

Genus	Vol. 21(1): 21-29	Wrocław, 30 III 2010
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*Eutheia nujianglisuana* n. sp. from China, and an updated checklist of  
Palearctic *Eutheia* STEPHENS  
(Coleoptera: Staphylinidae: Scydmaeninae)

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ABSTRACT. *Eutheia nujianglisuana* n. sp. (Staphylinidae, Scydmaeninae, Eutheini) is described from Yunnan, China. Diagnostic characters, including the aedeagus, are illustrated. An updated checklist of Palearctic (in broad sense) species of *Eutheia* STEPHENS is provided.

Key words: entomology, taxonomy, new species, Staphylinidae, Scydmaeninae, Eutheini, *Eutheia*, East Palearctic, China.

INTRODUCTION

The scarce East Palearctic (in a broad sense; including Japan and Taiwan) species of *Eutheia* STEPHENS have been dealt with by several authors. FRANZ (1985) described three species from Taiwan; O'KEEFE and LI (1998) provided a checklist of species of eastern Asia; KURBATOV (1990, 1991) described two species from Primorie; VIT (2004) provided a checklist of Palearctic species; JALOSZYŃSKI (2004) described two species from Japan; another new species from Japan was added by Hoshina (2007); and most recently JALOSZYŃSKI (2008a, 2008b) revised *Eutheia* of Taiwan, adding two more species, and described the first member of this genus from mainland China. On the entire area where Eutheini occur, they are highly outnumbered by other tribes, especially Cephenniini, Cyrtoscydmini and Scydmaenini, and even intensive collecting efforts typically yield single individuals. The vast areas of China remain especially poorly studied, and the eutheines have been so far represented there only by a single *Eutheia* (JALOSZYŃSKI 2008b) and two species of *Veraphis* (JALOSZYŃSKI 2009). Recently, an interesting specimen of an apparently undescribed species from Yunnan has been sent to

me for study by Michael SCHÜLKE. Examination of the aedeagus confirmed the separate status of this species, which is described below as *E. nujianglisuana* n. sp.

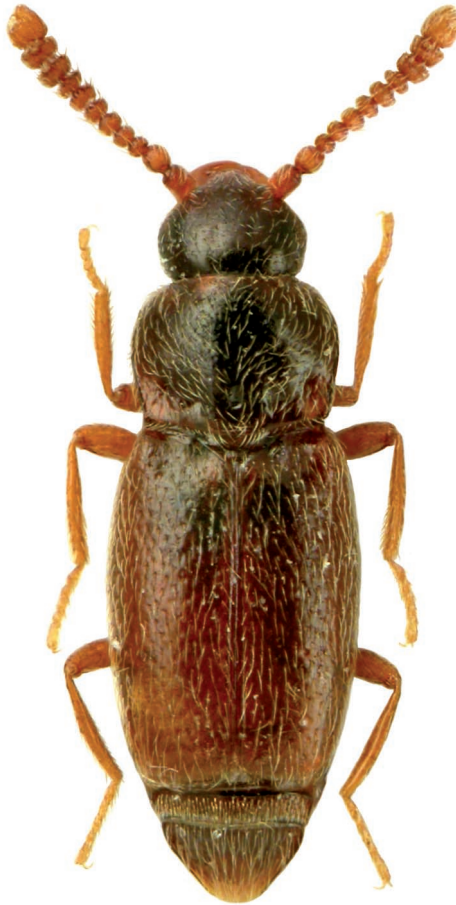
The type material is deposited in the private collection of Michael SCHÜLKE, Berlin, Germany (PCMS).

***Eutheia nujianglisuana* n. sp.**

(Figs.1-3)

NAME DERIVATION

Locotypical, after the Nujiang Lisu Autonomous Prefecture in Yunnan, China, where the type material comes from.



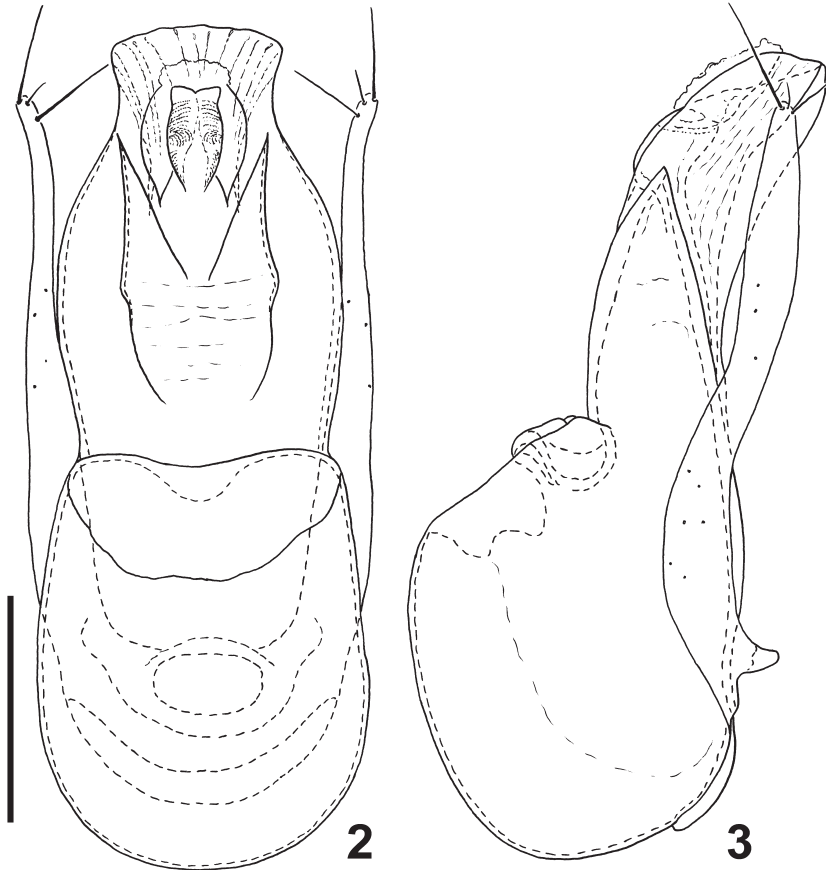
1. *Eutheia nujianglisuana* n. sp. Habitus of the holotype male (length 1.20 mm)

## DIAGNOSIS

Males of this species can be identified on the basis of the head and pronotum (except for narrow area along hind angles) distinctly darker than the elytra and the aedeagus with the apical part of the median lobe broader than long, separated by distinct but shallow constriction, so that sides of apical part are shallowly concave and the apical margin is rounded, without median angle.

## DESCRIPTION

*Male* (Fig. 1). Body length (including pygidium) 1.20 mm, pigmentation moderately dark brown, with head, major part of pronotal disc and pygidium slightly but distinctly darker than hind angles of pronotum and entire elytra; antennae, palpi and legs yellowish-brown; vestiture silverish. Head much broader than long, widest at large, very convex, moderately coarsely faceted eyes, length 0.18 mm, width 0.28 mm.



2-3. *Eutheia nujianglisuana* n. sp. Aedeagus in ventral (2) and lateral (3) views (scale bar: 0.1 mm)

Tempora short, well visible; vertex and frontoclypeal region confluent, convex, vertex in posterior part with very shallow traces of two longitudinally elongate pits; supraantennal tubercles small, indistinct. Punctures on frons and vertex dense and distinct, but very small and slightly diffused, unevenly distributed; setae short, moderately dense, nearly recumbent. Antennae short, with very indistinctly delimited club, length 0.50 mm; antennomere I twice as long as broad; II much shorter but slightly broader than I, only 1.1x as long as broad and ovoid in shape; III-IV subequal in shape and size, each distinctly narrower than II and about 0.6x as long as broad; V-VI subequal in shape and size, each slightly larger than IV and 0.5-0.6x as long as broad; VII slightly larger than VI, ca. 0.6x as long as broad; VIII slightly narrower and shorter than VII, only half as long as broad; IX distinctly larger than VIII, 0.6x as long as broad, with lateral excavations or impressions; X slightly narrower but slightly longer than IX, ca. 0.7x as long as broad, with lateral excavations or impressions; XI as broad as X, ca. 1.3x as long as broad, with round subapical excavation.

Pronotum distinctly broader than long, broadest near anterior third, length 0.30 mm, width 0.40 mm; anterior margin broadly rounded; lateral margins strongly rounded in anterior third, nearly straight in posterior third; hind angles obtuse; posterior margin strongly expanded in middle towards mesoscutellum, expansion trapezoidal, truncate; base with five very shallow but distinct impressions, with median pit most distinct and longitudinal. Pronotal disc densely covered with very small and shallow but distinct punctures separated by spaces about as long as puncture diameters; setae moderately dense and long, suberect.

Elytra oval, very long, broadest near middle, length 0.68 mm, width 0.48 mm, elytral index (length / combined width) 1.42. Apex of each elytron truncated and broadly rounded; basal pit small, located closer to scutellum than to humerus; humeral callus well marked, delimited by short but deep subhumeral impression; each elytron with very shallow but distinct adsutural groove. Punctuation slightly sparser than that on pronotum, but composed of much larger, shallow punctures reducing in diameter and depth from median part towards sides and apices of elytra; setation similar to that on pronotum. Mesoscutellum small, subtriangular. Hind wings well developed.

Legs slender, moderately long, with pro- and mesotibiae straight, metatibiae slightly curved.

Aedeagus (Figs. 2-3) 0.25 mm in length, elongate, with large and well delimited basal capsule, apical part of median lobe small, broader than long, delimited by distinct but shallow constriction, so that sides of apical part are concave and apical margin is broadly rounded, not angulate. Parameres in lateral view broad and recurved, with two long and one short apical setae.

*Female.* Unknown.

#### TYPE MATERIAL

Holotype (male): "CHINA: Yunnan [CH07-21], \ Nujiang Lisu Aut. Pref., Gaoligong Shan, \ pass 22 km W Gongshan, N slope 3350-\ 3400m, 27°46'27"N, 98°26'50"E, fern, \ moss, litter, sifted, 6.VI.2007, M. Schülke" [white, printed]; "*EUTHEIA \ nujianglisuana* m. \ det. P. JAŁOSZYŃSKI, 2009 \ HOLOTYPUS" [red, printed] (PCMS).

## DISTRIBUTION

China: Yunnan.

## REMARKS

The new species belongs to a distinct lineage of *Eutheia* characterized by simple, not bifurcate apex of the aedeagus (see discussion below). In the easternmost part of the Palearctic, only *E. exortiva* KURBATOV and *E. hariola* KURBATOV (both from Primorie) belong in this group, but their aedeagi are distinctly different from that of *E. nujianglisuana*. In *E. nujianglisuana* the separated apical part of the median lobe is broader than long, with only slightly concave sides, whereas in *E. exortiva* and *E. hariola* the separated apex is longer than broad and strongly broadening distally. Two Himalayan species, *E. pusilla* FRANZ and *E. himalayana* FRANZ, are much smaller or much larger than *E. nujianglisuana*, with body lengths 0.90 mm and 1.60 mm, respectively, vs. 1.20 mm in the new species. Also *E. merklia* SIMON from Central Europe, *E. minutissima* SAINTE-CLAIRE DEVILLE from South Europe and *E. ptinelloides* SAHLBERG from Israel are much smaller, 1 mm, 0.8 mm and 0.8 mm, respectively. All other species from the western part of the region, whose aedeagi are known and have been illustrated in dorsal or ventral aspect (i.e., all except *E. clavicornis* REITTER from Greece, *E. praeclara* NORMAND from Tunisia, and *E. jordaniae* FRANZ from Jordan) have the apex of the median lobe different: subtriangular (or at least with the apical margin angulate in middle) in *E. plicata* (GYLLENHAL), *E. linearis* MULSANT & REY, *E. carreti* GUILLEBEAU, *E. tenerifae* FRANZ, *E. parallela* FAIRMAIRE, *E. paganettii* FRANZ, *E. formicetorum* REITTER, *E. nigriceps* GUILLEBEAU, and indistinctly also in *E. schaumii* KIESENWETTER; or subtrapezoidal, narrowing toward truncate apex, as in *E. scydmaenoides* STEPHENS. *Eutheia clavicornis* and *E. jordaniae* were described as uniformly reddish-brown or even reddish-yellow, whereas *E. nujianglisuana* is distinctly bicolorous, with the head and major part of the pronotal disc darker than the elytra. The only Palearctic *Eutheia* not possible to compare to (and distinguish from) *E. nujianglisuana* remains *E. praeclara*; this North African species requires revision.

## DISCUSSION

A checklist of Palearctic *Eutheia* was provided in the Catalogue of Palaearctic Coleoptera (VIT 2004). However, one species (*E. pusilla* FRANZ) was overlooked, and since the publication of this important checklist some taxa previously placed in *Eutheia* were transferred to other genera, and several new species were described. *Euthiopsis* MÜLLER was recently removed from synonymy with *Eutheia* and placed as a senior synonym of *Protoeutheia* FRANZ, 1970 (CASTELLINI 2006); *E. holzneri* FRANZ, 1976 (misspelled *holzeri* in the Palearctic catalogue) was transferred to *Paraneseuthia* FRANZ, 1986 (and the latter transferred from Cephenniini to Eutheini by JALOSZYŃSKI and HOSHINA (2004)); and *E. japonica* K. SAWADA, 1962 was transferred to *Veraphis* CASEY, 1897 (JALOSZYŃSKI and HOSHINA 2005). An updated checklist is presented below. The limits of the region and the format of the data follow those in the above-mentioned catalogue, except for the detailed list of countries replaced with “Europe” in all cases where the species is broadly distributed throughout the continent.

CHECKLIST OF PALEARCTIC SPECIES OF *EUTHEIA* STEPHENS

**Genus *Eutheia* STEPHENS, 1830: 115** (attributed to WATERHOUSE). Type species: *Eutheia scydmaenoides* STEPHENS, 1830 (monotypy).

*Euthia* AGASSIZ, 1874: 152 (unjustified emendation of *Eutheia*).

- carreti* GUILLEBEAU, 1896: 49 (Italy)  
*clavicornis* REITTER, 1884: 53 (Greece)  
*exortiva* KURBATOV, 1990: 137 (Primorie)  
*formicetorum* REITTER, 1882: 546 (Europe, Lebanon)  
*gramme* JAŁOSZYŃSKI, 2008a: 185 (Taiwan)  
*hariola* KURBATOV, 1991: 153 (Primorie)  
*himalayana* FRANZ, 1974: 87 (Nepal)  
*horii* JAŁOSZYŃSKI, 2004: 133 (Japan)  
*jordaniae* FRANZ, 1982: 152 (Jordan)  
*klapperichi* FRANZ, 1985a: 93 (Taiwan)  
*latissima* JAŁOSZYŃSKI, 2008a: 187 (Taiwan)  
*linearis* MULSANT & REY, 1861: 316 (Europe, W Siberia)  
*clavata* REITTER, 1881: 206  
*cylindricornis* ROUBAL, 1931: 66  
*deubeli* GANGLBAUER, 1897: 468  
*merklII* SIMON, 1880: 96 (Hungary, Romania)  
*minutissima* SAINTE-CLAIRE DEVILLE, 1901: 57 (France, Italy)  
*nigriceps* GUILLEBEAU, 1896: 49 (Algeria)  
*nujianglisuana* n. sp. (China)  
*paganettii* FRANZ, 1871: 67 (Greece)  
*parallela* FAIRMAIRE, 1879: 161 (France, Italy, Spain, Algeria, Morocco, Tunisia)  
*plicata* (GYLLENHAL, 1813): 678 (Europe)  
*(Cryptophagus)*  
*fortior* REY, 1888: 3  
*truncatella* (ERICHSON, 1837): 259 (*Scydmaenus*)  
*praeclara* NORMAND, 1909: 256 (Tunisia)  
*ptinelloides* SAHLBERG, 1913: 5 (Israel)  
*puetzi* JAŁOSZYŃSKI, 2008b: 33 (China)  
*pusilla* FRANZ, 1985b: 252 (Nepal)  
*rufa* JAŁOSZYŃSKI, 2004: 130 (Japan)  
*schaumi* KIESENWETTER, 1858: 45 (Europe, Madeira, Cyprus, Turkey)  
*laetificans* ROUBAL, 1931: 65  
*scydmaenoides orientalis* FRANZ, 1971: 76 (Austria, Czech Rep., Slovakia)

<i>scydmaenoides scydmaenoides</i>	
STEPHENS, 1830: 116	(Europe)
<i>scydmaenoides tirolensis</i> FRANZ,	
1971: 76	(Austria)
<i>simillima</i> FRANZ, 1985a	(Taiwan)
<i>taiwanensis</i> FRANZ, 1985a: 92	(Taiwan)
<i>tenerifae</i> FRANZ, 1971: 65	(Canary Isls.)
<i>yoshidai</i> HOSHINA, 2007: 7	(Japan)

Palaearctic *Eutheia* can be divided into two distinct lineages on the basis of the aedeagus. In the majority of species the apex of the median lobe is simple, with its median part projected and separated to various extent, the apical margin rounded or angulate in middle, similar to that in the type species of the genus. In this group belong all West Palaearctic *Eutheia* (with unclear status of *E. clavicornis* and *E. praeclara*, whose aedeagi have not been described, and *E. jordaniae*, whose aedeagus was illustrated in the original paper in lateral aspect only), and only three East Palaearctic species: *E. hariola*, *E. exortiva*, and *E. nujianglisuana*. The Himalayan *E. himalayana* and *E. pusilla*, potentially very interesting due to their disjunctive and high mountainous distribution, need revision, as their aedeagi have been illustrated in original papers in such a way that it is not possible to see how the apical parts actually look like. All remaining, exclusively East Palaearctic (or partly Oriental, depending on interpretation of limits of the regions) species have the aedeagi with distinct lateral apical projections: *E. gramme*, *E. horii*, *E. klapperichi*, *E. latissima*, *E. puetzi* (this species additionally has a long and slender median projection, so that the apex is trifurcate), *E. rufa*, *E. simillima*, *E. taiwanensis*, and *E. yoshidai*. These easternmost species are very likely strongly derived and might have evolved from within the “western” lineage.

#### ACKNOWLEDGMENTS

I am greatly indebted to Michael SCHÜLKE (Berlin, Germany), for sending me material for study, and to Prof. Lech BOROWIEC (Wrocław University, Wrocław, Poland) for taking the habitus photo used in this paper.

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