

# A revision of Palaearctic and Oriental *Rugilus* LEACH, 1819

## II. Three new species from China and additional records

(Coleoptera: Staphylinidae: Paederinae)

V. ASSING

### Abstract

Four species of *Rugilus* LEACH, 1819 (Coleoptera: Staphylinidae: Paederinae) from China and Nepal are described, illustrated, and distinguished from their closest relatives: *R. (Rugilus) aquilinus* sp.n. (Sichuan: Emei Shan), *Rugilus (R.) birugatus* sp.n. (NW-Yunnan), and *R. (R.) barbatus* sp.n. (Nepal: Manaslu), and *R. (R.) mordens* sp.n. (NW-Yunnan). Additional records of fifteen species are reported from China, Taiwan, and the Himalaya. The genus is now represented in the Palaearctic and Oriental Regions by 89 species.

**Key words:** Coleoptera, Staphylinidae, Paederinae, *Rugilus*, China, Nepal, new species, additional records, taxonomy, sexual dimorphism.

### Introduction

According to a recent revision (ASSING 2012), the paederine genus *Rugilus* LEACH, 1819 is represented in the Palaearctic and Oriental Regions by 85 species, at least one of them of doubtful status, and one subspecies. They are attributed to two subgenera, the nominate subgenus (67 species), which is of Palaearctic (or Holarctic) affiliations, and the probably circumtropical subgenus *Eurystilicus* FAGEL, 1953 (16 species). Two species are of uncertain subgeneric affiliations.

Since the completion of the first part of the revision, more material has become available, primarily material recently collected by Aleš Smetana and Vasia Grebennikov (Ottawa). This material included not only specimens of several recently described species, but also three undescribed taxa from China. Another new species was found among paederine material from the Naturkundemuseum Erfurt.

### Material and methods

The material referred to below is deposited in the following public and private collections:

CAS	Chinese Academy of Sciences, Beijing, China
MCSNV	Museo Civico di Storia Naturale, Verona, Italy (L. Latella; via A. Zanetti)
MMUM	The Manchester Museum, The Manchester University, UK (D. Logunov)
NME	Naturkundemuseum Erfurt, Germany (M. Hartmann)
cAss	author's private collection
cSme	private collection Aleš Smetana, Ottawa, Canada

The morphological studies were conducted using a Stemi SV 11 microscope (Zeiss Germany) and a Jenalab compound microscope (Carl Zeiss Jena). A digital camera (Nikon Coolpix 995) was used for the photographs.

Head length was measured from the anterior margin of the frons to the posterior margin of the head, elytral length at the suture from the apex of the scutellum to the posterior margin of the elytra, aedeagal length from the apex of the ventral process to the base of the capsule. The side of the aedeagus with the sperm duct opening is referred to as the ventral, the opposite side as the dorsal aspect.

The limits of the biogeographic regions are based on LÖBL & SMETANA (2004), if not indicated otherwise.

### Additional records and descriptions of new species

#### *Rugilus (Rugilus) gansuensis* ROUGEMONT, 1998

MATERIAL EXAMINED: **CHINA: S-Shaanxi:** 22 ♀♀, Qinling Shan, pass on road Zhouzhi-Foping, 105 km SW Xi'an, 33°44'N, 107°59'E, 1990 m, N-slope, 2.–5.VII.2001, leg. Smetana (cSme, cAss); 9 ♀♀, Qinling Shan, river bank above Houzhenzi, 115 km WSW Xi'an, 33°50'N, 107°47'E, 1450 m, mixed deciduous forest, 5.VII.2001, leg. Smetana (cSme, cAss).

COMMENT: The distribution of *R. gansuensis* is confined to several mountain ranges in Shaanxi and southern Gansu provinces. In the previously examined material, 17 % of the specimens were males (ASSING 2012). The above material, which is composed entirely of females, reduces this percentage significantly.

#### *Rugilus (Rugilus) dabaicus* ASSING, 2012

MATERIAL EXAMINED: **CHINA: W-Hubei:** 3 ♀♀, Daba Shan, creek valley 8 km NW Muyuping, 31°30'N, 110°22'E, 1550–1650 m, 18.VII.2001, leg. Smetana (cSme, cAss); 2 ♀♀, Daba Shan, creek valley 11 km NW Muyuping, 31°29'N, 110°22'E, 1960 m, 18.VII.2001, leg. Smetana (cSme).

COMMENT: The above specimens were collected together with the type material. Only three of the sixteen type specimens (19 %) are males (ASSING 2012). Including the above females, the percentage is now down to 15 %.

#### *Rugilus (Rugilus) parvincicus* ASSING, 2012

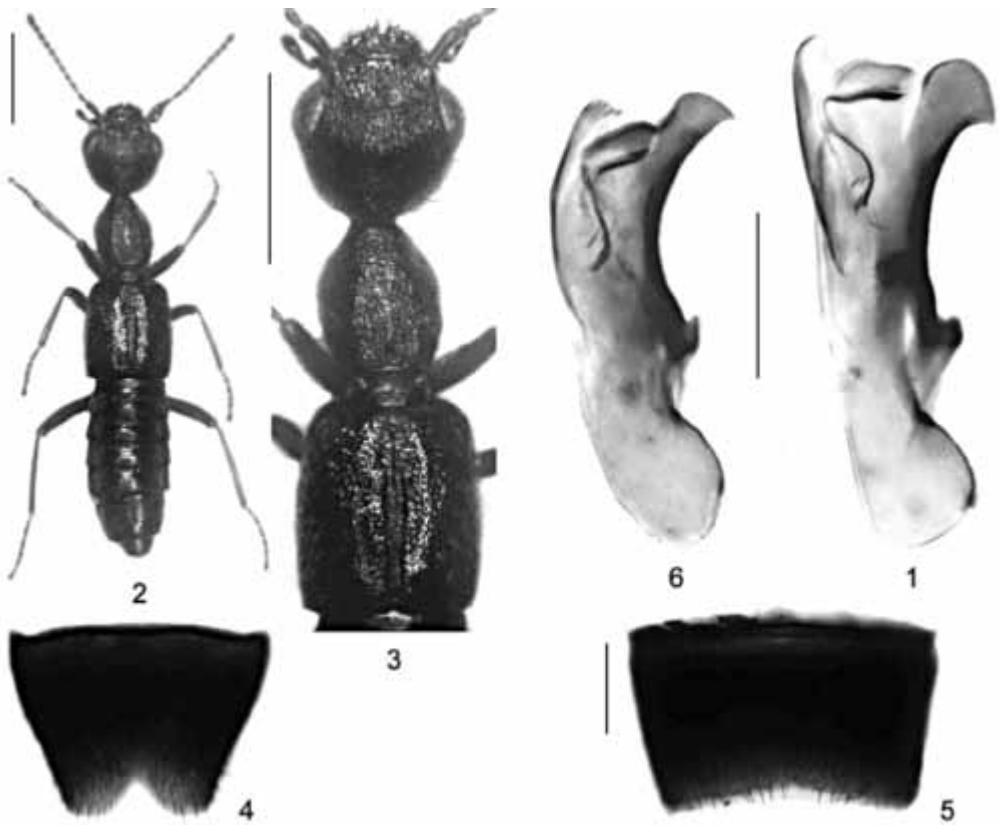
MATERIAL EXAMINED: **CHINA: Yunnan:** 2 ♀♀ [1 teneral], Lijiang Naxi Aut. Co., E Yulongxue Shan, 30 km N Lijiang, 27°09'N, 100°15'E, 2800–2900 m, 13.VIII.2003, leg. Smetana (cSme, cAss).

COMMENT: The above specimens were collected at the type locality.

#### *Rugilus (Rugilus) biformis* ASSING, 2012 (Fig. 1)

MATERIAL EXAMINED: **CHINA: Yunnan:** 2 ♂♂ [micropterous], Zhongdian Co., 33 km ESE Zhongdian, 27°42'N, 100°01'E, 3200 m, 24.VIII.2003, leg. Smetana [C135] (cSme, cAss).

COMMENT: The above specimens were collected at the type locality. Like the two paratypes, they are micropterous. Remarkably, while in closely related species males are much rarer than females, all the known specimens of *R. biformis* are males, one of them macropterous and four micropterous. The ventral process of the aedeagus of one of the males above is of slightly different shape than that of the holotype (Fig. 1).



Figs. 1–6. *Rugilus biformis* (1) and *R. meilixuensis* (2–6). 1, 6) aedeagus in lateral view; 2) male habitus; 3) male forebody; 4) male sternite VIII; 5) male sternite VII. Scale bars: 2–3: 1.0 mm; 1, 4–6: 0.2 mm.

***Rugilus (Rugilus) meilixuensis* ASSING, 2012 (Figs. 2–6)**

MATERIAL EXAMINED: **CHINA: Yunnan:** 1 ♀, Diqing Tibet. Aut. Pref., Deqin Co., Meili Xue Shan, E-side, 12 km SW Deqin, 28°26'N, 98°49'E, 2890 m, 13.VI.2005, leg. Smetana (cSme); 1 ♂, northern Gaoligong Shan, east slope, 27°59'N, 98°33'E, 3020 m, 27.V.2010, leg. Grebennikov (cAss).

COMMENT: The above male differs from the type material by somewhat darker coloration and an aedeagus with a slightly more curved and apically differently shaped ventral process (ventral view). However, in view of the fact that the above locality is only some 55 km from the type locality (though separated by the Salween river valley) and that some intraspecific variation of the shape of the ventral process was observed also in some other related and geographically close species (*R. parvincisus*, *R. biformis*, *R. aequabilis* ASSING, 2012), these differences are attributed to intra- rather than interspecific variation. For illustrations of the male see Figs. 2–6.

***Rugilus (Rugilus) schuelkei* ASSING, 2012**

MATERIAL EXAMINED: **CHINA: Yunnan:** 7 ♀♀ [2 teneral], Zhongdian Co., 48 km N Zhongdian, 28°17'N, 99°46'E, 3220 m, 21.VIII.2003, leg. Smetana [C130] (cSme, cAss); 1 ♀, Zhongdian Co., 51 km SSE Zhongdian, 27°25'N, 99°57'E, 2970 m, 16.VIII.2003, leg. Smetana [C123] (cSme); 1 ♂ [teneral], Zhongdian Co., 46 km SSE Zhongdian, 27°27'N, 99°55'E, 3050–3100 m, 17.VIII.2003, leg. Smetana [C125] (cAss).

COMMENT: The above specimens were collected together with the types. Including this material, the sex ratio is now 10 ♂♂ : 20 ♀♀ (50 %).

***Rugilus (Rugilus) aequabilis* ASSING, 2012**

MATERIAL EXAMINED: **CHINA: Yunnan:** 15 exs., Nujiang Lisu Aut. Pref., Gongshan Co., Gaoligong Shan, 27°48'N, 98°30'E, valley at 3000–3050 m, 21.VI.2005, leg. Smetana [C169] (cSme, cAss); 3 ♀♀, Nujiang Lisu Aut. Pref., Gongshan Co., Gaoligong Shan, 27°45'N, 98°36'E, snowfield at 2500 m, 19.VI.2005, leg. Smetana [C165] (cSme, cAss); 24 exs., northern Gaoligong Shan, E-slope, 27°47'N, 98°33'E, 2000–3000 m, sifted, 12–15.VI.2009, leg. Grebennikov (CAS, cSme, cAss); 1 ex., same data, but 2980 m, 15.VI.2009 (cSme); 3 exs., same data, but 2950 m, 14.VI.2009 (cSme, cAss); 5 exs., northern Gaoligong Shan, E-slope, 27°59'N, 98°33'E, 3080 m, sifted, 28.V.2010, leg. Grebennikov (CAS, cSme, cAss); 1 ex., northern Gaoligong Shan, E-slope, 27°48'N, 98°35'E, 2100 m, sifted, 1.VI.2010, leg. Grebennikov (CAS, cSme, cAss); 10 exs., northern Gaoligong Shan, E-slope, 27°59'N, 98°32'E, 3020 m, sifted, 27.V.2010, leg. Grebennikov (CAS, cSme, cAss); 3 ♀♀, northern Gaoligong Shan, E-slope, 27°47'N, 98°32'E, 3030 m, sifted, 24.V.2010, leg. Grebennikov (CAS, cSme, cAss).

COMMENT: The distribution of *R. aequabilis* is confined to the Gaoligong Shan in Yunnan, close to the Chinese border with Myanmar.

***Rugilus (Rugilus) pungens* ASSING, 2012**

MATERIAL EXAMINED: **CHINA: Yunnan:** 2 exs., northern Gaoligong Shan, E-slope, 27°45'N, 98°35'E, 2600 m, sifted, 2.VI.2010, leg. Grebennikov (cSme, cAss).

COMMENT: Like the preceding species, *R. pungens* is endemic to the Gaoligong Shan in northwestern Yunnan (ASSING 2012).

***Rugilus (Rugilus) emeiensis* ASSING, 2012**

MATERIAL EXAMINED: **CHINA: Sichuan:** 1 ♀, Emei Shan, 29°34'N, 103°21'E, 1950 m, sifted, 15.VI.2010, leg. Grebennikov (cSme).

COMMENT: *Rugilus emeiensis* is endemic to the Emei Shan in Sichuan (ASSING 2012).

***Rugilus (Rugilus) glabripennis* ASSING, 2012**

MATERIAL EXAMINED: **CHINA: Yunnan:** 2 ♀♀, Diqing Tibet. Aut. Pref., Deqin Co., Meili Xue Shan, E-side, 12 km SW Deqin, 28°26'N, 98°49'E, 2890 m, 13.VI.2005, leg. Smetana (cSme, cAss); 2 ♀♀, Diqing Tibet. Aut. Pref., Deqin Co., Meili Xue Shan, E-side, 14 km W Deqin, 28°26'N, 98°49'E, 2580 m, 11.VI.2005, leg. Smetana (cSme).

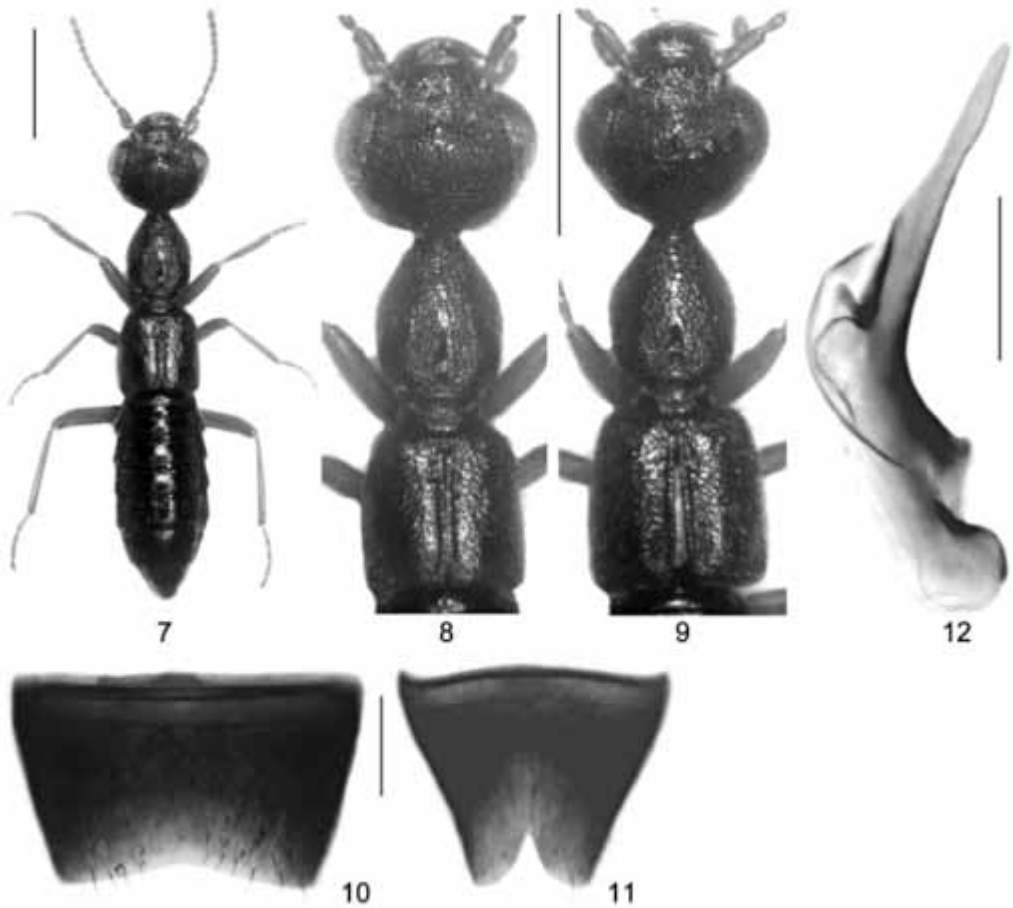
COMMENT: The above material was collected together with the type material.

***Rugilus (Rugilus) mordens* sp.n. (Figs. 7–12)**

TYPES: **Holotype** ♀: “P. R. China, Yunnan, E slope Cang Shan at Dali, N25°40'13.2" E100°07'54.8", 13.V.2010, 2728 m, sifting08, V. Grebennikov / Holotypus *Rugilus mordens* sp. n. det. V. Assing 2012” (CAS). **Paratypes:** 1 ♂, 10 ♀♀: same data as holotype (CAS, cSme, cAss).

DESCRIPTION: Small species; body length 3.8–4.7 mm; length of forebody 2.2–2.6 mm. Habitus of female as in Fig. 7.

Coloration: forebody brown to blackish-brown, with the head usually slightly darker than pronotum and elytra; pronotum and elytra usually with slight bronze hue; abdomen black; legs and antennae reddish.



Figs. 7–12. *Rugilus mordens*. 7) female habitus; 8) female forebody; 9) male forebody; 10) male sternite VII; 11) male sternite VIII; 12) aedeagus in lateral view. Scale bars: 7–9: 1.0 mm; 10–12: 0.2 mm.

Head (Figs. 8–9) strongly transverse, approximately 1.15 times as wide as long; punctuation dense, moderately coarse, areolate, and partly confluent; dorsal surface matt, median dorsal portion with less densely punctate glossy area. Eyes strongly bulging and conspicuously large, distinctly longer than distance from posterior margin of eye to posterior constriction. Anterior margin of labrum with pair of rather short and broadly separated teeth on either side of the median excision, the internal tooth longer and acute, the external one very short.

Pronotum (Figs. 8–9) approximately 1.15 times as long as broad and 0.65–0.70 times as wide as head; lateral margins convexly converging posteriad from point of maximal width; midline with usually broad impunctate shiny band in posterior half; punctuation similar to that of head.

Elytra (Figs. 8–9) with sexual dimorphism; punctuation dense, rather shallow, and weakly to moderately defined; interstices glossy. Metatarsomere I approximately as long as the combined length of II and III.

Abdomen with fine and dense punctation; all tergites with transverse microsculpture; tergites III–V anteriorly with rather shallow impressions, these impressions with moderately coarse and dense punctation; tergite VII with sexual dimorphism.

♂: elytra approximately as long as pronotum and with rather pronounced humeral angles (Fig. 9); hind wings present; abdomen approximately as broad as elytra; posterior margin of tergite VII with palisade fringe; sternite VII with broadly concave posterior margin (Fig. 10); sternite VIII with acutely V-shaped, moderately deep posterior excision (Fig. 11); aedeagus 0.7 mm long, with conspicuously long, slender, and straight ventral process of distinctive shape (Fig. 12).

♀: elytra approximately 0.9 times as long as pronotum and with rather weakly pronounced humeral angles (Fig. 8); hind wings completely reduced; abdomen broader than elytra; posterior margin of tergite VII without palisade fringe.

ETYMOLOGY: The specific epithet (Latin, present participle of *mordere*: to sting) alludes to the shape of the ventral process of the aedeagus.

COMPARATIVE NOTES: Both in external (size, coloration, eye size, sexual dimorphism of elytra, wings, and palisade fringe of the abdominal tergite VII) and in sexual characters (shapes of aedeagus and of male sternites VII and VIII), *R. mordens* is most similar to *R. emeiensis* ASSING, 2012 from the Emei Shan in Sichuan. It is distinguished from this species only by the somewhat broader elytra, the less deep posterior excision of the male sternite VIII, and by the slightly shorter and basally broader ventral process of the aedeagus. For illustrations of *R. emeiensis* see ASSING (2012).

DISTRIBUTION AND NATURAL HISTORY: The type locality is situated in the Cangshan near Dali in northwestern Yunnan, China. The type specimens were sifted at an altitude of 2730 m. As in many other species from China with restricted distributions and a sexual wing dimorphism, the sex ratio is strongly biased in favour of females (1 ♂ : 11 ♀).

### *Rugilus (Rugilus) aquilinus* sp.n. (Figs. 13–18)

TYPES: **Holotype** ♂: “P. R. China, Sichuan, Emei Shan, N29°33.6'N, E103°20.6', 27.vi.-5.vii.2009, 1800–2400 m, sifting 11–17, V. Grebennikov / Holotypus ♂ *Rugilus aquilinus* sp. n. det. V. Assing 2012” (CAS). **Paratypes**: 3 ♂♂, 5 ♀♀: same data as holotype (CAS, cSme, cAss).

DESCRIPTION: Relatively large species; body length 6.0–6.8 mm; length of forebody 3.4–3.8 mm. Habitus of female as in Fig. 13.

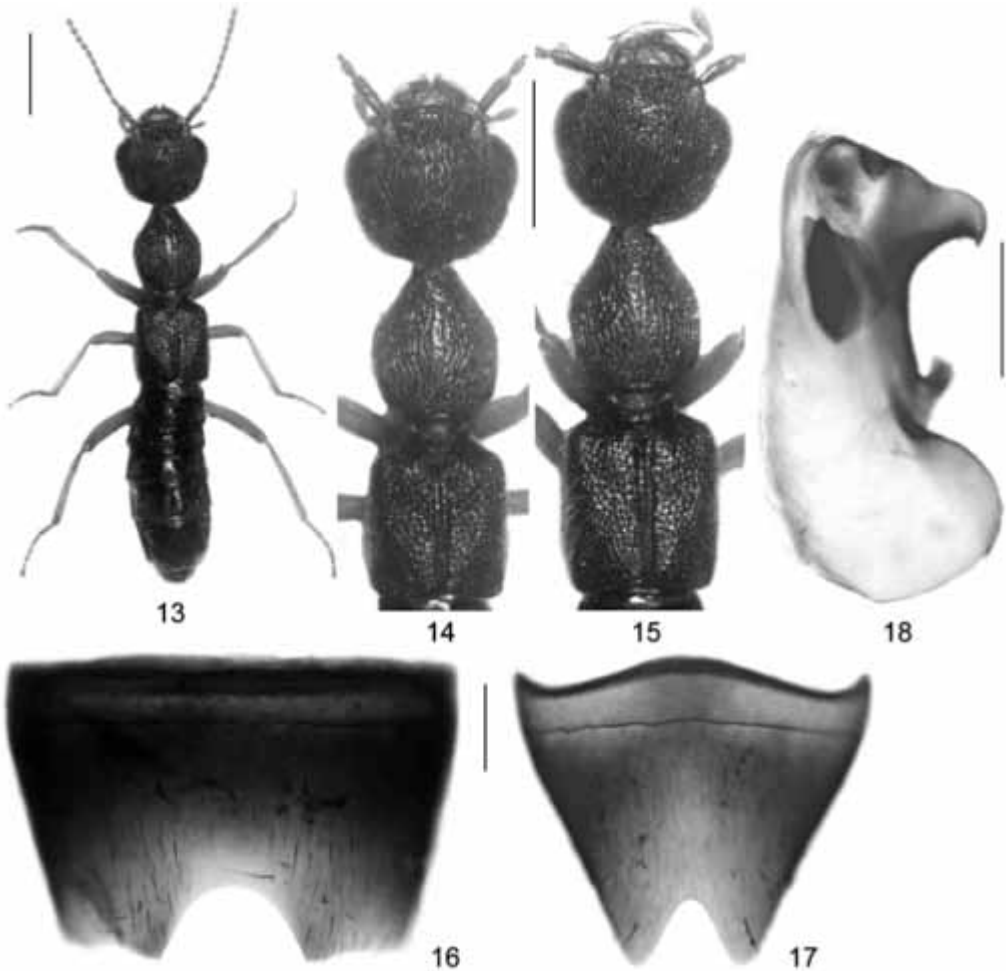
Coloration: head, pronotum, and abdomen blackish-brown to blackish; elytra brown with slight bronze hue; legs and antennae reddish.

Head (Figs. 14–15) distinctly transverse, approximately 1.1 times as wide as long; punctation coarse, very dense, and largely confluent; interstices reduced to narrow ridges and forming longitudinal rugae. Eyes strongly bulging and large, approximately as long as distance from posterior margin of eye to posterior constriction, or nearly so. Anterior margin of labrum with pronounced pair of basally fused teeth on either side of the median excision.

Pronotum (Figs. 14–15) approximately 1.15 times as long as broad and 0.70–0.75 times as wide as head, strongly convex in cross-section; lateral margins convexly converging posteriad from point of maximal width; midline without impunctate band; punctation similar to that of head, but even slightly coarser.

Elytra (Figs. 14–15) and hind wings with sexual dimorphism; punctation very dense, coarse, and defined; interstices glossy. Metatarsomere I approximately as long as the combined length of II and III.

Abdomen without distinct microsculpture; punctation rather dense and moderately fine on anterior, sparse and very fine on posterior tergites; tergites III–V anteriorly with rather shallow transverse impressions, these impressions with moderately coarse and dense punctation; posterior margin of tergite VII with palisade fringe in both sexes.



Figs. 13–18. *Rugilus aquilinus*. 13) female habitus; 14) female forebody; 15) male forebody; 16) male sternite VII; 17) male sternite VIII; 18) aedeagus in lateral view. Scale bars: 13–15: 1.0 mm; 16–18: 0.2 mm.

♂: elytra approximately 0.85 times as long as pronotum and approximately as broad as abdomen, humeral angles pronounced (Fig. 15); hind wings present; sternite VII posteriorly with pronounced semi-circular excision (Fig. 16); sternite VIII with moderately deep V-shaped posterior excision (Fig. 17); aedeagus approximately 0.65 mm long, compact, and with ventral process of distinctive shape (Fig. 18).

♀: elytra approximately 0.75 times as long as pronotum and approximately as broad as abdomen, humeral angles pronounced (Fig. 14); hind wings completely reduced.

**ETYMOLOGY:** The specific epithet (Latin, adjective: of an eagle, eagle-like) alludes to the shape of the ventral process of the aedeagus, which somewhat resembles the beak of an eagle.

**COMPARATIVE NOTES:** As can be inferred from the external (relatively large size; largely confluent punctation of the head and pronotum; pronotum strongly convex in cross-section; elytra with defined humeral angles and punctation) and male sexual characters (sternite VII with pronounced concavity posteriorly; compact aedeagus with characteristically shaped ventral process), *R. aquilinus* is undoubtedly very closely related to the similar *R. malaisei* (SCHEERPELTZ, 1965) from Myanmar and *R. wuyicus* ASSING, 2012 from the Wuyishan in Jiangxi province. It is distinguished from *R. malaisei* (female unknown) by distinctly larger and more bulging eyes, a more oblong and more strongly convex (cross-section) pronotum, shorter elytra (at least in male), the slightly less deep posterior concavity of the male sternite VII, the narrower posterior excision of the male sternite VIII, and by the apically distinctly hooked ventral process of the aedeagus. It is separated from *R. wuyicus* by the presence of a sexual wing dimorphism (*R. wuyicus*: both sexes micropterous), broader elytra (*R. wuyicus*: elytra narrower than abdomen in both sexes), the presence of a palisade fringe at the posterior margin of the abdominal tergite VII (absent in *R. wuyicus*), the deeper posterior concavity of the male sternite VII, the narrower posterior excision of the male sternite VIII, as well as by the different shape of the ventral process of the aedeagus. For illustrations of *R. malaisei* and *R. wuyicus* see ASSING (2012).

**DISTRIBUTION AND NATURAL HISTORY:** The type locality is situated in the Emei Shan in Sichuan province, China. The specimens were sifted at an altitude of 1800–2400 m.

### *Rugilus (Rugilus) birugatus* sp.n. (Figs. 19–24)

**TYPES:** **Holotype** ♂: “P. R. China, Yunnan, E slope N Gaoligongshan, N27°59'11.5" E098°33'25.3, 28.v.2010, 3086 m, sifting24, V. Grebennikov / Holotypus ♂ *Rugilus birugatus* sp. n. det. V. Assing 2012” (CAS). **Paratypes:** 1 ♂, 4 ♀: same data as holotype; 1 ♀: same data, but “N27°59'01.0" E098°32'56.9”, 27.v.2010, 3018 m, sifting22”; 1 ♂: same data as before, but “sifting23”; 1 ♀: same data, but “N27°47'51.7" E098°34'56.4”, 1.vi.2010, 2100 m, sifting25”; 1 ♀: same data, but “N27°46.8' E098°33.1", 12-15.vi.2009, sifting1-7, 200[0]-3000 m” (paratypes in CAS, cSme, cAss).

**DESCRIPTION:** Relatively large species; body length 5.3–6.8 mm; length of forebody 3.2–3.8 mm. Habitus of female as in Fig. 19.

**Coloration:** head, pronotum, and abdomen black; elytra blackish-brown with slight bronze hue; legs and antennae reddish to brown.

**Head** (Figs. 20–21) approximately as wide as long; punctation moderately coarse, very dense, and partly confluent; median dorsal portion sometimes with small, somewhat more shiny area with less dense punctation. Eyes strongly bulging and rather large, slightly shorter than distance from posterior margin of eye to posterior constriction. Anterior margin of labrum with pronounced pair of basally fused, but apically distinctly separated teeth on either side of the median excision.

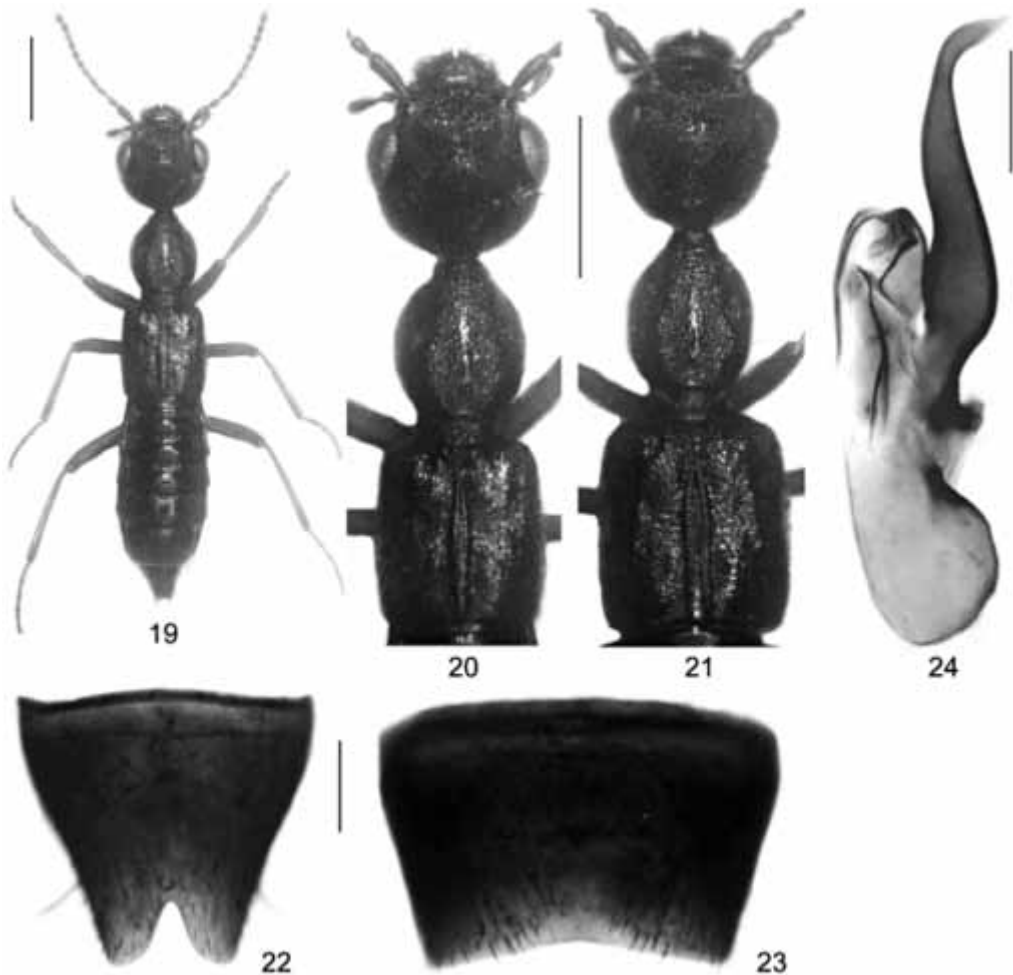
**Pronotum** (Figs. 20–21) approximately 1.15 times as long as broad and 0.75 times as wide as head; lateral margins convexly converging posteriad from point of maximal width; midline with moderately narrowly impunctate band in posterior half; punctation slightly coarser than that of head and not distinctly confluent.

**Elytra** (Figs. 20–21) and hind wings with sexual dimorphism; surface somewhat uneven; each elytron with a more or less pronounced ruga in anterior two thirds; punctation shallow and ill-defined. Metatarsomere I approximately as long as the combined length of II and III.



Abdomen with very shallow microsculpture; punctation dense and fine; tergites III–V anteriorly with rather shallow transverse impressions, these impressions with coarse, dense, and rather defined punctation; posterior margin of tergite VII with palisade fringe in both sexes.

♂: elytra approximately 1.2 times as long and 1.5 times as broad as pronotum, distinctly broader than abdomen, humeral angles pronounced (Fig. 21); hind wings fully developed; sternite VII with broadly concave posterior margin (Fig. 23); sternite VIII with moderately deep, narrowly V-shaped posterior excision (Fig. 22); aedeagus approximately 1.05 mm long, with long and slender ventral process of distinctive shape (Fig. 24).



Figs. 19–24. *Rugilus birugatus*. 19) female habitus; 20) female forebody; 21) male forebody; 22) male sternite VIII; 23) male sternite VII; 24) aedeagus in lateral view. Scale bars: 19–21: 1.0 mm; 22–24: 0.2 mm.

♀: elytra approximately as long and 1.25 times as broad as pronotum, approximately as broad as, or slightly narrower than abdomen, humeral angles pronounced (Fig. 20); hind wings of reduced length, slightly longer than elytra when unfolded.

**ETYMOLOGY:** The specific epithet (Latin, adjective: with two rugae) alludes to the presence of rugae on the elytra.

**COMPARATIVE NOTES:** *Rugilus birugatus* is undoubtedly most closely related to *R. nuicus* ASSING, 2012 from the Nu Shan in Yunnan (male sexual characters unknown), the only species with which it shares the derived presence of a ruga on each elytron. It is distinguished from this species by the much longer and more pronounced median impunctate band on the pronotum, the less extensively confluent punctation on the head (*R. nuicus*: interstices forming long longitudinal rugae), the distinctly longer, broader, and much more glossy elytra (*R. nuicus*: elytra practically matt, much shorter and little broader than pronotum), as well as by the presence of hind wings of reduced length in the female (*R. nuicus*: hind wings completely reduced). For illustrations of *R. nuicus* see ASSING (2012).

**DISTRIBUTION AND NATURAL HISTORY:** The type locality is situated in the northern Gaoligong Shan in the extreme northwest of Yunnan, China. The specimens were sifted at altitudes of approximately 2100–3100 m. In one locality, the species was found together with *R. meilixuensis*. As in many other East Palaearctic representatives of the genus, the sex ratio appears to be biased in favour of females (3 ♂♂ : 7 ♀♀)

***Rugilus (Rugilus) caporiaccoi* (BERNHAEUER, 1934)**

**MATERIAL EXAMINED:** **PAKISTAN:** 3 exs., Northern Areas, Gilgit, Bagrot Valley, 18.VI.2008, leg. Latella (MCSNV); 9 exs., Northern Areas, Gilgit district, Gulmit, Borith Lake, 2600 m, 31.X.2008, leg. Latella (MCSNV, cAss).

**COMMENT:** The distribution of this species is confined to Afghanistan, Pakistan, and Kashmir (ASSING 2012).

***Rugilus (Rugilus) manasluensis* ASSING, 2012**

**MATERIAL EXAMINED:** **NEPAL:** 1 ♂, 7 ♀♀, Manaslu range, E-slope of Ngali Khola Valley, 28°22'N, 84°30'E, 2800–3000 m, 13.V.2005, leg. Schmidt (NME, cAss).

**COMMENT:** The above specimens were collected close to the type locality. Only two of the 14 specimens that have become known so far are males.

***Rugilus (Rugilus) barbatus* sp.n. (Figs. 25–29)**

**TYPES:** **Holotype** ♂: “Nepal, Manaslu Mts., 28°21'36N 84°30'04E, E slope of Ngali Khola Vall., 2800-3000 m, leg. Schmidt, 13.V.2005 / Holotypus ♂ *Rugilus barbatus* sp. n., det. V. Assing 2012” (NME).

**DESCRIPTION:** Body length 5.9 mm; length of forebody 3.6 mm.

**Coloration:** body uniformly blackish; legs blackish, with the tibial bases and the tarsi slightly paler; antennae dark-brown, with antennomere I blackish.

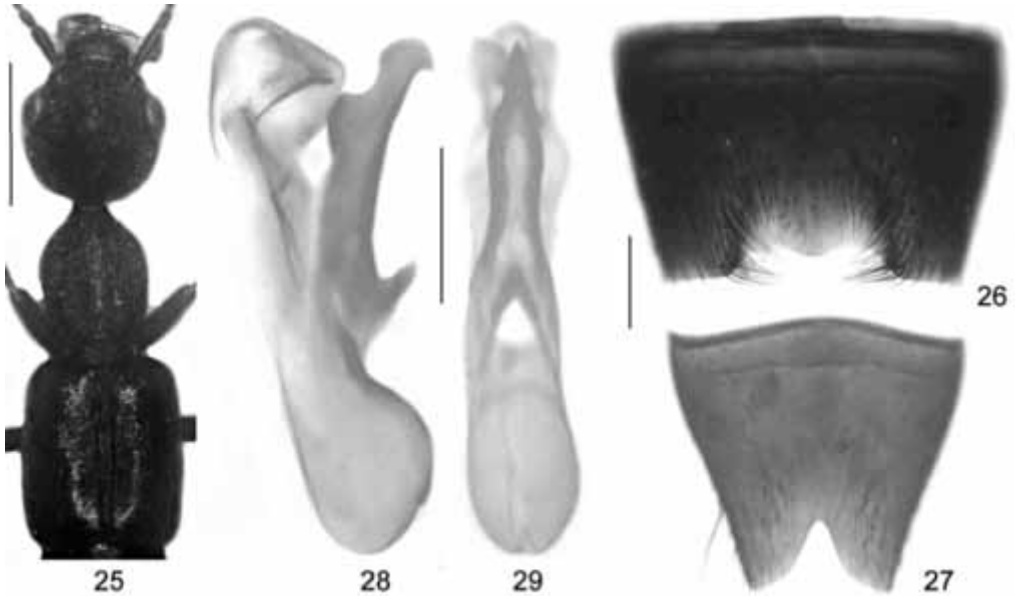
**Head** (Fig. 25) approximately as wide as long, widest across eyes; posterior angles rounded, but noticeable; punctation moderately coarse, very dense, and partly longitudinally confluent. Eyes bulging and rather large, approximately 0.7 times as long as distance from posterior margin of eye to posterior constriction. Anterior margin of labrum with pair of basally fused, but apically distinctly separated teeth on either side of the median excision.

**Pronotum** (Fig. 25) 1.18 times as long as broad and 0.75 times as wide as head; lateral margins convexly converging posteriad from point of maximal width; midline with rudimentary impunctate band in posterior half; punctation distinctly coarser than that of head and partly confluent.

Elytra (Fig. 25) long, 1.15 times as long and nearly 1.30 times as broad as pronotum, humeral angles pronounced; punctuation shallow, rather fine, and not very dense; interstices somewhat glossy. Metatarsomere I approximately as long as the combined length of II and III.

Abdomen with shallow microsculpture; punctuation moderately dense and fine; tergites III–V anteriorly with rather shallow transverse impressions, these impressions with coarse, dense, and rather defined punctuation; tergite VI anteriorly with moderately coarse punctuation; posterior margin of tergite VII with palisade fringe.

♂: sternite VII posteriorly with pronounced median impression, this impression laterally margined by tufts of long black setae, posterior margin with broad and basally bisinuate median excision (Fig. 26); sternite VIII with moderately deep, narrowly V-shaped posterior excision (Fig. 27); aedeagus approximately 0.65 mm long, with slender ventral process of distinctive shape (Figs. 28–29).



Figs. 25–29. *Rugilus barbatus*. 25) forebody; 26) male sternite VII; 27) male sternite VIII; 28–29) aedeagus in lateral and ventral view. Scale bars: 25: 1.0 mm; 26–29: 0.2 mm.

♀: unknown.

ETYMOLOGY: The specific epithet (Latin, adjective: with beard) alludes to the conspicuous chaetotaxy of the male sternite VII.

COMPARATIVE NOTES: In the key in ASSING (2012), *R. barbatus* would key out at couplets 19–12, together with *R. prolongatus* (SOLSKY, 1874), *R. gracilis* (EPPELSHEIM, 1895), *R. morvani* (ROUGEMONT, 1987), and *R. smetanai* ROUGEMONT, 1998. It is distinguished from all of them by the darker coloration (at least of the legs), the shape and chaetotaxy of the male sternite VII, by the morphology of the aedeagus, and additionally as follows:

from *R. prolongatus* by the completely different shape of the head (*R. prolongatus*: head distinctly oblong; posterior angles completely obsolete), the denser and less defined punctuation of the elytra, the larger and more bulging eyes, and the distinctly shorter and less slender legs;

from *R. gracilis* by the much finer, shallower, and less defined punctation of the elytra and by the weakly marked posterior angles of the head (*R. gracilis*: posterior angles completely obsolete);

from *R. morvani* and *R. smetanai* by the much less defined, shallower elytral punctation and by the more slender pronotum.

The modifications of the male sternite VII somewhat resemble those of *R. caporiaccoi* (BERNHAEUER, 1934). From this species, *R. barbatus* is distinguished by the uniformly blackish coloration (*R. caporiaccoi*: elytra and legs reddish-brown; antennae reddish), the differently shaped head (*R. caporiaccoi*: posterior angles practically obsolete), the denser, confluent, and slightly less coarse punctation of the head, the rudimentary impunctate midline of the pronotum (pronounced in *R. caporiaccoi*), the distinctly longer and larger elytra, the shorter and less slender tarsi, and by the completely different shape of the aedeagus.

**DISTRIBUTION AND NATURAL HISTORY:** The type locality is situated in the Manaslu range in central Nepal, where the holotype was collected at an altitude of 2800–3000 m, together with several specimens of *R. manasluensis* (see above).

### ***Rugilus (Eurystilicus) ceylanensis* (KRAATZ, 1859)**

**MATERIAL EXAMINED:** CHINA: 1 ex., N-Yunnan, Diqing Tibet. Aut. Pref., Deqin Co., 33 km WNW Zhongdian, small cleft W Yangtze river, 27°57'N, 99°25'E, 2220–2300 m, 4.VI.2005, leg. Smetana (cSme).

**COMMENT:** *Rugilus ceylanensis* is widespread and common in the south of the East Palaearctic, in the Oriental, and in the Australian Regions; it has been reported also from Hawaii and North America (ASSING 2012).

### ***Rugilus (Eurystilicus) simlaensis* (CAMERON, 1931)**

**MATERIAL EXAMINED:** TAIWAN: 5 exs., Nantou Hsien, Shanlinchi, 1650 m, 15.V.1990, leg. Smetana [T60] (cSme, cAss); 1 ex., Kaohsiung Hsien, Tona Forest Station, 1050 m, 1.V.1998, leg. SMETANA [T194] (cSme); 4 exs., Taichung Hsien, Anmashan, 2120 m, 1.V.1990, leg. Smetana [T36] (cSme, cAss); 1 ex., Taichung Hsien, Anmashan, 2225 m, 2.V.1990, leg. Smetana [T37] (cAss); 2 exs., Taichung Hsien, Anmashan, 2230 m, 4.V.1990, leg. Smetana [T43] (cSme, cAss); 2 exs., Hualien Hsien, Taroko N.P., Nanhushi Hut, 2220 m, 8.V.1990, leg. Smetana [T48] (cSme); 1 ex., Hualien Hsien, Taroko N.P., Nanhushi Hut, 2200 m, 11.V.1990, leg. Smetana [T54] (cSme); 1 ex., Hualien Hsien, Taroko N.P., Nanhushi Hut, 2220 m, 12.V.1990, leg. Smetana [T54] (cAss); 1 ex., Chiayi Hsien, Alishan, Sister Ponds, 2180 m, 26.IV.1990, leg. Smetana [T24] (cAss).

**COMMENT:** Like the preceding species, *Rugilus simlaensis* is one of the most widespread species of the genus in the southern East Palaearctic and the Oriental Regions.

### ***Rugilus (Eurystilicus) rufescens* (SHARP, 1874)**

**MATERIAL EXAMINED:** CHINA: 2 exs., Jiangsu, Nanjing, Agricultural University, VII.1991, leg. Cooter (MMUM, cAss).

**COMMENT:** The vast distribution of *R. rufescens* ranges from India to Kamchatka, Japan, and Singapore (ASSING 2012). The species is widespread in China, but was previously unknown from Jiangsu province.

## **Zusammenfassung**

Vier Arten der Gattung *Rugilus* LEACH, 1819 werden aus China und Nepal beschrieben, abgebildet und von den nächstverwandten Arten unterschieden: *Rugilus (Rugilus) aquilinus* sp.n.

(Sichuan: Emei Shan), *R. (R.) birugatus* sp.n. (NW-Yunnan) und *R. (R.) barbatus* sp. n. (Nepal: Manaslu), and *R. (R.) mordens* sp.n. (NW-Yunnan). Weitere Nachweise von fünfzehn Arten werden aus China, Taiwan und dem Himalaja gemeldet. Die Gattung ist nun mit 89 Arten in der Paläarktis und der Orientalis vertreten.

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### References

- ASSING, V. 2012: The *Rugilus* species of the Palaearctic and Oriental regions (Coleoptera: Staphylinidae: Paederinae). – Stuttgarter Beiträge zur Naturkunde A, Neue Serie 5: 115–190.
- LÖBL, I. & SMETANA, A. 2004: Catalogue of Palaearctic Coleoptera. Volume 2. Hydrophiloidea – Histeroidea – Staphylinoidea. – Stenstrup: Apollo Books, 942 pp.

Dr. Volker ASSING  
Gabelsbergerstr. 2, D – 30163 Hannover, Germany (vassing.hann@t-online.de)

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