterior fourth; tergites III–V with dense punctation in posterior two thirds, anterior third almost impunctate but punctation extending somewhat further anteriorly medially; anterior punctures on tergite III large, almost pit-like; remaining tergites densely, almost uniformly punctate and pubescent.

Aedeagus (Fig. 45) quite unusual; median lobe slender with sharply pointed apex, with a large tooth-like projection on parameral face; paramere (Fig. 45c) very simple, short.

REMARK: The specimen from Vietnam is somewhat different from the Chinese specimens, mainly in the smaller body size, paler coloration of the abdominal segments VIII–X, and a slightly different aedeagus (for an illustration of the aedeagus of the Vietnam specimen see SCHILLHAMMER 2004: figs. 35–37). Whether these differences are specific, intraspecific variation or just manifestations of a local morph cannot be interpreted from such limited material.

ADDITIONAL MATERIAL EXAMINED:

C H I N A: FUJIAN: “Kuatun (2300m) 27,40n.Br. 117,406.L. J. Klapperich 8.5.1938 (Fukien)” (NMW); same locality but “31.5.1938” (NMW); same locality but “1.5.1938” (NMW); “Kuatun, Fukien China, 14.5.46 leg. Tschung-Sen” (NMW); W-Fujian, Xiyungdongshan, NW-slopes, 25°46'N 117°20'E, 900-1100 m, 25.IV.2006, 13.-14.VII.2007, leg. J. Turna (NMW); W-Fujian, Emei Feng, 27°01'N 117°04'E, 1200-1500 m, 1.--2.VII.2007, leg. J. Turna (NMW); HUBEI: SE-Hubei, Mufu Shan, Jiugongshan forest park, 29.4N 114.8E, up to 1000 m, 3/5./18.VI.2002 (NMW).

V I E T N A M: TUYEN QUANG: Na Hang Reserve, 360 m, 20.–24.V.1997, rain forest, FIT, leg. S. Peck (ASC).

DIAGNOSIS: The species closely resembles *H. brunkei* and *H. meghalayense*, but differs, in addition to the completely different aedeagus, in the reddish basal antennal segments.

DISTRIBUTION: The species is at present known from two provinces in southeastern China (Hebei, Fujian) and from Vietnam. *Hesperosoma excellens* was described from Kamikochi (Japan). There have been doubts about the correctness of the type locality (see HAYASHI 2002). Most likely, the specimen was mislabeled.

Hesperosoma elegans group

The species group is characterized by the following characters: eyes large and prominent, at least 1.8 times as long as tempora, usually more than twice as long, thus resembling the genus *Thoracostrongylus* BERNHAUER in habitus; infraorbital furrow almost confluent with

postmandibular ridge (Fig. 22); dorsal surface of pronotum rather flat, abruptly deflexed laterally, almost forming a ridge in posterior two thirds, superior lateral line not or hardly visible from above; mesoventrite with short but distinct median carina anteriorly; aedeagus with rather simple median lobe and very simple paramere with peg setae arranged along the lateral and apical margins and usually less numerous than in the *miwai* group. The group has not been named by the oldest species name but by the one with the widest distribution.

Hesperosoma (Hemihesperosoma) elegans (CAMERON, 1920)

Amichrotus elegans CAMERON 1920: 218

Thoracostrongylus elegans: CAMERON 1932: 214

Hesperosoma (Euheperosoma) elegans: HAYASHI 2002: 178

Thoracostrongylus bryanti CAMERON 1937: 23 **syn.n.**

Amichrotus bryanti: HAMMOND 1984: 194–195

Amichrotus andrewesi FAUVEL (manuscript name)

Amichrotus calliceps CAMERON (manuscript name)

TYPE MATERIAL: **Holotype** ♀ (by monotypy): “Type H.T. \ Syntype \ Sidapur, Coorg, 8.vii.1917, Y.R. Bao coll. \ 1920.142 \ *Amichrotus elegans* Cam. \ (Holotype) *Hesperosoma elegans* (Cameron) det. Y. Hayashi 2003” (BMNH).

Amichrotus bryanti: **Holotype** ♂: “Type \ Quop, W. Sarawak. G.E. Bryant. IV.1914 \ *Amichrotus bryanti* Cam. Type \ M.Cameron. Bequest. B.M. 1955-147” (BMNH).

REDESCRIPTION (Habitus: Fig. 13): 9–12 mm (5–6 mm, abdomen excluded). – Head including neck black, sometimes with slight bronze metallic hue, mandibles and palpi reddish; antennae with variable coloration, usually basal three segments dark brown to blackish with reddish bases, but sometimes almost entirely reddish, segments 4–7(8) black, distal 4 (rarely 3) segments creamy white, last segment often partly dark brown to blackish; pronotum bright reddish, very rarely with a hardly discernible brownish shade; elytra reddish, each elytron with a large black spot occupying posterior third or slightly more, leaving broad V-shaped area along suture reddish, hardly extending onto hypomeron posteriorly and not extending anteriorly, posterior margin yellowish in lateral half; abdominal tergites III–V reddish, with a black median spot confined by pair of basal carinae, spots of tergites III and IV of about equal size, that of tergite V much smaller, narrowed posteriorly, very rarely reaching posterior margin, tergites VI and VII black, tergite VI narrowly reddish along anterior margin, tergite VIII yellowish in anterior two thirds, black to dark brown in posterior third, styli of tergite IX and tergite X black to dark brown, often narrowly reddish-yellow at base, sternite IX pale yellowish to almost transparent; legs yellowish-red, meso- and metafemora frequently darkened distally.

Head trapezoidal, usually 1.33–1.36 times as wide as long (very rarely slightly less than 1.30), eyes strongly protruding, length of tempora quite variable, eyes 2.43–3.15 times as long as tempora, latter proportionately longer in larger specimens; dorsal surface of head rather flat but with slightly bulging glossy area on vertex, latter extremely variable in size and shape (Figs. 23–26), with very fine wavy microsculpture, posteriorly of glossy patch with shallow depressions, punctation very dense in posterior two thirds, punctures contiguous, in anterior third (approximately at level of anterior margin of glossy spot) rather abruptly turning into wrinkle-like microsculpture, anterior margin of clypeus with narrow strip of finely meshed microsculpture; antennae with segments 4–6 (4–5 in females) markedly oblong, subsequent segments gradually becoming shorter, segments 7–10 about as long as wide; pronotum 1.20–1.23 times as long as wide, widest at level of large lateral seta, narrowed toward base in very shallow concave arc or in almost straight line; entire dorsal surface extremely densely punctate, without any trace of an impunctate midline; head and pronotum with very short and fine ground pubescence, that of head pointing anteriorly, that of pronotum pointing posteriorly; elytra about as long as pronotum, sides gently rounded, posterior margin forming obtuse but distinct angle;

along suture surface variably strongly elevated and remaining surface variably uneven; punctation very dense but much finer than that of head and pronotum, with narrow but discernible interstices, matt due to fine irregular microsculpture; ground pubescence as fine and almost as short as that on head and pronotum; abdominal tergites III and IV with basal carinae rather widely separated, distance between carinae larger than distance between each carina and lateral margin of tergite; tergites III–V with very fine and dense punctation in depressions between pairs of basal carinae, pubescence black, laterad of carinae impunctate on tergites III and IV in basal half, sparsely punctate in posterior half, on tergite V with denser punctation and silvery pubescence reaching further anteriorly than on tergites III and IV, surface between punctures matt due to dense meshed microreticulation; tergites VI and VII entirely densely and finely punctate and pubescent and with numerous half-erect macrosetae; tergite VIII with very inconspicuous and very scanty yellowish ground pubescence, also with a considerable number of black macro-setae.

Aedeagus (Figs. 46–47) rather simple, with rod-like, acutely pointed median lobe, with subapical tooth in lateral view (Fig. 54); paramere (Figs. 46c, 47c, 48–51) slender, subparallel-sided, with a few characteristically arranged peg setae, forming a narrow apical sinuation; arrangement and number of peg setae quite variable.

ADDITIONAL MATERIAL EXAMINED:

I N D I A: TAMIL NADU: 1 ♂: “Nilgiri Hills \ andrewesi Fvl. \ R.I.Sc.N.B. 17.479, coll. et det. A. Fauvel” (IRSNB).

M Y A N M A R: SHAN STATE: 1 ♂: “MYANMAR: Shan State (MBS 146a), ca. 35 km N Aungban, Mintaingbin Forest Camp, FIT, 20°55.20'N 96°33.60'E, 11.-23.6.2004, ca. 1320 m [leg. H. Schillhammer]” (NMW).

L A O S: BOKEO: 1 ♂: “Laos, Bokeo prov., 5 km W Ban Toup, Bokeo Nature Reserve, 500-700 m, 20°27-28'N 100°45'E, 4.-18.V.2011 \ NHMB Basel, Laos 2011 Expedition, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan” (NHMB).

V I E T N A M: TUYEN QUANG: 1 ♂: “Vietnam, Tuyen Quang Prov., NaHang Res., 360 m, 20.-24.V.97, rainforest, FIT S. Peck” (ASC).

M A L A Y S I A: PAHANG: 1 ♀: “Malaysia - Pahang, Taman Negara NP, 12.-14.7.1993, leg. H. Forster” (NMW); SELANGOR: 5 ♂♂, 5 ♀♀: “W-Malaysia: Selangor, Ulu Gombak (FIT), 2-18.III.2004, leg. M. Maruyama” (7 KUM, 3 NMW); SABAH: 1 ♂: “Borneo, Sabah, Danum Valley, 04°58'N : 117°47'E, Flight Intercept Trap, June 1999 \ BMNH{E} 2005-177 H. Mendel” (BMNH); 1 ♀: “Sabah Danum Valley B.R.L., f.i.t., 14.-16.II.2007, leg. G. de Rougemont” (CRL).

S I N G A P O R E: 1 ♀: “Singapore \ coll. et det. A. Fauvel, Amichrotus Andrewesi Fauv., R.I.Sc.N.B. 17.479” (IRSNB).

I N D O N E S I A: KALIMANTAN SELATAN: 1 ♂: “Type \ Martapura, S.E. Borneo. Doherty 1891. \ Sharp Coll. 1915-313 \ No. 1133 examined by Prof. Thaxter for Laboulbeniaceae \ Amichrotus calliceps Bernh. Typ.” (BMNH); KALIMANTAN TENGAH: 1 ♀: “Indonesia: Borneo, Kalimantan Tengah, Busang/ Rekut confl., 0°03'S 113°59'E \ Flight Intercept FIT 7, Brendell / Mendel, August 2001 \ 'Barito-Ulu 2001' BMNH(E) 2001-191” (BMNH); SUMATERA UTARA: 1 ♂: “Medan, - O.Küste v. Sumatra. leg. Dr. L. Fulmek \ Brastagi, Fenster, VIII.24 \ ex coll. Scheerpeltz” (NMW).

DISTRIBUTION: The species has a wide distribution: from southwestern India down to the Sunda region (except Java).

Hesperosoma (Hemihesperosoma) chrisaueri sp.n.

TYPE MATERIAL: **Holotype** ♂: “N-Thailand, Chiang M., Soppong-Pai, 1.-8.5.1993, 1800 m, Pacholatko & Dembicky” (NMW).

DESCRIPTION (Habitus: Fig. 14): 11.0 mm long (5.5 mm, abdomen excluded). – The species is extremely similar to *H. elegans* externally, but differs as follows: tempora distinctly longer, eyes only 1.8 times as long as tempora; glossy area on vertex very narrow and short, in shape of an impunctate midline (Fig. 27); antennae with segments 8 and 9 creamy white, two outer segments black (this character might be variable); pronotum slightly more slender (1.26 times as long as

wide); black spot of elytra extended anteriorly laterally, in addition, with a darker oblique, drop-shaped “shadow” near shoulders; basal oblique carinae on tergites III and IV less widely separated, distance between carinae about equal to distance from each carina to lateral margin of tergite, thus black median patches smaller.

Aedeagus (Fig. 55) with median lobe short, as long as paramere, with a tiny indication of a subapical tooth in lateral view; paramere (Fig. 55c) with peg setae more numerous than in *H. elegans*, apical situation less obvious.

Female unknown.

DISTRIBUTION: The species is at present known only from the type locality.

ETYMOLOGY: The species is dedicated to my inspiring mineral collecting friend, Ing. Christian Auer, to commemorate his 50th birthday.

***Hesperosoma (Hemihesperosoma) jacobsoni* (BERNHAEUER, 1915) comb.n.**

Amichrotus jacobsoni BERNHAEUER 1915: 231

Thoracostrongylus picticollis CAMERON 1937: 22 **syn.n.**

Amichrotus picticollis: HAMMOND 1984: 195

TYPE MATERIAL: **Holotype** ♂ (by monotypy): “E. JACOBSON. Java Jan. 1911 Nongkodjar \ Jacobsoni Brh. Typus unic. \ Chicago NHMus M.Bernhauer collection \ HOLOTYPE teste D.J. Clarke GDI Imaging Project \ Photographed Kelsey Keaton Emu catalog \ FMNHINS 2819285 FIELD MUSEUM” (FMC).

Thoracostrongylus picticollis: **Paratype** ♂: “Paratype \ Batoerraden, G. Slamet. Java F.C. Drescher II.1930 \ T. picticollis Cam. Paratype” (BMNH).

DIAGNOSIS: 9 mm long (5 mm, abdomen excluded). – The two known specimens hardly differ from *H. elegans*, except for the generally darker appearance, in particular dark, anchor-shaped markings of the pronotum (Figs. 19–20), and the dark patch on tergite V hardly narrowed posteriorly, distinctly reaching the posterior margin; in addition, there is a very short and narrow, stitch-like impunctate midline in the posterior fifth of the pronotum.

Aedeagus (Fig. 52) also very similar to that of *H. elegans*, but apical portion of median lobe that is delimited by the subapical tooth (in lateral view) somewhat longer (Fig. 53); paramere (Fig. 52c–d) hardly differing from that of *H. elegans*.

Female unknown.

REMARK: It might be disputable whether this is really a separate species or just a subspecies of *H. elegans*, especially since the known distributional ranges do not overlap. More material, especially of *H. jacobsoni* is needed to assess the situation more properly.

DISTRIBUTION: The species is at present known only from two places in Central and East Java, respectively.

***Hesperosoma (Hemihesperosoma) signaticolle* sp.n.**

TYPE MATERIAL: **Holotype** ♂: “Malaysia, Pahang distr., Cameron Highlands, 1450-1650 m, Tanah Rata env., Gun. Jasar, N 04°28'25" E 101°22'43", 14.III.-7.IV.2011, R. Hergovits leg.” (NMW).

DESCRIPTION (Habitus: Fig. 15): 11.5 mm long (5.4 mm, abdomen excluded). – This species, too, is very similar to *H. elegans* in terms of size and body proportions; head 1.33 times as wide as long, eyes 2.65 times as long as tempora; head with very narrow mediolongitudinal glossy portion (Fig. 28) as in *H. chrisaueri*; pronotum about as slender as in *H. chrisaueri*, 1.25 times as wide as long; in coloration it is more similar to *H. jacobsoni*, due to dark brown markings on the pronotum, a longitudinal dark brown median patch and two smaller anterolateral patches; color

pattern of elytra almost identical to that of *H. chrisaueri*, with dark posterior patch laterally extended anteriorly, dark median patches on tergites III–V very narrow, occupying only about half the width of space between oblique carinae. It differs from *H. elegans* and *H. chrisaueri* in the more narrowly spaced oblique carinae on tergites III–V, the distance between carinae being smaller than the distance between each carina and lateral margin of tergite, and in the presence of a pair of shorter oblique carinae even on tergite VI.

Aedeagus (Fig. 56), with median lobe very short, hardly as long as paramere, in lateral view with a tiny hook-like tooth at apex; paramere (Fig. 56c) broader than in *H. elegans* and with peg setae more numerous.

Female unknown.

DISTRIBUTION: The species is at present known only from the type locality.

ETYMOLOGY: The specific name refers to the dark markings on the pronotum.

***Hesperosoma (Hemihesperosoma) merritti* (BERNHAEUER, 1912) comb.n.**

Amichrotus merritti BERNHAUER 1912: 253

TYPE MATERIAL: **Holotype** ♀ (by monotypy): “Acc. No. 8075 \ Collected by H.C. Merritt \ Mt. Banajo, Lagun Philippinen \ *Amichrotus merritti* [sic!] Bh. Typ. un. \ merritti [sic!] Brnh. Typus \ Chicago NHMus M.Bernhauer Collection \ Holotype teste D.J. Clarke GDI Imaging Project \ Photographed Kelsey Keaton 2014 EMU Catalog \ [Barcode] NHMUSINS 2819286 FIELD MUSEUM” (FMC).

REDESCRIPTION (Habitus: Fig. 16): 11.5–12.5 mm long (5.8–6.7 mm, abdomen excluded). – Head black, neck dark reddish; mandibles reddish testaceous, palpi brownish red to dark reddish-brown, segments 2–3 of maxillary palpi and segment 2 of labial palpi usually darker than remaining segments; antennae with segment 1 dark brown to reddish brown, segment 2 dark brown to black but with proximal half reddish, segments 3–7 black, segments 8–10 creamy white, segment 11 black, sometimes narrowly whitish at base; pronotum, prosternum, meso- and metaventre reddish; elytra brick-red, each elytron (Figs. 17–18) with a small black postero-lateral spot (larger rounded spot in Negros specimens), posterior margin narrowly yellowish in lateral half; abdominal segments III–VI black, paratergites III–V pale yellowish in posterior third, tergite V with pair of large, semicircular, pale yellowish to orange spots, segment VIII pale yellowish in anterior two thirds, black in posterior third; styli of tergite IX black, dark reddish-brown at base, tergite X dark brown and somewhat blackened toward distal end; legs pale yellowish, sides of protibiae, distal third of meso- and metafemora darker brown.

Head rounded quadrangular to slightly trapezoidal, 1.25–1.27 times as wide as long, eyes large, 2.56–2.58 times as long as tempora (2.43–2.50 in Negros specimens), latter rounded to slightly angular; surface with very dense, mostly contiguous punctation, punctural grooves confluent in places, vertex with very narrow and rather short impunctate midline; with large area (delimited by impunctate midline and antennal sockets) impunctate but densely strigulose, narrowly reaching anterior margin of clypeus medially; remaining part of clypeus as well as a very narrow area around antennal sockets glabrous and glossy; antennae with segments 4–7 markedly oblong (slightly less so in females), segments 8–10 slightly oblong in males, about as long as wide in females; pronotum 1.18–1.19 times as long as wide (1.20–1.22 in Negros specimens), widest at level of large antero-lateral seta, narrowed toward base in shallow concave arc; dorsal surface somewhat flattened, punctation similar to that on head, without any indication of an impunctate midline; scutellum rather coarsely punctate, but less densely as head and pronotum, surface between punctures with isodiametrical microsculpture medially, more long-meshed laterally; elytra densely, very finely punctate, punctures weakly impressed, hardly discernible; pubescence of body short, decumbent, color usually corresponding with color of integument underneath;

abdominal tergites III–V each with pair of oblique carinae, carinae widely separated on tergites III and IV, distance between carinae markedly wider than distance between each carina and lateral margin of tergite; tergites III–VII finely and very densely punctate and pubescent, pubescence black, moderately long, yellowish parts on tergites (paratergites resp.) III–V with silvery pubescence, that on large semicircular spots variegated; tergite VIII very sparsely punctate and thus more glossy than preceding tergites.

Aedeagus (Figs. 57–58) as simple as in the other members of the species group; median lobe rather bulky, in lateral view with distinct subapical tooth; paramere (Figs. 57c–d, 58c) with similar pattern of peg setae as in the other group members but more numerous.

ADDITIONAL MATERIAL EXAMINED:

PHILIPPINES: LUZON: 1 ♀: “6.IV. Banahao \ meritti Brh. Det. Bernhauer Staudinger. \ Chicago NHMus M.Bernhauer Collection \ [Barcode] NHMUSINS 2840713 FIELD MUSEUM” (FMC); 1 ex. (heavy dermestid damage): “Mt. Makiling Luzon, Baker \ 2336 \ meritti Brh. det. Bernhauer \ Chicago NHMus M.Bernhauer Collection \ [Barcode] NHMUSINS 2840714 FIELD MUSEUM” (FMC); 1 ♂: “Philippines: Luzon, Laguna, Mt. Makiling, 16.-17.XI.2013, leg. C.V. Pangantihon” (CZW); 1 ♀: “Philippines, Luzon: Lagunas, Mt. Banahaw above Kinabuhayan, 600-700 m, trail to Crystalino, 24.XI.1995, J. Kodada & B. Rigová lgt.” (MHNG); NEGROS: 2 ♂♂, 1 ♀: “Philippinen: Negros Or., Lake Balinsasayao – Lake Danao, Sibulan, 20.-30.10.2004, leg. C. Pangantihon (P403)” (CZW, NMW).

DISTRIBUTION: The species is at present known only from the islands of Luzon and Negros (Philippines).

REMARK: The specimens from Negros differ from the Luzon specimens in the much larger black elytral spots. The slightly smaller eyes and the slight differences in the aedeagus might fit into the variability range. More material would be needed to judge the significance of these differences and whether or not they represent different subspecies.

Unidentified species

Hesperosoma (Hemihesperosoma) sp. prope laosense

2 ♀♀: “NE-LAOS: prov. Hua Phan, Ban Saluei, Phou Pan, 1.-31.5.2011, 20°12'N 104°01'E, 1500-1900 m, leg. Holzschuh” (NMW).

These two females have a similar tergite X as those of *H. laosense*. Externally, they also resemble specimens of that species with a red pronotum. However, the shape of the head is more quadrangular. The possibility that the two specimens belong to another species cannot be excluded with certainty.

Hesperosoma (Hemihesperosoma) sp.

2 ♀♀: “Laos-NE, Huoa Phan prov., 20°13'09-19"N 103°59'54"-104°00'03"E, 1480-1550 m, Phou Pane Mt., 22.iv.-14.v.2008, Vit. Kubáň leg.” (NMB).

The two females definitely belong to an undescribed species close to *H. brunkei*, *H. laosense* and *H. pedersenii*, on account of the entirely reddish abdominal segment VIII, which does not occur in any known species of this subgenus. Since it is likely that another species with a similar character may occur on a geographically close mountain, it seems wise not to describe a new species based on these two females as subsequent assignment might be very difficult or impossible.



Figs. 1–2: Habitus of 1) *Hesperosoma miwai*, 2) *H. klapperichi*.



Figs. 3–4: Habitus of 3) *Hesperosoma alexpuchneri*, 4) *H. yunnanense*.



Figs. 5–6: Habitus of 5) *Hesperosoma distinctum*, 6) *H. vietnamense*.



Figs. 7–8: Habitus of 7) *Hesperosoma laosense*, 8) *H. ruficolle*.



Figs. 9–10: Habitus of 9) *Hesperosoma brunkei*, 10) *H. meghalayense*.



Figs. 11–12: Habitus of 11) *Hesperosoma pedersenii*, 12) *H. excellens*.



Figs. 13–14: Habitus of 13) *Hesperosoma elegans*, 14) *H. chrisaueri*.



Figs. 15–16: Habitus of 15) *Hesperosoma signaticolle*, 16) *H. merritti*.



17



18



19



20

Figs. 17–20: 17–18) Elytra of *Hesperosoma merritti* from 17) Luzon and 18) Negros; 19–20) pronotum of *H. jacobsoni*.



21



22



23



24

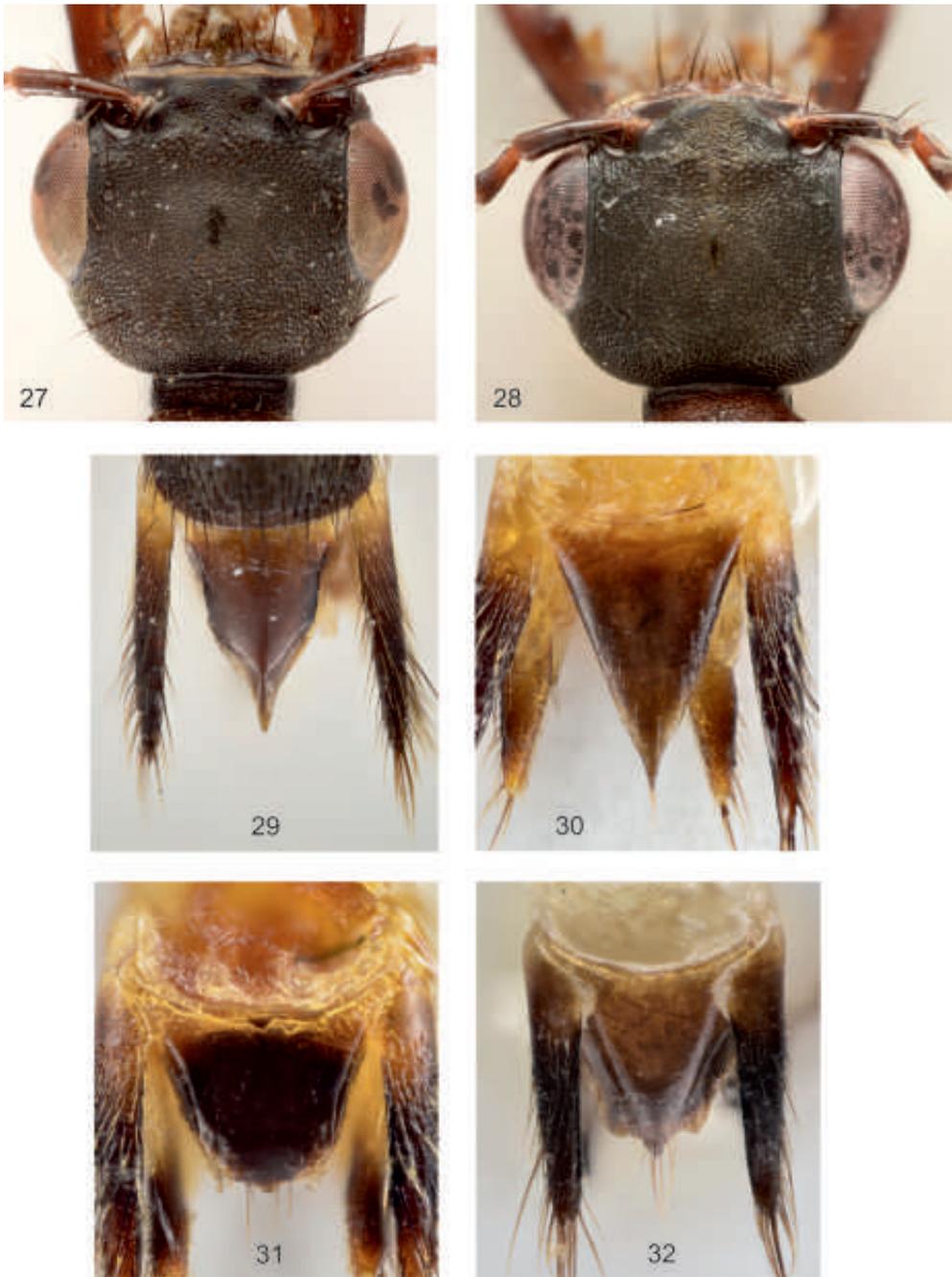


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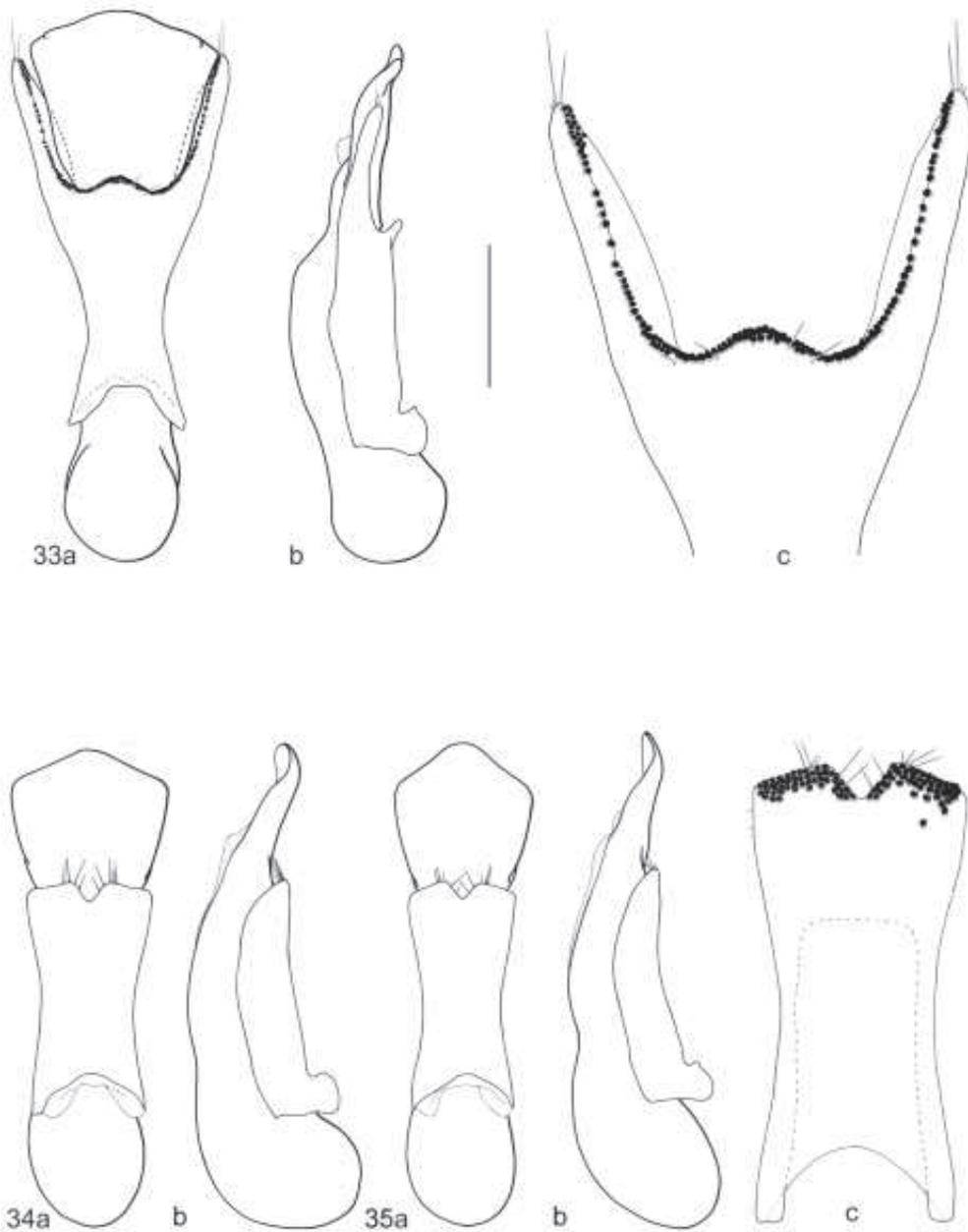


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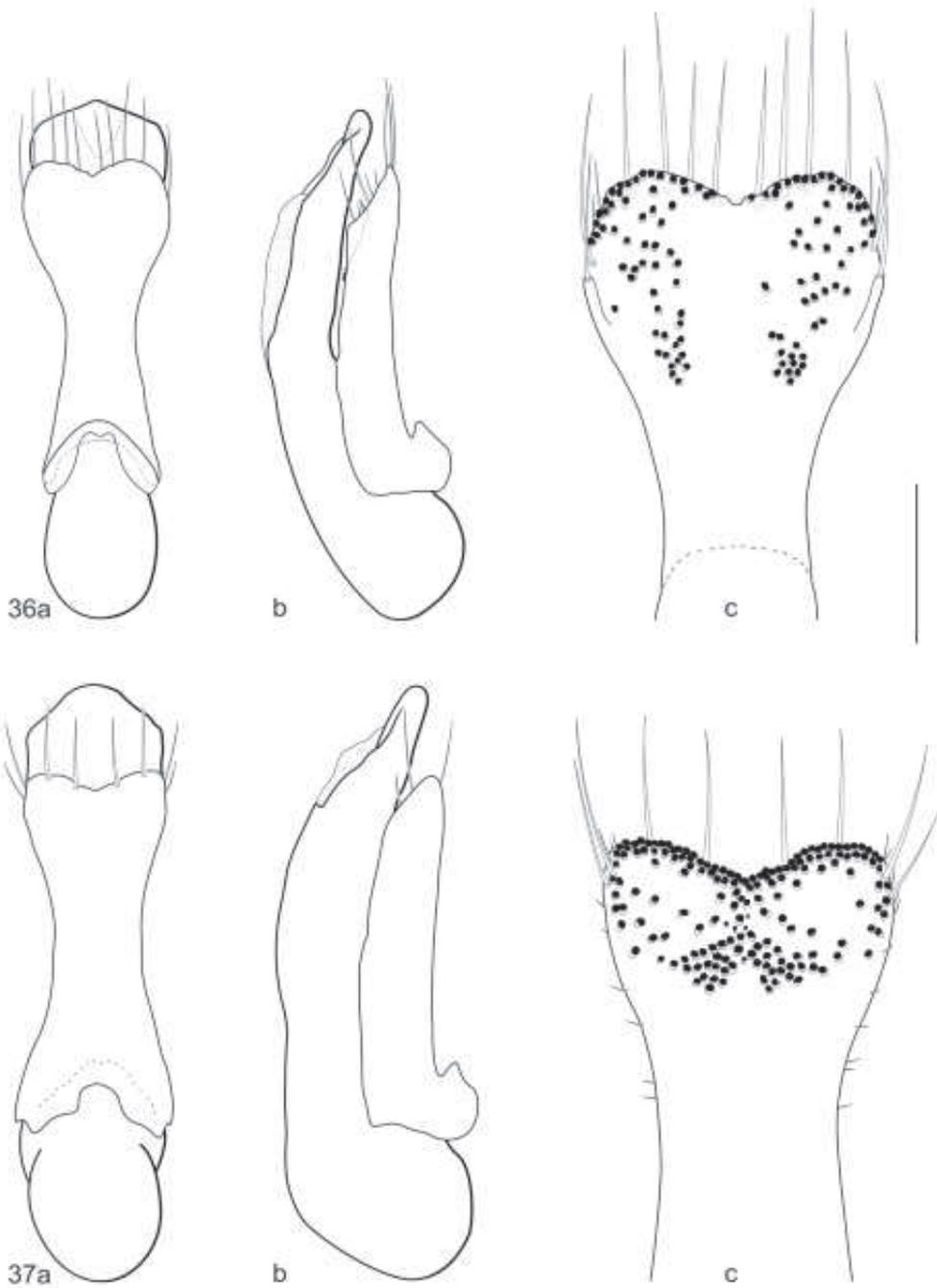
Figs. 21–26: Head of 21) *Hesperosoma brunkei* (ventral view); 22) *H. elegans* (ventral view); 23–26) *H. elegans* (dorsal view) from 23) Malaysia, 24) Borneo, 25) Vietnam, 26) India.



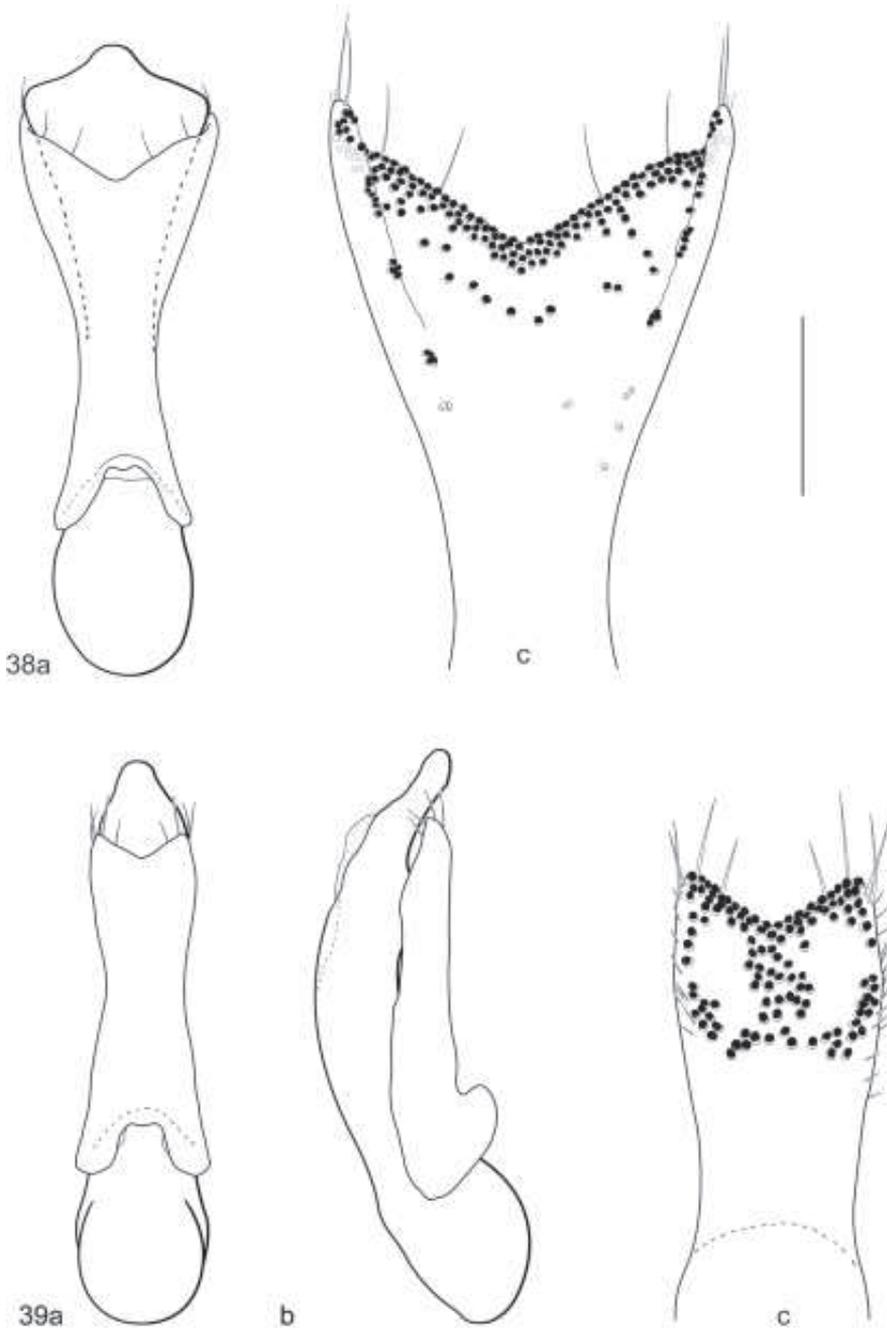
Figs. 27–32: 27–28) Head (dorsal view) of 27) *Hesperosoma chrisaueri*; 28) *H. signaticolle*; 29–32) female tergite X of 29) *H. pedersenii*, 30) *H. brunkei*, 31) *H. laosense*, 32) *H. elegans*.



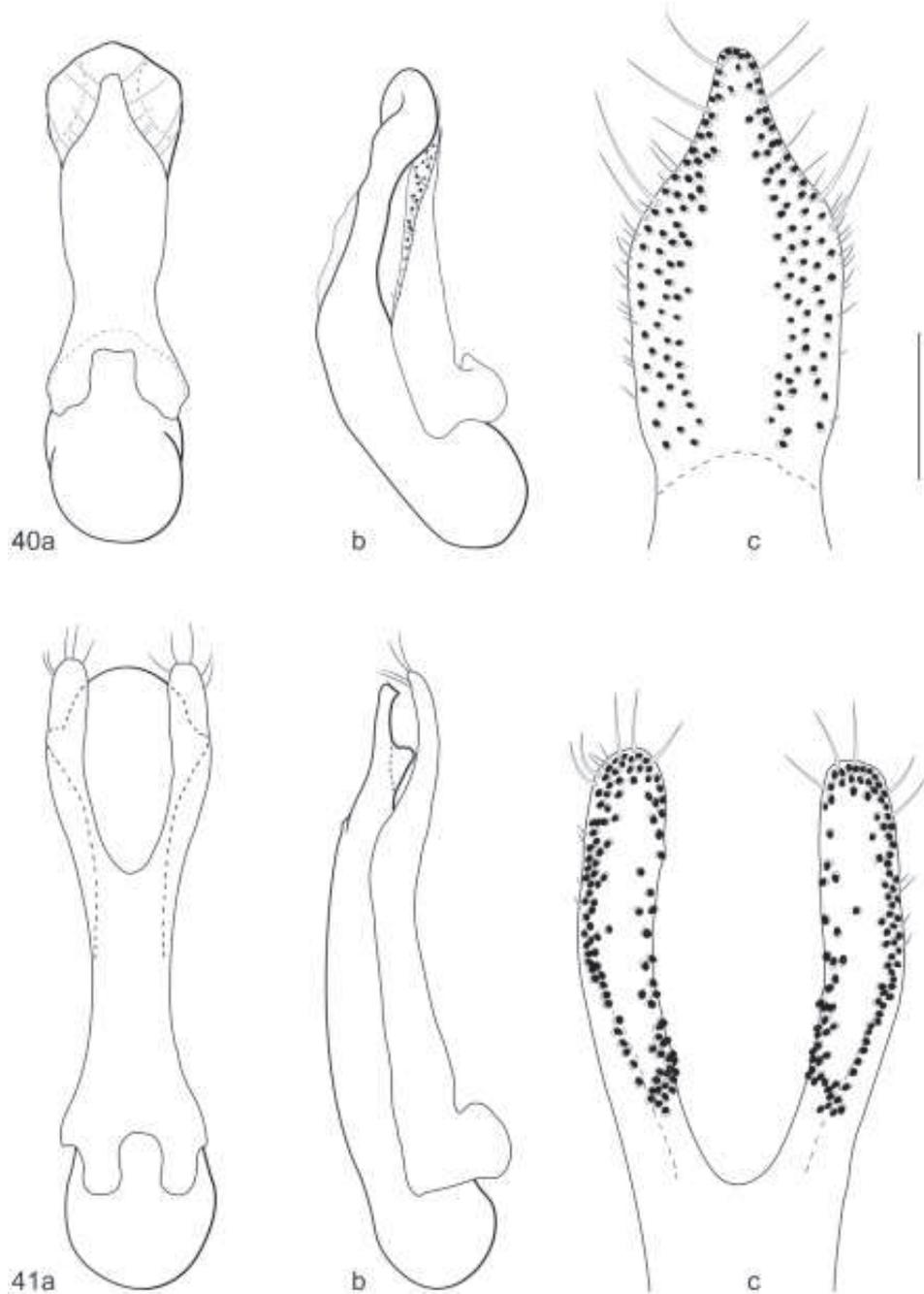
Figs. 33–35: Aedeagus of 33) *Hesperosoma miwai*; 34) *H. klapperichi* (Fujian); 35) *H. klapperichi* (Hubei). Ventral (a) and lateral (b) view, paramere (c). Scale bars: 0.5 mm (a–b), 0.25 mm (c).



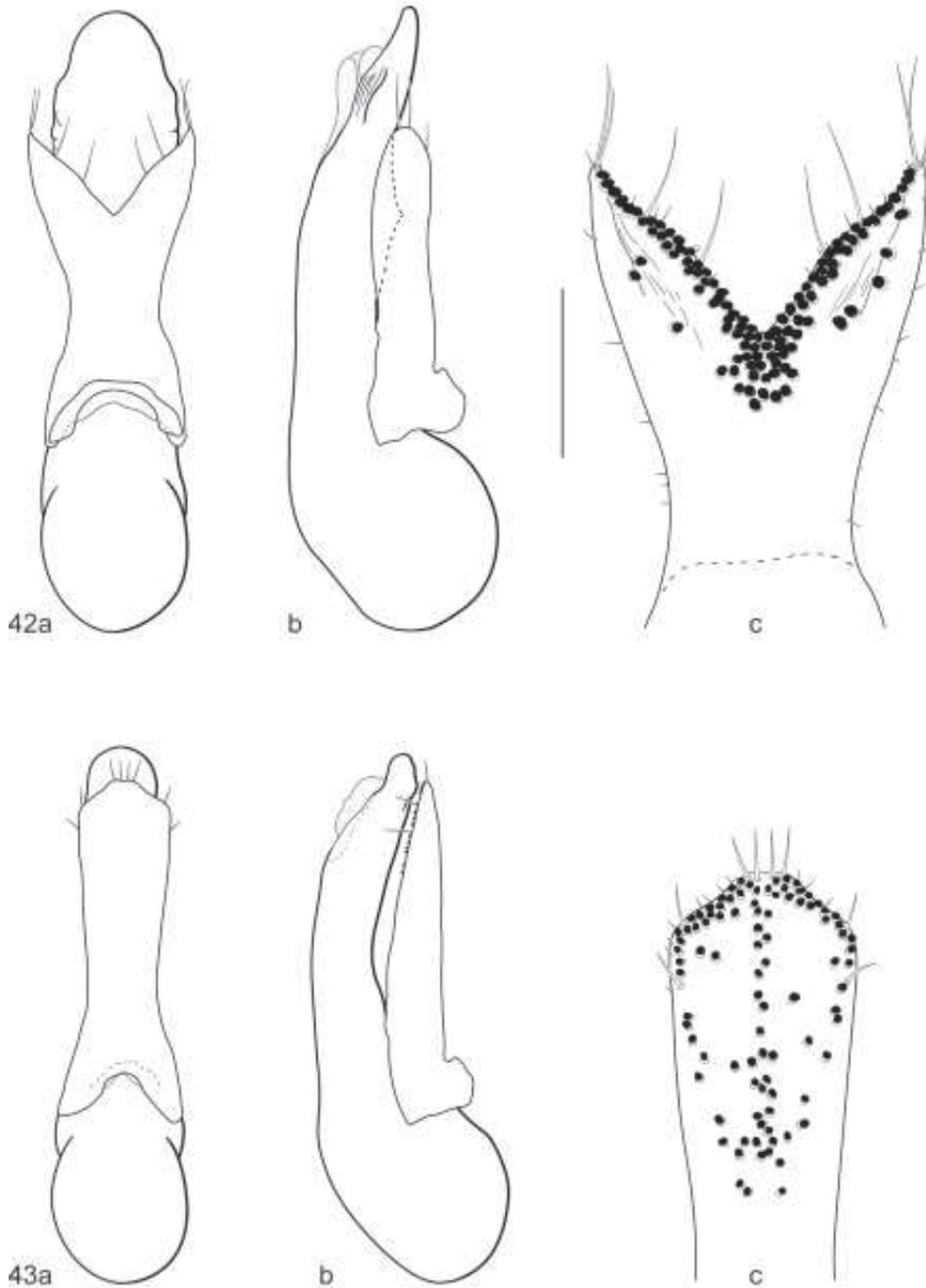
Figs. 36–37: Aedeagus of 36) *Hesperosoma yunnanense*; 37) *H. laosense*. Ventral (a) and lateral (b) view, paramere (c). Scale bars: 0.5 mm (a–b), 0.25 mm (c).



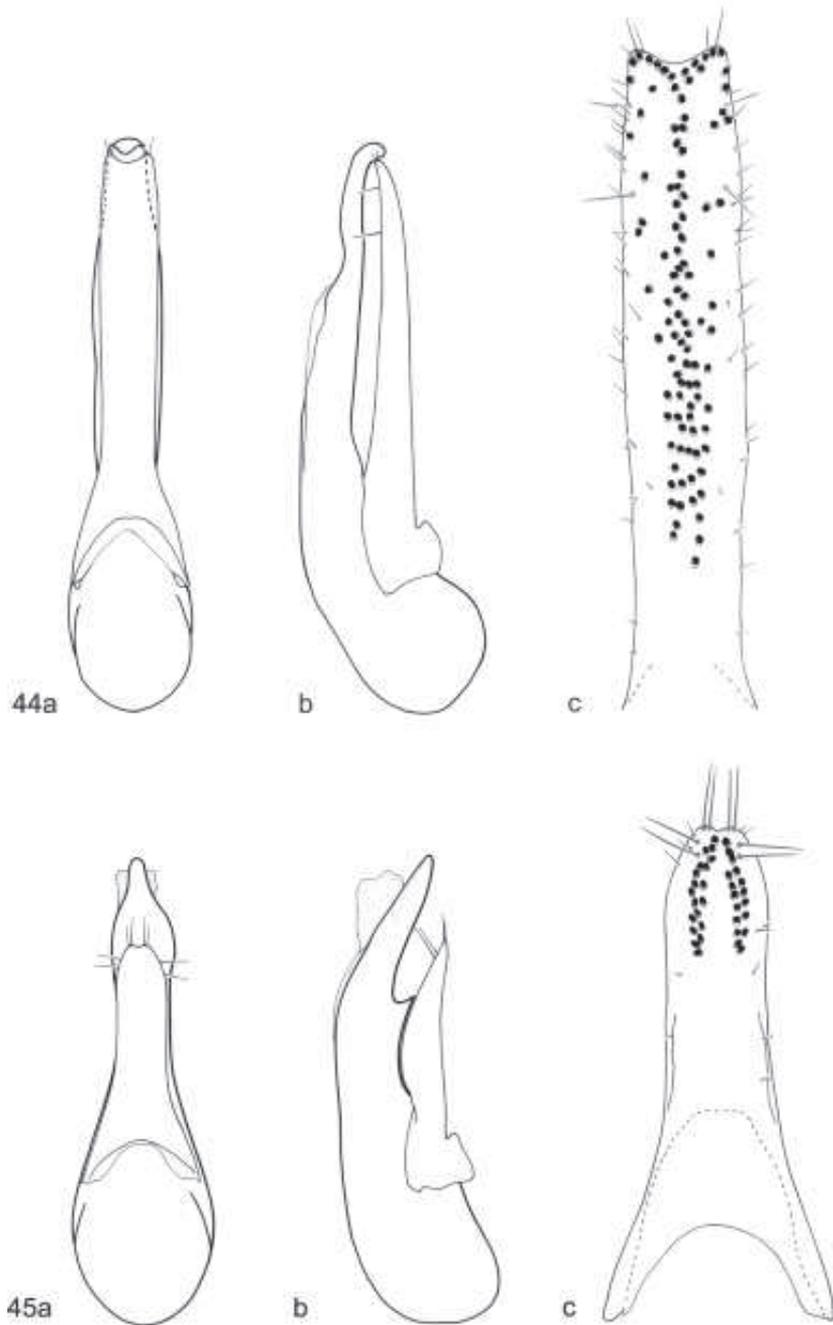
Figs. 38–39: Aedeagus of 38) *Hesperosoma vietnamense*; 39) *H. distinctum*. Ventral (a) and lateral (b) view, paramere (c). Scale bars: 0.5 mm (a–b), 0.25 mm (c).



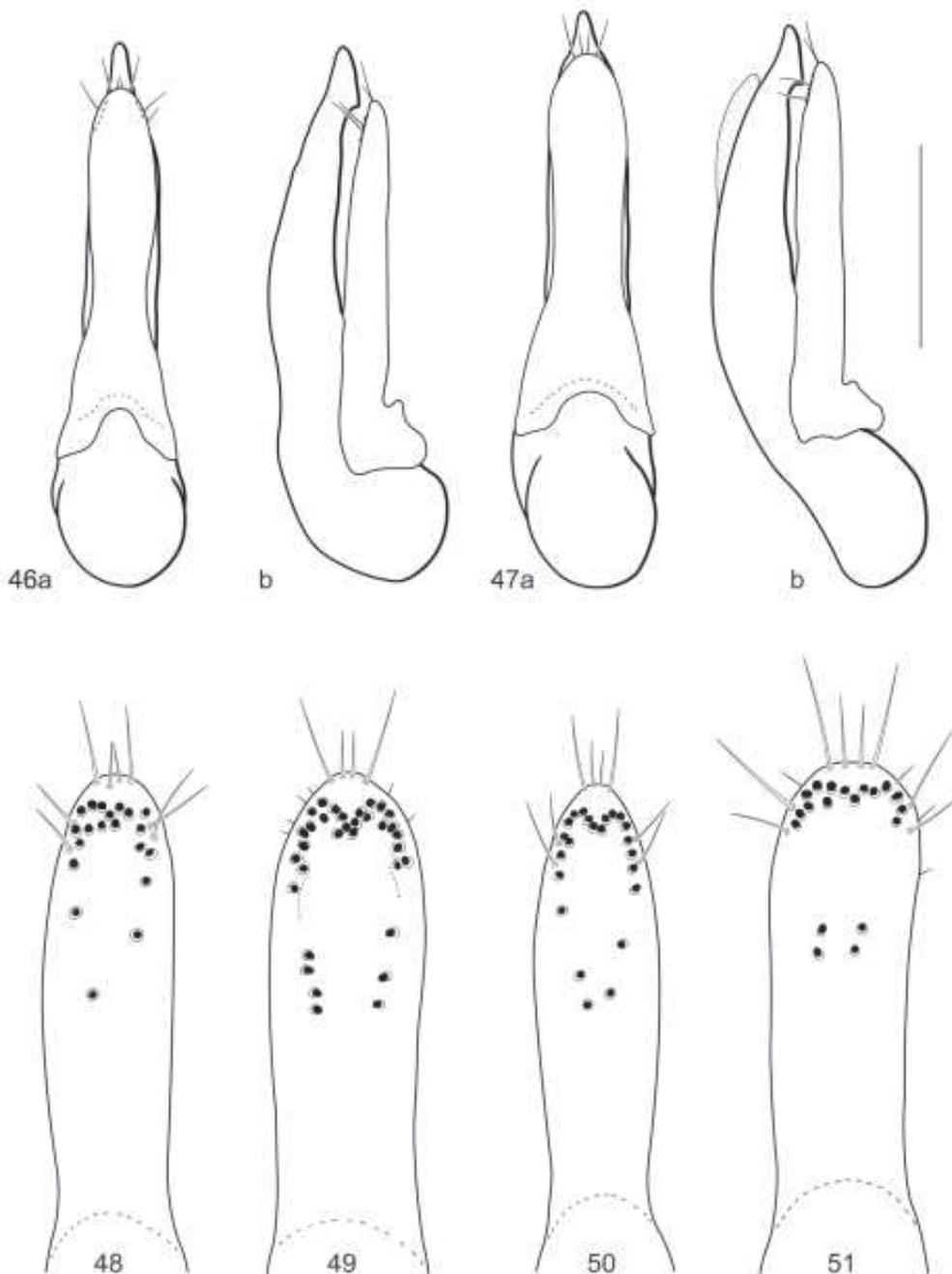
Figs. 40–41: Aedeagus of 40) *Hesperosoma alexpuchneri*; 41) *H. ruficolle*. Ventral (a) and lateral (b) view, paramere (c). Scale bars: 0.5 mm (a–b), 0.25 mm (c).



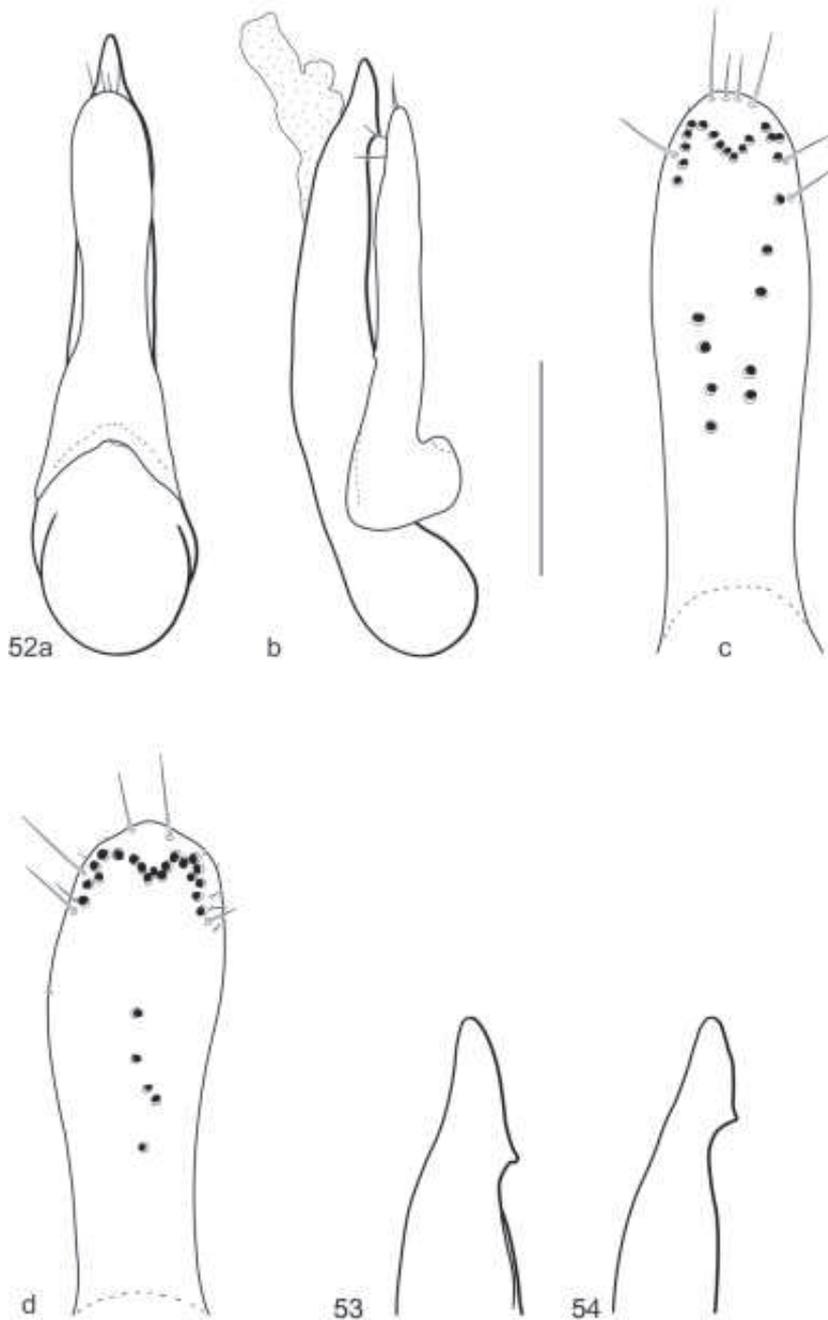
Figs. 42–43: Aedeagus of 42) *Hesperosoma pedersenii*; 43) *H. brunkei*. Ventral (a) and lateral (b) view, paramere (c). Scale bars: 0.5 mm (a–b), 0.25 mm (c).



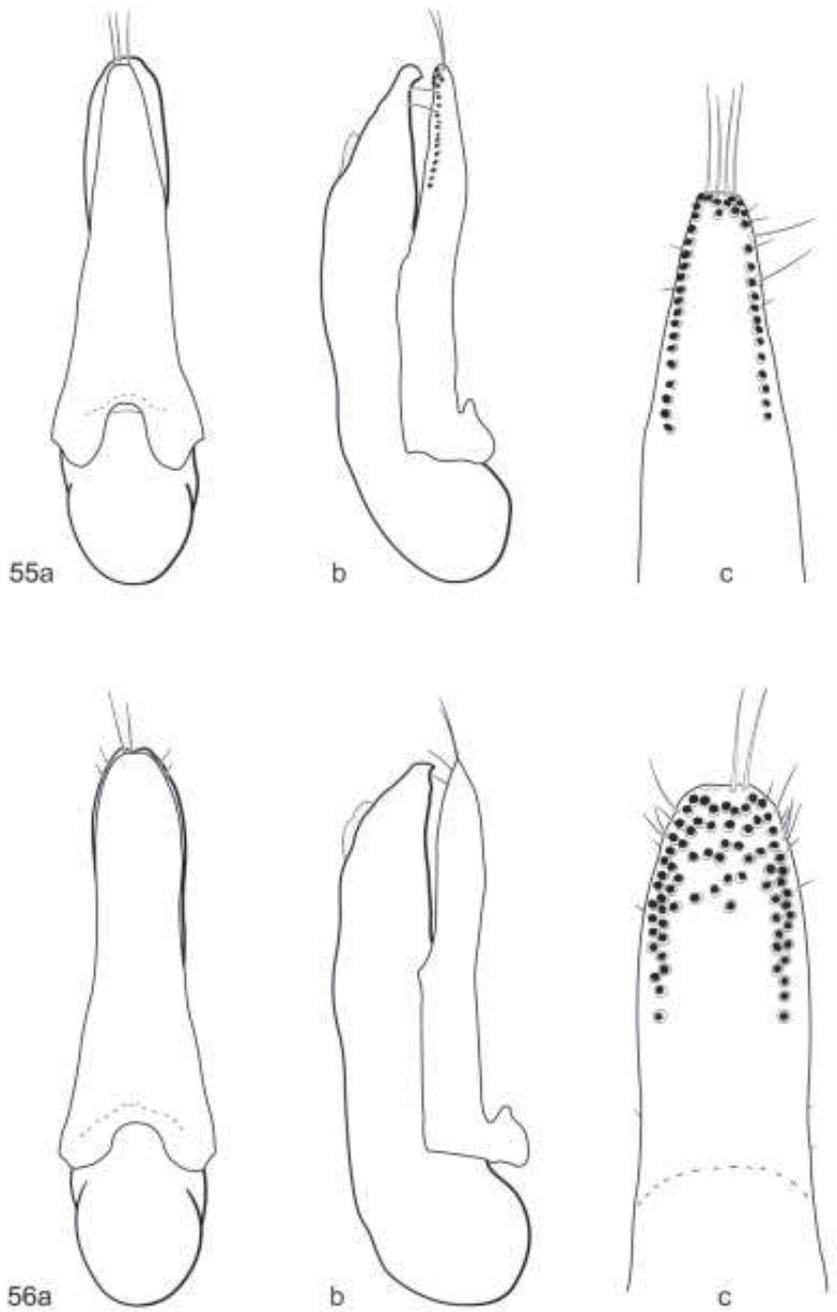
Figs. 44–45: Aedeagus of 44) *Hesperosoma meghalayense*; 45) *H. excellens* (China). Ventral (a) and lateral (b) view, paramere (c). Scale bars: 0.5 mm (a–b), 0.25 mm (c).



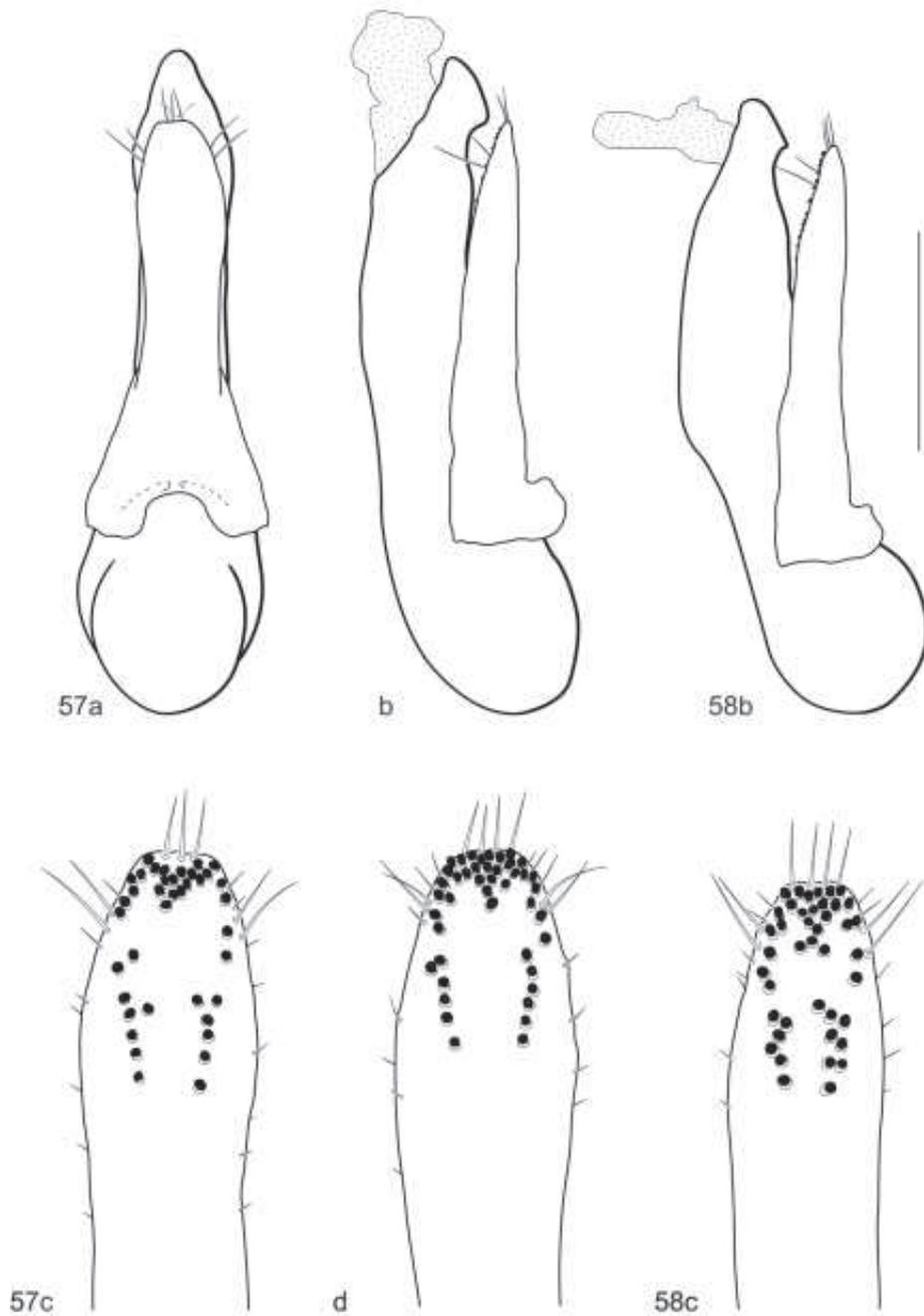
Figs. 46–51: Aedeagus of *Hesperosoma elegans* from 46) Borneo, 47) Vietnam; 48–51) variety of parameres. Ventral (a) and lateral (b) view. Scale bars: 0.5 mm (a–b), 0.25 mm (48–51).



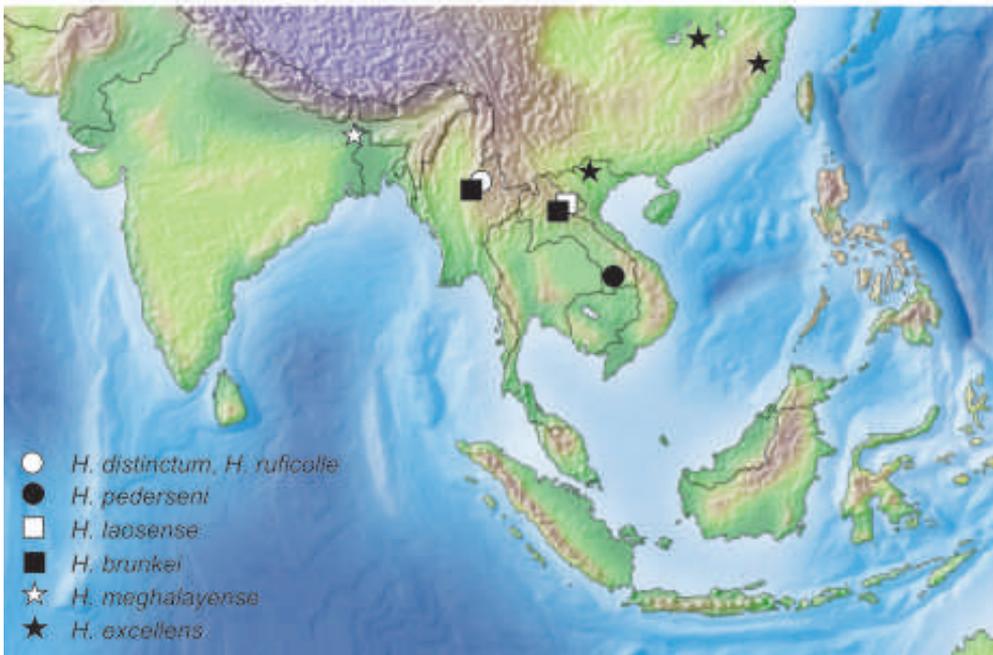
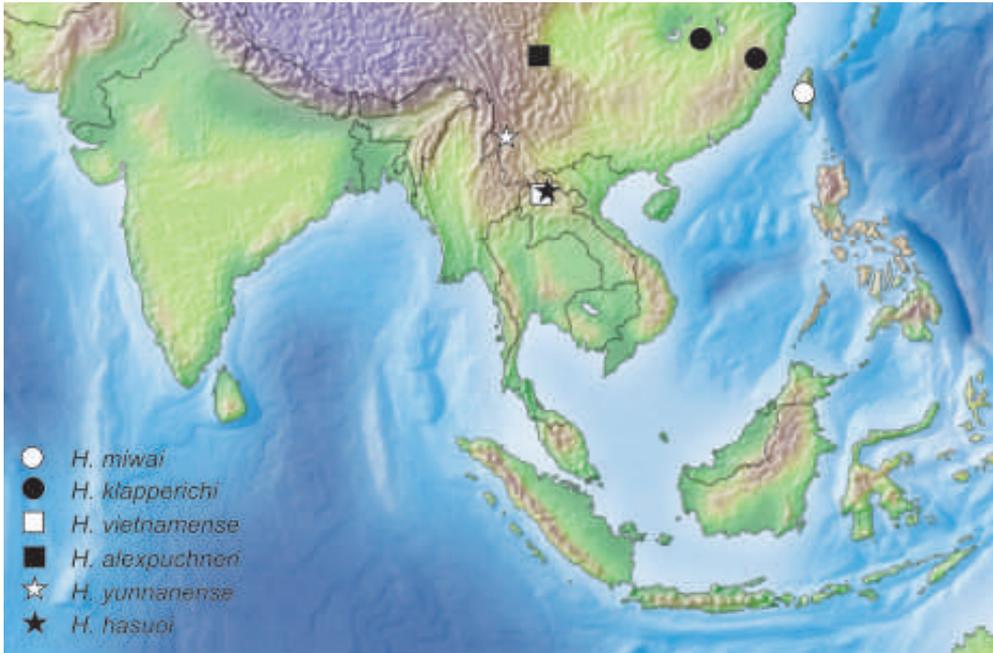
Figs. 52–54: 52) Aedeagus of *Hesperosoma jacobsoni*, a–c) “*Amichrotus picticollis*”, d) holotype of *H. jacobsoni*; 53–54) apex of median lobe in lateral view of 53) *H. jacobsoni*; 54) *H. elegans*. Ventral (a) and lateral (b) view, paramere (c, d). Scale bars: 0.5 mm (a–b), 0.25 mm (c–d).



Figs. 55–56: Aedeagus of 55) *Hesperosoma chrisaueri*; 56) *H. signaticolle*. Ventral (a) and lateral (b) view, paramere (c). Scale bars: 0.5 mm (a, b), 0.25 mm (c).



Figs. 57–58: Aedeagus of *Hesperosoma merritti*; 57) Negros; 58) Luzon (Makiling). Ventral (a) and lateral (b) view, paramere (c–d). Scale bars: 0.5 mm (a–b), 0.25 mm (c–d).



Figs. 59–60: Distribution of *Hesperosoma* species of the *miwai* group.

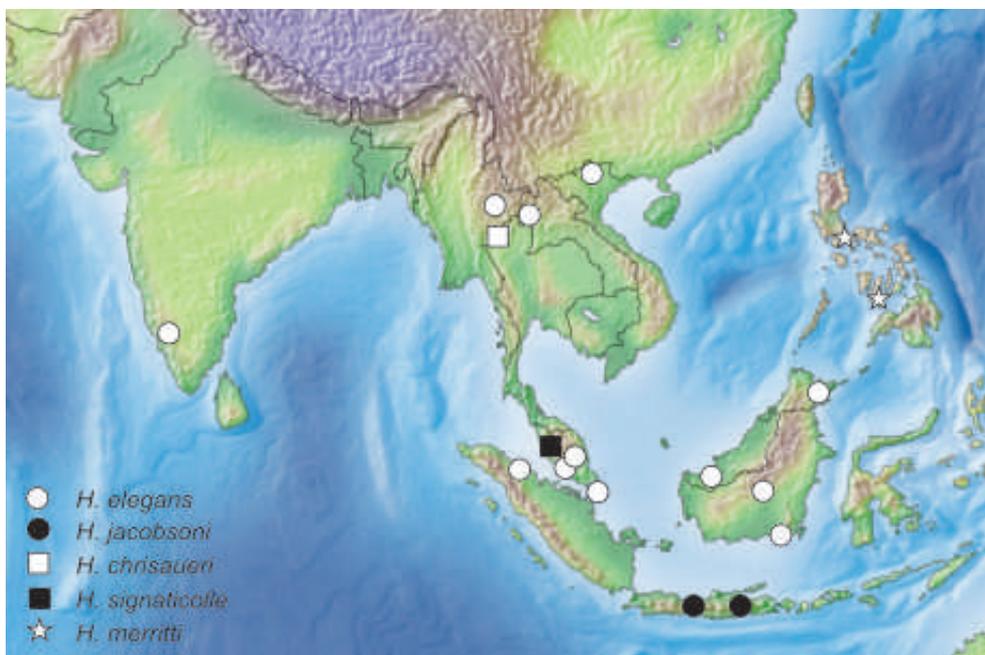


Fig. 61: Distribution of *Hesperosoma* species of the *elegans* group.

Discussion

The systematic situation at the generic level in this group of genera is anything but satisfactory. This mainly concerns the genera *Hesperosoma* (with its two subgenera) and *Philomyceta* CAMERON. A closer examination of the *elegans* group during this revision underlined the problems. The species of this group are so different from those of the *miwai* group (even more from those of *Hesperosoma* s.str.) that one might be tempted to place them in a genus of their own. In fact, the strongly deflexed sides of the pronotum in the *elegans* group somehow resemble those of *Philomyceta*, from which, however, the former clearly differs in the large eyes and a completely different general morphology of the aedeagus. It is even questionable whether or not *Hemihesperosoma* should be raised to genus level. The availability of DNA-grade material is highly desirable, as this seems to be about the only way to assess the relationships among the respective lineages. For practical reasons, however, it seems appropriate to keep the *elegans* group within the subgenus *Hemihesperosoma* and the subgenus within *Hesperosoma*.

Zusammenfassung

Die Untergattung *Paramichrotus* NAOMI, 1982 der Gattung *Hesperosoma* SCHEERPELTZ, 1965 wird revidiert. Vier neue Arten werden beschrieben: *H. (Paramichrotus) brunkei* (Laos, Myanmar); *H. (Paramichrotus) laosense* (Laos); *H. (Paramichrotus) chrisaueri* (Thailand); *H. (Paramichrotus) signaticolle* (W-Malaysia). Neue Synonyme: *Hesperosoma (Paramichrotus) NAOMI, 1982* (= *H. (Euhesperosoma, HAYASHI, 2002) syn.n.*); *H. vietnamense* ITO, 2011 (= *H.*

yasuhikoi ITO, 2011 **syn.n.**); *H. elegans* CAMERON, 1920 (= *Amichrotus bryanti* CAMERON, 1937 **syn.n.**); *H. jacobsoni* BERNHAUER, 1915 (= *Amichrotus picticollis* CAMERON, 1937 **syn.n.**). Die Aedeagi aller durch Männchen vertretenen Arten werden abgebildet. Der Habitus der meisten Arten und zusätzliche, für die Diagnostik bedeutsame Merkmale, werden durch Farbfotos illustriert. Zusätzlich enthält die Arbeit einen Bestimmungsschlüssel zu den Arten der Untergattung sowie Verbreitungskarten.

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Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Koleopterologische Rundschau](#)

Jahr/Year: 2015

Band/Volume: [85_2015](#)

Autor(en)/Author(s): Schillhammer Harald

Artikel/Article: [Subgenus Hemihesperosoma HAYASHI of Hesperosoma SCHEERPELTZ reinstated and revised \(Coleoptera: Staphylinidae: Staphylininae\) 121-165](#)