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Two new species of *Eccoptoglossa* from Iran and Kyrgyzstan (Coleoptera: Staphylinidae: Aleocharinae)

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A b s t r a c t : *Eccoptoglossa amischoides* nov.sp. (Iran: Ardabil, Lorestan) and *E. kirgisica* nov.sp. (Kyrgyzstan: Osh) are described and illustrated. Including the new species, the Palaearctic falagriine genus *Eccoptoglossa* LUZE, 1904 now comprises five species and is distributed from the East Caucasus region across Middle Asia eastwards to northwestern Mongolia. The distributions of the *Eccoptoglossa* species are mapped and a key to species is provided.

K e y w o r d s : Coleoptera, Staphylinidae, Aleocharinae, Falagriina, *Eccoptoglossa*, Iran, Kyrgyzstan, taxonomy, new species, key to species, distribution map.

Introduction

The falagriine genus *Eccoptoglossa* LUZE, 1904 previously included three species distributed in Middle Asia, eastwards to the Chjargas Nuur lake in northwestern Mongolia (ASSING 1997, 1999). Little is known about the ecology of these species, but the available evidence suggests that they are associated with moist habitats.

Recently examined material from Iran and Kyrgyzstan collected by Johannes Frisch (Berlin) and Ludger Schmidt (Neustadt/Rbg.), respectively, included two undescribed species. Thus, the genus now comprises five species.

Material and methods

The material treated in this study is deposited in the following collections:

MNHUB..... Museum für Naturkunde der Humboldt-Universität Berlin (J. Frisch, J. Willers)
cAss..... Author´s private collection
cFel ..... Private collection Benedikt Feldmann, Münster

The morphological studies were conducted using a Stemi SV 11 microscope (Zeiss Germany) and a Jenalab compound microscope (Carl Zeiss Jena). The images of the habitus and the forebody were created using a photographing device constructed by Arved Lompe (Nienburg) and CombineZ software. A digital camera (Nikon Coolpix 995) was used for the remaining photographs. The map was created using MapCreator 2.0 (primap) software.

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Body length was measured from the anterior margin of the labrum to the abdominal apex, the length of the forebody from the anterior margin of the labrum to the posterior margin of the elytra, head length from the anterior margin of the clypeus (without anteclypeus) 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, and the length of the aedeagus from the apex of the ventral process to the base of the median lobe. The "parameral" side (i.e., the side where the sperm duct enters) is referred to as the ventral, the opposite side as the dorsal aspect.

***Eccoptoglossa amischoides* nov.sp.** (Figs 1-3, 7-13, Map 1)

T y p e m a t e r i a l : Holotype ♂: "IRAN, Ardabil Province, E Abi Beyglu: Saha Dam, 1470 m, N 38°14'18" E 048°39'43", [date not specified; according to FRISCH (pers. comm.), 11.X.2011], leg. Frisch / Holotypus ♂ *Eccoptoglossa amischoides* sp.n. det. V. Assing 2014" (MNHUB). Paratypes: 82 exs.: same data as holotype (MNHUB, cAss, cFel); 1♀: "IRAN, Ardabil Province, Aradabil - Astara: Namin - Abi Beyglu, 1360 m, N 38°23'26" E 048°29'08", 11.10.2011, leg. Frisch" (MNHUB); 1♀: "IRAN, Lorestan Province, 20 km SW Borujerd, 1740 m, N 33°46'23" E 049°39'06", 15.10.2011, leg. Frisch" (MNHUB); 1♀: "IRAN, Lorestan Province, 35 km E Kuhdasht: Kashkan, 1010 m, N 33°35'20" E 047°52'52", 17.10.2011, leg. Frisch" (cAss).

E t y m o l o g y : The specific epithet (adjective) alludes to the external resemblance to species of the athetine genus *Amischa* THOMSON, 1858.

D e s c r i p t i o n : Body length 2.2-3.0 mm; length of forebody 1.2-1.4 mm. Habitus as in Fig. 1. Coloration: body black; legs blackish-brown with paler tarsi; antennae blackish.

Head (Fig. 2) distinctly transverse, 1.10-1.22 times as broad as long and wedge-shaped, i.e., distinctly dilated posteriorly; punctation fine and moderately dense; interstices with distinct microreticulation (Fig. 3). Eyes usually slightly longer than postocular region in dorsal view. Antenna 0.8-0.9 mm long, moderately and gradually incrassate apically; antennomeres IV-X distinctly transverse, gradually increasing in width (Fig. 2).

Pronotum (Fig. 2) 1.04-1.12 times as broad as long and approximately 1.08 times as broad as head, with very indistinct and ill-defined median impression posteriorly; punctation dense, more distinct than that of head (Fig. 7).

Elytra (Fig. 2) approximately as long as pronotum; punctation fine and dense; microsculpture composed of fine network of striae connecting the punctures (Fig. 8). Hind wings fully developed. Metatarsomere I elongated, longer than combined length of II-IV.

Abdomen approximately 0.9 times as broad as elytra; tergites III-V with moderately pronounced anterior impressions; punctation dense and moderately fine, slightly less dense on posterior than on anterior tergites; interstices without microsculpture, except for rudiments near anterior tergal margins; posterior margin of tergite VII with palisade fringe.

♂: sternite VIII (Fig. 9) approximately as long as broad, somewhat longer than tergite VIII, and with concave posterior margin; median lobe of aedeagus approximately 0.25 mm long and shaped as in Figs 10-11.

♀: sternite VIII distinctly transverse, posterior margin weakly convex; spermatheca shaped as in Figs 12-13.

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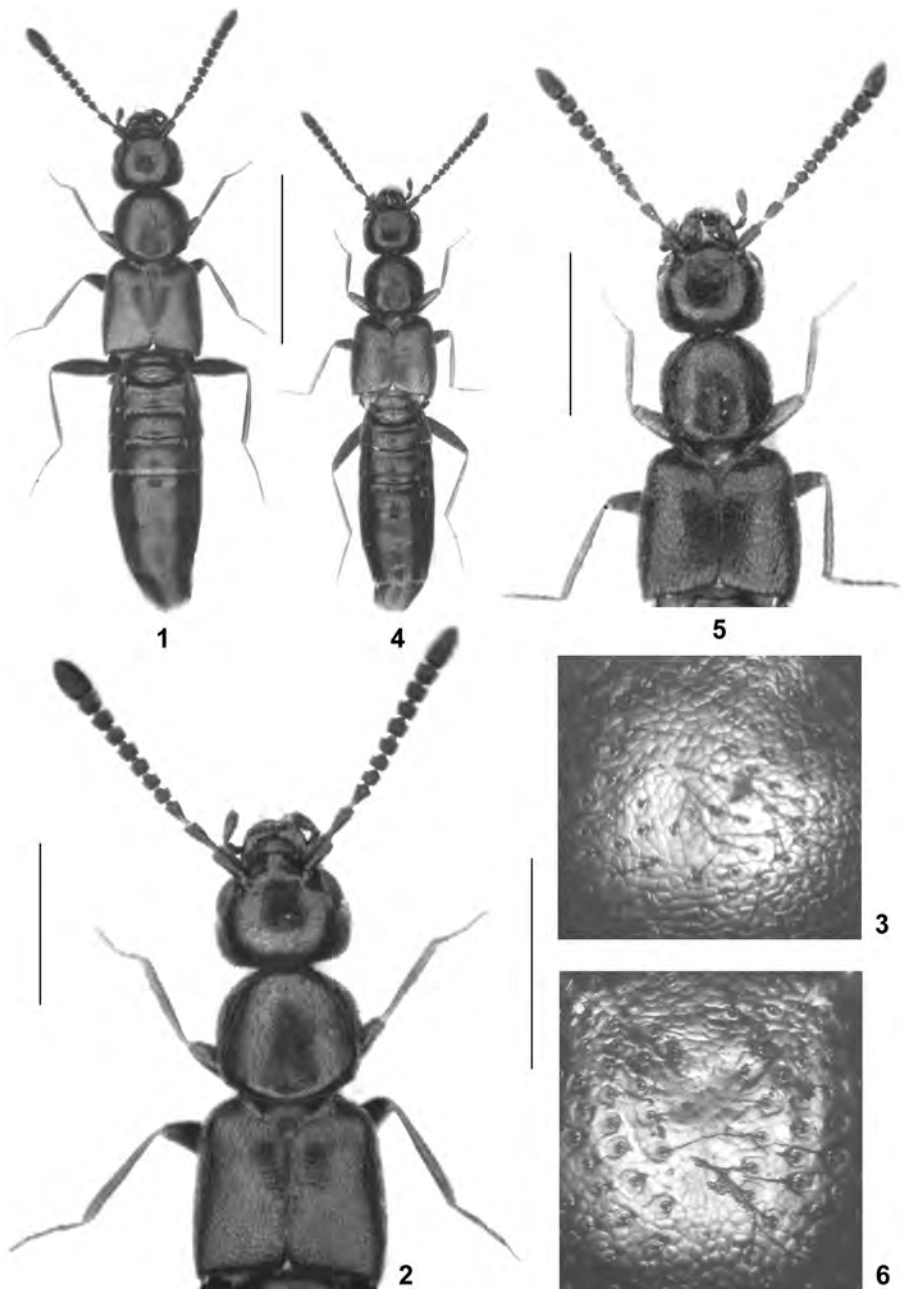

Figs 1-6: *Eccoptoglossa amischoides* nov.sp. (**1-3**) and *E. kirgisica* nov.sp. (**4-6**): (**1**, **4**) habitus; (**2, 5)** forebody; (**3**, **6**) median dorsal portion of head. Scale bars: 1, 4: 1.0 mm; 2, 5: 0.5 mm; 3, 6: 0.1 mm.

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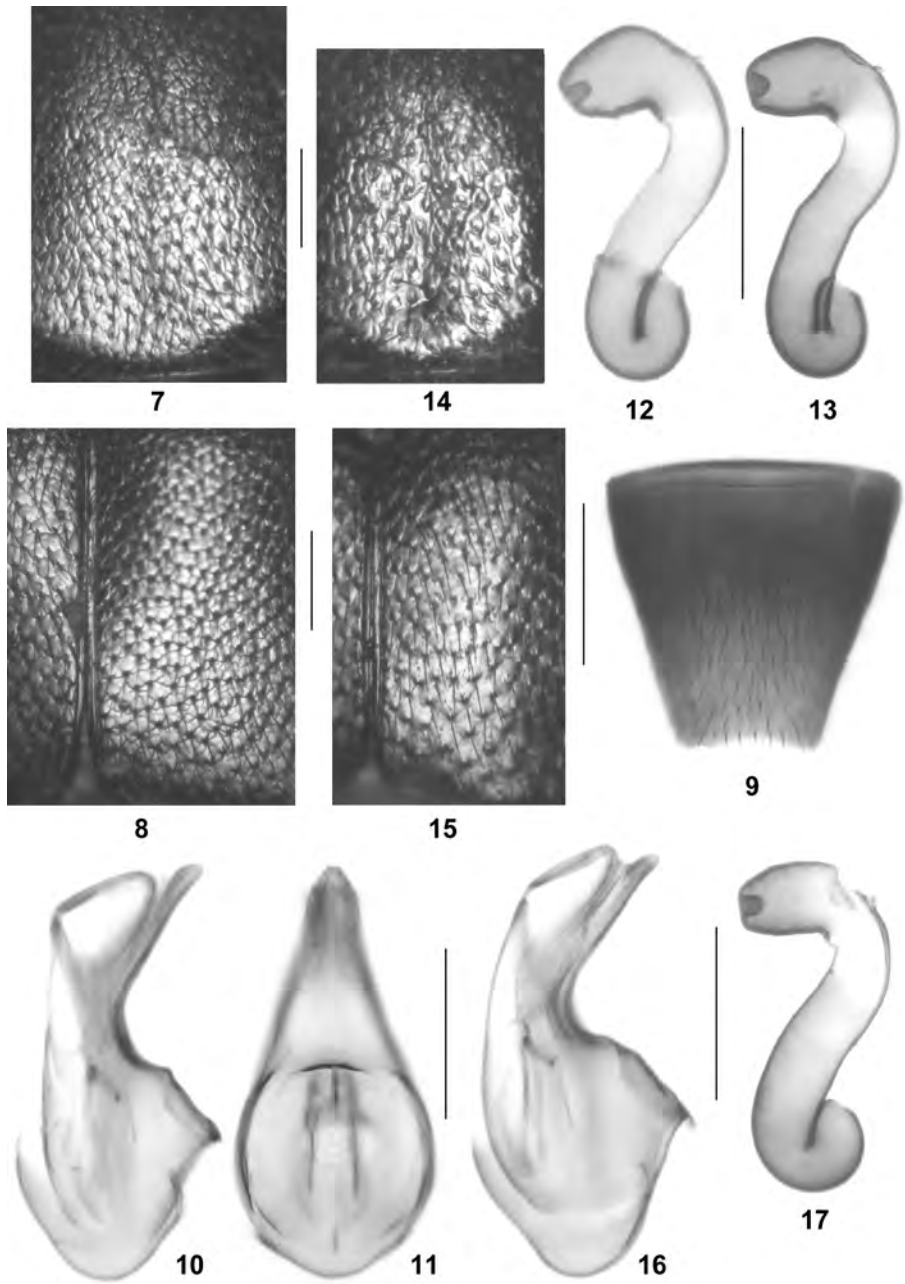

Figs 7-17: *Eccoptoglossa amischoides* nov.sp. (**7-13**) and *E. kirgisica* nov.sp. (**14-17**): (**7**, **14**) posterior median portion of the pronotum; (**8**, **15)** sutural portion of elytra; (**9**) male sternite VIII; (**10, 16**) median lobe of aedeagus in lateral view; (**11**) median lobe of aedeagus in ventral view; (**12-13, 17**) spermatheca. Scale bars: 9: 0.2 mm; 7-8, 10-17: 0.1 mm.

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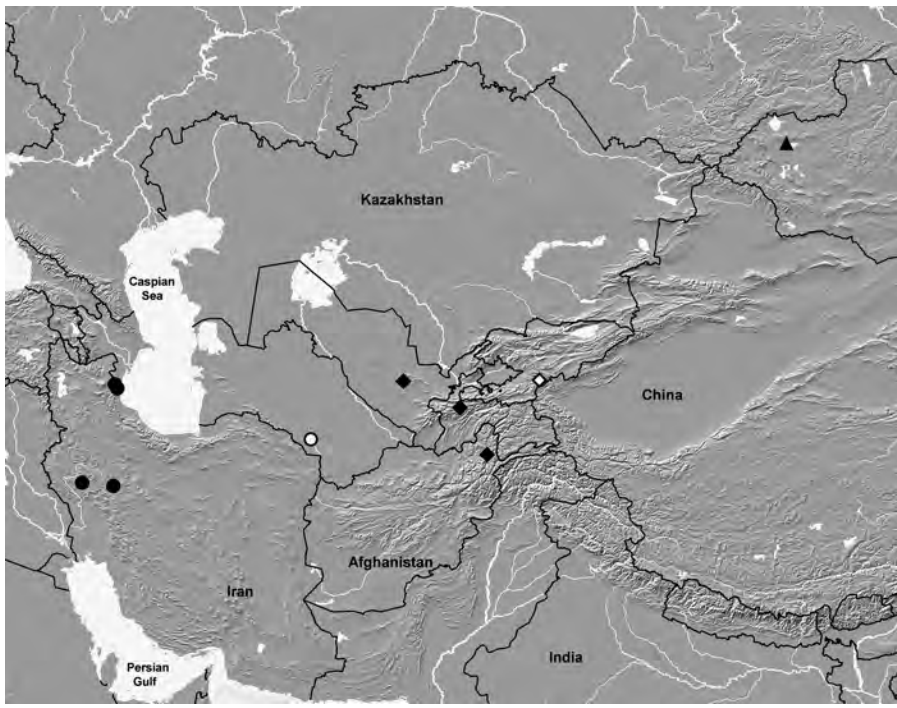

Map 1: Distribution of *Eccoptoglossa*: *E. amischoides* (black circles); *E. turanica* (white circle); *E. obscura* (black diamonds); *E. kirgisica* (white diamond); *E. reticuliceps* (triangle).

Comparative notes: This species is characterized particularly by the amischoid habitus, the pronounced microsculpture and dense punctation of the forebody, the dark coloration, and the sexual characters. From the externally similar *E. reticuliceps* ASSING, 1999 (male unknown) from Mongolia, it is distinguished above all by the longer proximal portion and the shorter apical portion of the spermathecal capsule. From *E. obscura* LUZE, 1904 (Uzbekistan, Tajikistan, Afghanistan), it differs by the wedge-shaped head, the distinctly transverse antennomeres I-IV, the presence of microsculpture on the elytra, the posteriorly concave male sternite VIII, the longer crista apicalis of the aedeagus, as well as by the apically not dilated distal portion and the longer proximal portion of the spermathecal capsule. For characters separating *E. amischoides* from *E. kirgisica* see the comparative notes in the following section.

Distribution and natural history: The known distribution is confined to two localities in Ardabil Province, northwestern Iran, and two in Lorestan Province, western Iran (Map 1). The altitudes range from 1010 to 1740 m. The specimens were sifted from *Salix* leaf litter and hand-collected from moist soil on banks of streams and rivers (FRISCH pers. comm.)

***Eccoptoglossa kirgisica* nov.sp.** (Figs 4-6, 14-17, Map 1)

Type material: Holotype ♂: "KYRGYZSTAN: Osch, near Kyzyl-Zar, 2000 m, Alaj-Kuu, 23.VII.2003, 40°21'41N, 74°09'39E, leg. L. Schmidt / Holotypus ♂ *Eccoptoglossa kirgisica* sp.n. det. V. Assing 2014" (cAss). Paratypes: 2♀♀: same data as holotype (cAss).

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Etymology: The specific epithet is an adjective derived from the old name of what is Kyrgyzstan today.

Description: Body length 2.5-3.0 mm; length of forebody 1.2-1.4 mm. Habitus as in Fig. 4. Coloration: body black; legs blackish-brown with paler tarsi; antennae blackish.

Head (Fig. 5) weakly transverse, 1.05-1.13 times as broad as long and very weakly dilated posteriorly at most; punctation moderately fine and moderately dense; interstices with shallow microreticulation (Fig. 6), glossy. Eyes slightly longer than postocular region in dorsal view. Antenna 0.7-0.8 mm long, moderately and gradually incrassate apically; antennomeres IV-X distinctly transverse, gradually increasing in width (Fig. 5).

Pronotum (Fig. 5) approximately 1.05 times as broad as long and 1.03-1.08 times as broad as head, with rather broad and distinct median impression posteriorly; punctation moderately dense, finer than that of head (Fig. 14).

Elytra (Fig. 5) approximately as long as pronotum; punctation fine, but distinct, and moderately dense; interstices without microsculpture (Fig. 15). Hind wings fully developed. Metatarsomere I elongated, longer than combined length of II-IV.

Abdomen approximately 0.9 times as broad as elytra; tergites III-V with moderately pronounced anterior impressions; punctation dense and distinct, as dense on posterior as on anterior tergites; interstices without microsculpture; posterior margin of tergite VII with palisade fringe.

♂: sternite VIII somewhat longer than tergite VIII and with truncate posterior margin; median lobe of aedeagus 0.27 mm long and shaped as in Fig. 16.

♀: sternite VIII distinctly transverse, posterior margin convex; spermatheca shaped as in Fig. 17.

Comparative notes: *Eccoptoglossa kirgisica* is distinguished from *E. amischoides*, whose spermatheca is of similar shape, by the more slender body, the more convex (cross-section) and posteriorly more distinctly impressed pronotum, the coarser punctation of the head, the less distinct punctation of the pronotum, the less dense punctation of the elytra, the absence of microsculpture on the elytra, the evenly dense punctation of the abdomen, the posteriorly truncate male sternite VIII, and by the shape of the median lobe of the aedeagus (apical portion shorter in relation to basal portion). It differs from the two other species with dark legs (*E. obscura*, *E. reticuliceps*) by the different shape of the spermatheca. For illustrations of *E. obscura* and *E. reticuliceps* see ASSING (1997, 1999).

Distribution and natural history: The type locality is situated in the Osh region in southern Kyrgyzstan (Map 1) at an altitude of 2000 m. The specimens were collected on a river bank (SCHMIDT pers. comm.)

Key to the species of *Eccoptoglossa*

1 Pale-coloured species: head, pronotum, and antennae pale-brown to brown; elytra yellowish-brown; legs yellowish. ♂: median lobe of aedeagus as in ASSING (1997: figure 25a). ♀: spermatheca with distal portion of capsule somewhat dilated and proximal portion short (ASSING 1997: figure 25b). Turkmenistan (Map 1) .... *E. turanica* (EPPELSHEIM, 1888)

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- Species of dark coloration: forebody, sometimes except for the brownish elytra, and antennae blackish; legs blackish-brown, except for the paler tarsi. Sexual characters different 2

2 Elytra with distinct microreticulation. Head distinctly wedge-shaped, i.e., distinctly dilated posteriad 3

- Elytra without microreticulation. Head not wedge-shaped, weakly dilated posteriorly at most 4

3 ♀: capsule of spermatheca with distal portion long and proximal portion short (ASSING 1999: figure 1). ♂ unknown. Mongolia (Map 1) ..... *E. reticuliceps* ASSING, 1999

- ♂: median lobe of aedeagus as in Figs 10-11. ♀: capsule of spermatheca with distinctly shorter distal portion and much longer proximal portion (Figs 12-13). Iran (Map 1)..... *E. amischoides* nov.sp.

4 ♂: crista apicalis of aedeagus shorter; ventral process of aedeagus longer in relation to basal portion of median lobe (ASSING 1997: figure 25a). ♀: spermatheca with proximal portion shorter and distal portion larger (ASSING 1997: figure 25b). Uzbekistan, Tajikistan (Map 1)..... *E. obscura* LUZE, 1904

- ♂: crista apicalis of aedeagus longer; ventral process of aedeagus shorter in relation to basal portion of median lobe (Fig. 16). ♀: spermatheca with longer distal portion and more slender apical portion (Fig. 17). Kyrgyzstan (Map 1) ..... *E. kirgisica* nov.sp.

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Zusammenfassung

Eccoptoglossa amischoides nov.sp. (Iran: Ardabil, Lorestan) und *E. kirgisica* nov.sp. (Kirgisistan: Osch) werden beschrieben und abgebildet. Einschließlich der neuen Arten enthält die Falagriinengattung *Eccoptoglossa* LUZE, 1904 derzeit fünf Arten, die von West-Iran östlich bis in die Nordwest-Mongolei verbreitet sind. Die Verbreitung der Arten wird anhand einer Karte illustriert. Eine neue Bestimmungstabelle wird erstellt.

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