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New species of *Shaverdolena* SCHILLHAMMER, 2005 and *Hybridolinus* SCHILLHAMMER, 1998

(Coleoptera: Staphylinidae: Staphylininae)

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Abstract

New species of the genera *Shaverdolena* SCHILLHAMMER, 2005 and *Hybridolimus* SCHILLHAMMER, 1998 (Coleoptera: Staphylinidae: Staphylininae) are described: *Shaverdolena edeltraudae* (China: Hubei), *Hybridolinus laosensis* (Laos) and *H. shiniushanus* (China: Fujian). *Hesperus malaisei* SCHEERPELTZ, 1965 is transferred to the genus *Hybridolinus*. The male copulatory organs of the new species are illustrated. The key to species of *Hybridolinus* is updated.

Key words: Coleoptera, Staphylinidae, Staphylininae, Philonthina, *Shaverdolena*, *Hybridolinus*, new species, new combination, China, Laos, systematics, taxonomy, key.

Introduction

Among recently received material from various sources, I detected several new species of the genera *Shaverdolena* Schillhammer, 2005 and *Hybridolinus* Schillhammer, 1998 which are described below. In addition, during the work on Chinese *Hesperus* Fauvel together with Chinese colleagues, the examination of the holotype of *Hesperus malaisei* Scheerpeltz, 1965 from Myanmar revealed that this species in fact belongs to *Hybridolinus*. Together with the new species described from Laos, these are the first records of *Hybridolinus* outside China. An updated key to *Hybridolinus* is provided, also accommodating the recently described species by LI & ZHOU (2010). The specimens treated in this paper are deposited in the collections of the Naturhistorisches Museum Wien (NMW) and the Riksmuseum, Stockholm (RMS; Bert Viklund).

Shaverdolena edeltraudae sp.n.

Holotype ♂: "CHINA, W-Hubei, 24.V.-14.VI., Guanmenshan, 31°26'N 110°22'E, 1350-1600 m, Jaroslav Turna leg., 2008" (NMW).

DESCRIPTION: 13.5 mm long (6.5 mm, abdomen excluded). — Black, shiny; head and pronotum with slight greenish to brassy hue; mandibles dark reddish brown, medial margin narrowly blackish; palpi reddish brown to reddish testaceous, antennae black with two outer segments reddish, bases of segments 2–9 narrowly reddish; elytra dark reddish brown, inconspicuously darkened on disc, with hardly discernible metallic hue; scutellum black; posterior margins of abdominal segments obscurely but rather broadly reddish, genital segment yellowish, styli of tergite IX with reddish basal and dark brown apical half; legs reddish brown, metafemora inconspicuously darker.

Head transversely quadrangular, 1.33 times as wide as long, tempora parallel-sided, 1.41 times as long as eyes, disc of head rather coarsely and densely punctate, punctures separated by about a

puncture diameter, with narrow and weakly delimited impunctate portion along midline and anterior margin of clypeus; surface between punctures with exceedingly fine short-meshed microsculpture; mandibles longer than head; antennae with all segments markedly oblong; pronotum oblong, 1.13 times as long as wide, widest at point where superior lateral line bent ventrad, narrowed toward base in very weak concave arc, punctation almost as on head but distinctly denser in places, antero-laterally punctures almost contiguous, with broad, well delimited impunctate midline, slightly widened in front of base, microsculpture as on head but lacking on widened posterior portion of midline, almost specular; setation of head and pronotum moderately long, very fine, brownish; elytra along sides longer than pronotum along midline, moderatey coarsely, very densely, uniformly punctate, punctures separated by somewhat less than a puncture diameter; abdomen with tergites III–V (first three visible) with shallow transverse depression at base, all visible tergites with only one basal line, with a narrow, impunctate transverse band at base, remaining portion of basal fourth or third coarsely and densely punctate, particularly in depressions of first three visible tergites almost pit-like, remaining posterior portions of tergites much less densely and rather finely punctate.

Male: secondary sexual characters hardly differing from those of the other two congeners; aedeagus (Fig. 1) very similar to that of *S. leigongshana* SCHILLHAMMER, 2005, but with longer apico-dorsal tube-like extension of median lobe and more slender lobes of paramere.

Female unknown.

DIAGNOSIS: Externally, the species is almost identical to *S. leigongshana* from Guizhou province and differs only by the markedly darker elytral color and the longer mandibles. These characters, however, might by subject to intraspecific variability.

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

ETYMOLOGY: I gladly dedicate this species to my mother, Edeltraud Tötzl, in thankfulness and admiration for having been a shelter in the storm through all my life.

Hybridolinus laosensis sp.n.

Holotype σ : "NE-LAOS: Houaphan province, Phu Loei NP, Mt. Phu Loei (Phu Soy), 20°15.267'N 103°11.560'E \ prim. upper montane rain forest, dung traps, 2099 m, 10.-12.08.2008, leg. S. Tarasov" (NMW).

DESCRIPTION: 12 mm long (5.7 mm, abdomen excluded). – Head and pronotum black with dark olive green metallic hue, head rather opaque; mandibles reddish brown, darkened in laterobasal portion; palpi dark brown, last segments of both maxillary and labial palpi markedly paler reddish; antennae with first two segments dark brown with bases narrowly reddish, segments 3–7 black, four outer segments creamy white; elytra bright reddish testaceous, apical margin narrowly yellowish, each elytron with large black spot in posterior half, laterally slightly protruding onto deflexed portion, medially and apically not reaching suture and apex by a fair margin; scutellum black; abdomen with segments III–V (first three visible) reddish testaceous, segments VI and VII black with broadly reddish posterior margin, segment VIII black with broadly reddish anterior and posterior margins; genital segment yellowish; legs entirely yellowish red.

Head trapezoid, extremely transverse, about twice as wide as long, tempora almost regularly rounded, about as long as eyes, disc of head coarsely but sparingly punctate, tempora very densely punctate, surface with distinct isodiametric microsculpture; mandibles falciform, almost twice as long as head; antennae with segments 4–6 oblong, segment 7 about as long as wide, segments 8–10 slightly transverse; pronotum slightly wider than long (1.04 times), widest at point where superior lateral line bent ventrad, inconspicuously narrowed posteriad in almost

straight line, base convex; punctation coarse, of varying density, punctures separated by 1–5 puncture diameters, with broad impunctate midline, surface between punctures with microsculpture of very fine waves, transverse on impunctate midline, more longitudinal towards lateral margin; setation of head and pronotum brown to dark brown, macrosetae of head black; elytra very densely and rather coarsely, almost uniformly punctate, punctures mostly separated by about a puncture diameter, but in places becoming denser with punctural grooves forming shallow transverse and oblique rugae, setation of elytra of same color as surface underneath; abdominal tergites III–V with shallow transverse depression at base, moderately densely, rather finely and uniformly punctate, except for basal depressions where punctation being somewhat coarser.

Male: Elytra with distinct lateral carina. Aedeagus (Fig. 2) quite unique due to the short and blunt apex of the median lobe in combination with the shallow apical emargination of the paramere.

Female unknown.

DIAGNOSIS: In the most recent keys (SCHILLHAMMER 2008, LI & ZHOU 2010), this species keys out at *H. smetanai* SCHILLHAMMER, 2003, from which it differs by the markedly broader head, much longer mandibles and entirely reddish abdominal segments III–V. Habitually, however, the species most closely resembles *H. jizushanus* SCHILLHAMMER, 1998, from which it differs by the black elytral markings, reddish abdominal segments III–V and the partly blackish segment VIII.

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

ETYMOLOGY: The species is named after the country of its origin.

Hybridolinus shiniushanus sp.n.

Holotype &: "CHINA: E-Fujian, 2.-28.5., Shiniushan, 1350 m, 25°38'N 118°28'E, 2008, leg. J. Turna" (NMW).

DESCRIPTION: 9.9 mm long (4.5 mm, abdomen excluded). – Head and pronotum black with very inconspicuous metallic hue, head opaque; mandibles reddish brown, darkened in latero-basal portion; palpi dark brown, last segments of both maxillary and labial palpi markedly paler reddish; antennae with two proximal segments dark brown with bases narrowly reddish, segments 3–9 black, two outer segments creamy white; elytra bright reddish testaceous, apical margin narrowly yellowish, each elytron with large roundish black spot in posterior three fifths, laterally protruding onto deflexed portion, almost reaching lateral margin, but not reaching suture and apex by a narrow margin; scutellum black; abdominal segments III–VIII (first five visible) black with broadly reddish posterior margins, lateral paraterga entirely reddish, genital segment entirely yellowish; legs entirely yellowish.

Head rounded trapezoid, 1.5 times as wide as long, eyes large, 1.7 times as long as regularly rounded tempora, disc moderately densely, coarsely punctate, with fairly large impunctate portion on vertex and somewhat narrower impunctate midline anteriad, tempora less coarsely but more densely punctate, some punctures almost contiguous, grooves forming inconspicuous transverse ridge; surface with distinct isodiametric microsculpture; antennae short, segments 4–7 about as long as wide, segments 8–10 slightly transverse; mandibles slightly longer than head; pronotum about as long as wide, parallel-sided in posterior two thirds, base convex, disc moderately densely punctate, somewhat less coarsely than on head, with narrow, not well delimited impunctate midline, surface with exceedingly fine and dense short-meshed microsculpture forming transverse and oblique, laterally almost longitudinal waves; elytra rather densely, moderately coarsely, uniformly punctate; setation of fore body light brown to yellowish,

on dark elytral patches and along suture black; abdominal tergites III–V (first three visible) with shallow transverse depression at base, with coarse and rather dense punctation in basal depressions, more finely and less densely punctate on posterior portion, tergites VI–VIII less densely punctate but punctural grooves of longitudinal shape, particularly at base of tergites.

Male: elytra without indication of longitudinal lateral carinae; aedeagus (Fig. 3) similar to that of *H. smetanai*, but with less pointed apex of median lobe and shallower emargination of apex of paramere.

Female unknown.

DIAGNOSIS: This species is most similar to *H. smetanai*, *H. hesperoides* SCHILLHAMMER, 1998 and *H. fengyangshanus* LI & ZHOU, 2010. It differs from *H. smetanai* by only two outer segments of antennae creamy white, distinctly more transverse head, larger eyes and narrower reddish posterior margins of abdominal segments. It differs from *H. hesperoides* and *H. fengyangshanus* by the presence of isodiametric microsculpture on head and by the shape of the aedeagus.

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

ETYMOLOGY: This species is named after the type locality.

Hybridolinus malaisei (SCHEERPELTZ, 1965) comb.n.

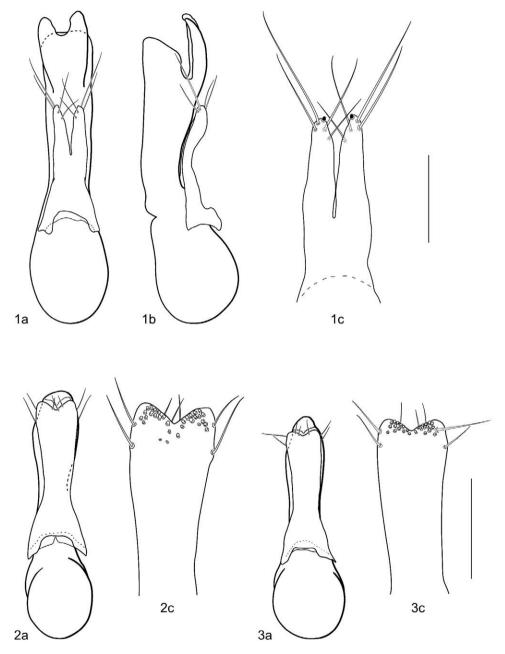
Hesperus malaisei SCHEERPELTZ 1965: 240.

Holotype φ : "N. E. BURMA, Kambaiti, 7000 ft., 13/5 1934, R. Malaise \ HOLOTYPUS \ TYPUS Hesperus Malaisei O. Scheerpeltz \ Hesperus Malaisei nov.spec. det. Scheerpeltz 1941 \ 5549 E91 +" (RMS).

REDESCRIPTION: 10 mm long (5.3 mm, abdomen excluded). – Black, shiny, head somewhat less shiny due to microsculpture, entire fore body with strong metallic violaceous lustre, elytra with hypomera dark reddish and posterior margin narrowly, obscurely reddish, scutellum black, mandibles dark reddish brown with proximal half distinctly blackened, palpi black, apical halves of last segments paler brownish, segments 1–6 of antennae black, segment 7 brownish, four outer segments creamy white, abdominal segments III–VI entirely black, posterior 2/3 of segment VII reddish, segment VIII entirely reddish, legs black, a narrow dorsal stripe on protibiae and dorsal faces of protarsi reddish to reddish brown.

Head trapezoid, 1.42 times as wide as long, eyes 1.15 times as long as tempora, latter convergent, straight for some distance behind eyes, then rounded toward straight base in regular arc, disc rather sparingly, moderately coarsely punctate, vertex largely impunctate, punctation becoming somewhat denser toward base of head and toward tempora, surface with distinct isodiametric microsculpture, antennae with segment 4 distinctly, segments 5 and 6 weakly oblong, segments 7 and 8 about as long as wide, segments 9 and 10 slightly transverse; pronotum as long as wide, widest at point where superior lateral line bent ventrad, narrowed toward convex base in inconspicuous concave arc, disc moderately densely, rather coarsely punctate, distance between punctures varying, with narrow impunctate midline, surface with exceedingly fine and dense short-meshed microsculpture along midline, lateral portions glossy; elytra rather densely, coarsely, uniformly punctate, punctures separated on average by a puncture diameter; setation of fore body reddish; abdominal tergites III–V with shallow transverse depression at base, moderately densely, rather finely and uniformly punctate, except for basal depressions where punctation being somewhat coarser.

Male unknown.



Figs. 1–3: Aedeagus of 1) Shaverdolena edeltraudae, 2) Hybridolinus laosensis, 3) H. shiniushanus; a) ventral view; b) lateral view, c) paramere. Scale bars: 0.5 mm (a, b), 0.25 mm (c).

DIAGNOSIS: The species is most similar to *H. daliensis* SCHILLHAMMER, 1998, but differs at once by the black tibiae. From the other species with violaceous fore body (*H. similis* SCHILLHAMMER, 1998, *H. meilishanus* SCHILLHAMMER, 2008, *H. baoxingensis* LI & ZHOU, 2010) it differs by the entirely red abdominal segment VII.

REMARK: The card to which the specimen is glued bears a pencil marking " σ ". The original description also refers to this specimen as a male. Sternite VIII shows a very slight medio-apical emargination which most likely mislead Scheerpeltz, who obviously had not made any attempt, though, to dissect the specimen. However, the slightly protruding gonocoxites leave no doubt about the true sex of the specimen.

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

Updated key to species of *Hybridolinus*

1	Antennae with two outer segments creamy-white2
_	Antennae with more than two outer segments creamy white
2	Head with distinct isodiametric microsculpture
_	Head without isodiametric microsculpture
3	Visible tergites I–V with posterior margins markedly reddish; brick-red elytra with variably large, well confined black markings laterally; eyes very large, 1.75–2.00 times as long as tempora
-	Visible tergites I–III entirely black, posterior half of 4 th and entire 5 th visible tergite reddish; brick-red elytra with only a slight "shadow" postero-laterally; eyes smaller, 1.15 times as long as tempora
4	Head without isodiametric microsculpture
_	Head with distinct isodiametric microsculpture
5	Entirely black species diabolicus
_	Not entirely black, elytra either black or metallic violaceous with yellowish or reddish posterior margin and hypomera, or elytra reddish with or without dark markings, at least abdominal segment VIII partly reddish
6	Abdominal segment VIII partly black
_	Abdominal segment VIII entirely reddish 9
7	Elytra black flavocinctus
/	Elytta black Juvocincus
_	Elytra reddish with black markings
- 8	· ·
_	Elytra reddish with black markings
_	Elytra reddish with black markings
8	Elytra reddish with black markings
8	Elytra reddish with black markings
- 8 - 9 -	Elytra reddish with black markings
- 8 - 9 -	Elytra reddish with black markings
- 8 - 9 - 10 -	Elytra reddish with black markings
- 8 - 9 - 10 -	Elytra reddish with black markings
- 8 - 9 - 10 - 11	Elytra reddish with black markings
- 8 - 9 - 10 - 11	Elytra reddish with black markings

SCHILLHAMMER: New species of *Shaverdolena* and *Hybridolinus* (STAPHYLINIDAE)

14	Legs entirely yellow	jizushanus
_	Femora and apical tips of tibiae dark	decipiens

Zusammenfassung

Neue Arten der Gattungen Shaverdolena SCHILLHAMMER, 2005 und Hybridolinus SCHILLHAMMER, 1998 werden beschrieben: Shaverdolena edeltraudae (China: Hubei), Hybridolinus laosensis (Laos) und H. shiniushanus (China: Fujian). Hesperus malaisei SCHEERPELTZ, 1965 wird in die Gattung Hybridolinus überstellt. Die männlichen Genitalorgane der neuen Arten werden illustriert und der Schlüssel zu den Arten der Gattung Hybridolinus aktualisiert.

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