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Ilybius enpalaiatheka spec. nov. from Anatolia, Turkey, with a revised key to males of the *Ilybius erichsoni* and *chalconatus* groups

(Coleoptera, Dytiscidae, Agabini)

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Ilybius enpalaiatheka spec. nov. is described from Eğirdir (Isparta province) in Anatolia, Turkey. The new species is a member of the *Ilybius montanus* subgroup within the *Ilybius chalconatus* group. It is externally similar to the other members of that subgroup, but males can be separated by the shape of the median lobe and that of the parameres, in particular from those of the especially similar *Ilybius jaechi* (Fery & Nilsson, 1993). The genus *Ilybius* Erichson, 1832 now contains 71 species, six of which belong to the *montanus* subgroup. The complete key to species of males of the *Ilybius erichsoni* and *chalconatus* groups given by Fery & Nilsson (1993) is modified to include the new species and also the recently described *I. adygheanus* Petrov, Shapovalov & Fery, 2010, and *I. thynias* Fery & Przewoźny, 2010. *Ilybius lenensis* Nilsson, 2000 is recorded for the first time from Kazakhstan. A few faunistic notes on other *Ilybius* are also presented.

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Introduction

It is well-known that many species are still waiting to be discovered, particularly in regions which not have been explored so extensively as for instance Central Europe. One way to meet with this challenge is to collect beetles in their natural habitats, another one to study the content of – often forgotten – boxes in museums as well as in private collections. It was not so long ago, that the junior author studied a box with undetermined material from diverse families in the Zoologische Staatssammlung München (ZSM) and found an *Ilybius* collected in Turkey almost 90 years ago. Naturally, at first it was supposed to be one of the known Turkish members of the *chalconatus* group. Females of that group cannot be determined with certainty and, thus, we both were very satisfied when finding that it was a male. But our surprise was still bigger when we dissected this male and found that the shape of the genitalia did not fit any of the known species.

Ilybius enpalaiatheka spec. nov. is the 71st member of genus *Ilybius* Erichson, 1832 (cf. Nilsson 2001 and 2011). The *chalconatus* group contains now 16 members, and the *montanus* subgroup six. Together with the new species the genus comprises the following nine *Ilybius* from Turkey: *I. chalconatus* (Panzer, 1796), *I. enpalaiatheka* spec. nov., *I. hulae* (Wewalka, 1984), *I. jaechi* (Fery & Nilsson, 1993), *I. satunini* (Zaitzev, 1913), *I. thynias* Fery & Przewoźny, 2010, and *I. wewalkai* (Fery & Nilsson, 1993) (all from the *chalconatus* group); *I. fuliginosus fuliginosus* (Fabricius, 1792) and *I. quadriguttatus* (Lacordaire, 1835) belong to the *subaeneus* group of the genus. A complete

synopsis of the *chalconatus* group species (except *I. enpalaiatheka* spec. nov.) can be found in Fery & Przewoźny (2011).

Material and methods

The holotype of the new species is stored in the Zoologische Staatssammlung München (ZSM). The last abdominal ventrite was removed from the body of the holotype. Afterwards the aedeagus was extracted by a pin and studied with an Olympus SZX16 stereomicroscope. Finally ventrite, median lobe and parameres were glued onto the card behind the body of the specimen. We studied also a few *I. jaechi* (paratype from the locus typicus, Corlu, Tekirdag province in western Turkey; paratypes from Aydin in western Turkey and Echinos, near Xanthi in north-eastern Greece). These belong to the collection of the senior author which is the property of the Natural History Museum Wien (Vienna, Austria). All genitalia have been studied in wet condition. The terminology to denote the orientation of the genitalia follows Miller & Nilsson (2003).

Systematics

The *Ilybius chalconatus* group and the *montanus* subgroup were introduced by Fery & Nilsson (1993), at that time still in the genus *Agabus* Leach, 1817. They were transferred by Nilsson (2000) to the genus *Ilybius*, that was later supported by the chromosomal analyses of Aradottir & Angus (2004). In contrast to "classical" *Ilybius* – which today are treated as members of the *subaeneus* group in the widened concept of Nilsson (2000) – the members of the *chalconatus* group do not have the anterior metatarsal claw distinctly shorter than the posterior claw, and the first four metatarsomeres do not have a ventrally lobed distal margin. The members of the *chalconatus* group are chiefly characterised by (cf. Fery & Nilsson 1993): pronotum with lateral margin evenly curved, without sinuation near anterior angle; first metatarsomere in most species without posteroventral spines (PV spines; see fig. 17 in Fery & Nilsson 1993); male anterior protarsal claw without basal excavation; total body length 7.3–10.5 mm. The members of the *montanus* subgroup are additionally characterised by parameres which are narrow in the distal fourth and possess here only few and short setae.

Ilybius enpalaiatheka spec. nov.

Type locality. Eğirdir, Isparta province, Turkey; c. 37.86° N 30.84° E.

Type material. Holotype (male): "Anatolien, Egerdir 1926, Kulzer V." [printed], "Holotype, Ilybius enpalaiatheka spec. nov., Fery & Hendrich det. 2011" [red, printed] (ZSM).

Note: "Egerdir" is identical with today's Eğirdir at the south-western edge of the Lake Eğirdir.

Description

Habitus oval in dorsal view, without discontinuity in outline at bases of pronotum and elytra. Broadest around middle of elytra. Major part of surface dark blackish brown, a few smaller parts brownish; surface neither matt nor shiny, but with a silky sheen due to reticulation present on entire surface.

Head with clypeus reddish brown, behind blackish brown; vertex with two diffusely delimited spots. Anterior margin of clypeus with narrow anterior bead, medially broadly interrupted over about one half of margin. Behind clypeus on each side with a transverse clypeal groove consisting of a row of about seven sharply impressed punctures; behind grooves with another, but smaller and very shallow impression consisting of two punctures. Along inner side of eyes with a row of punctures. Entire surface with more or less polygonal meshes of variable shape; these near anterior margin transversely deformed and incomplete in part. Several intersections of reticulation lines with very small punctures, some additional ones along these lines; centre of most meshes with one or very seldom two micropunctures. Setae very sparse, confined to clypeal grooves and puncture rows near eyes.

Pronotum blackish brown, near anterior and posterior margin narrowly, laterally broadly reddish brown, in particular near anterior angles; areas of different colour only diffusely delimited. In dorsal view sides almost straight in posterior half, before progressively more curved to anterior angles. Posterior angles more or less rectangular, narrowly rounded. Hind margin slightly deflexed backwards near posterior angles. Lateral bead well marked, rather broad, becoming slightly narrower anteriorly, vanishing before anterior angle. Anterior margin also with narrow bead, at anterior angles (near eyes) becoming still narrower and then vanishing anteriorly. Behind anterior margin with an irregular row of punctures, these slightly sparser and smaller medially; a similar puncture row before posterior margin, but broadly interrupted medially. Reticulation and punctation similar to that on head,

but meshes around centre of disc more longitudinally shaped or/and in part connected among each other, in part incomplete. Centre of disc with a rather long (c. one fifth of pronotal length) very shallow impression, only perceptible with adequate illumination; here reticulation narrowly interrupted. Setae very sparse, present only in a few coarser punctures of anterior and posterior puncture rows.

Elytra dark brownish, somewhat lighter than centre of pronotum; laterobasally and laterally a diffusely delimited area becoming lighter brownish, near lateral bead as reddish brown as sides of pronotum. Suture and oblique hind margins of scutellum narrowly brownish. In dorsal view sides in anterior two thirds slightly rounded, continuing curvature of pronotum, behind more strongly curved, at apex not pointed, conjointly rounded. Margin of elytra in lateral view almost straight in anterior two thirds. Lateral rim distinctly narrower than that of pronotum. Each elytron with four irregular discal puncture lines, starting somewhat behind elytral base, in apical fourth becoming more irregular; diameter of punctures smaller than that of meshes. Sutural puncture lines only indicated by a very few small punctures. Another puncture line directly beside lateral rim of elytra. Several punctures of these lines with a fine rather long seta (about as long as five meshes in diameter or even longer). Meshes on elytra mostly of same shape, but less impressed than on pronotum; at base narrowly longitudinally stretched; on disc some meshes prolonged and/or connected. Laterally from second fourth of elytral length, more centrally from second third until apex meshes with secondary microreticulation, anteriorly very weak and only perceptible if adequately illuminated, becoming progressively more impressed towards apex, however, directly at apex microreticulation again very weak.

Ventral surface predominantly dark brown. Head with mouthparts reddish brown, genae dark brown, gula black. Prothoracic epipleuron, prosternum anteriorly and prosternal process reddish brown, rest of prosternum dark brown. Epipleura and metacoxal processes also reddish brown. Metaepisterna and metacoxal plates almost black, fourth to sixth abdominal ventrites medially darkened, last ventrite reddish directly before apex. Legs, trochanters and pro- and mesocoxae reddish brown, meso- and metafemora as well as metatibiae medially largely darkened. Antennae and palpi unicolourous reddish; fourth antennomere slightly shorter than third and fifth.

Prosternal process with lanceolate blade almost tectiform in cross-section, sides with distinct, posteriorly somewhat weaker bead; apex pointed. Sides of blade somewhat flattened in part; here with a few larger punctures, else punctures sparse and very fine. Backwards bent distal part of lateral lobes of metasternum ("metasternal wings") rather narrow (cf. fig. 46 in Nilsson & Holmen 1995), posterior margin with indicated weak bend. Lines of metacoxal processes strongly diverging anteriorly, ending far before posterior margin of metasternum. Last abdominal ventrite with posterior margin evenly rounded. Posteroventral spines (PV spines) on first metatarsomere absent, two anterodorsal spines (AD spines) on first metatarsomere, one spine on second and third metatarsomeres each. Metafemora ventrally with a short series of strong rigid setae at posteroapical angle, typical for members of Agabini.

Metacoxal plates with rather distinct reticulation, meshes longitudinally stretched, often incomplete and confused; first two abdominal ventrites with irregular longitudinally oriented lines, on rest of ventrites more or less transversely oriented. Most meshes of metacoxal plates and abdominal ventrites with secondary microreticulation. Metasternum centrally and metacoxal processes anteriorly almost smooth, but with several small punctures; processes distally with fine reticulation. Last abdominal ventrite anteriorly with fine transverse meshes, behind with strongly impressed polygonal meshes, these distinctly microreticulated; on a semicircular area before hind margin meshes without microreticulation; directly before hind margin meshes weaker impressed and incomplete in part. Several meshes inside with a small puncture; before hind margin some coarse punctures, in part elongate, appearing like indistinct rugae. Some of large punctures with a long seta. Setation on venter absent, except a few and very thin rather long setae on prosternal process and on last four abdominal ventrites.

Male. First three pro- and mesotarsomeres weakly dilated, ventrally provided with setae, ending in elongate sucker palettes. Pro- and mesotarsal claws subequal, evenly curved, without any special feature; anterior metatarsal claw apically slightly more curved than posterior one. Median lobe of aedeagus in ventral view with groove straight and apex weakly pointed, not broadly rounded (Fig. 1c); in lateral view (Fig. 1b) widely curved in proximal half, almost straight in distal third; at apex with a slight asymmetry because before apex on right side lobe more reduced than on left side (Fig. 1c). On dorsal side in distal third with a shallow narrow longitudinal furrow reaching until short before apex; except base, rest of dorsal side provided with fine, but distinct longitudinal carinae, visible also in lateral view near base; here dorsal side along midline additionally provided with a fine longitudinal keel. Paramere (Fig. 1a) with distal fourth narrow, deflexed dorsally,

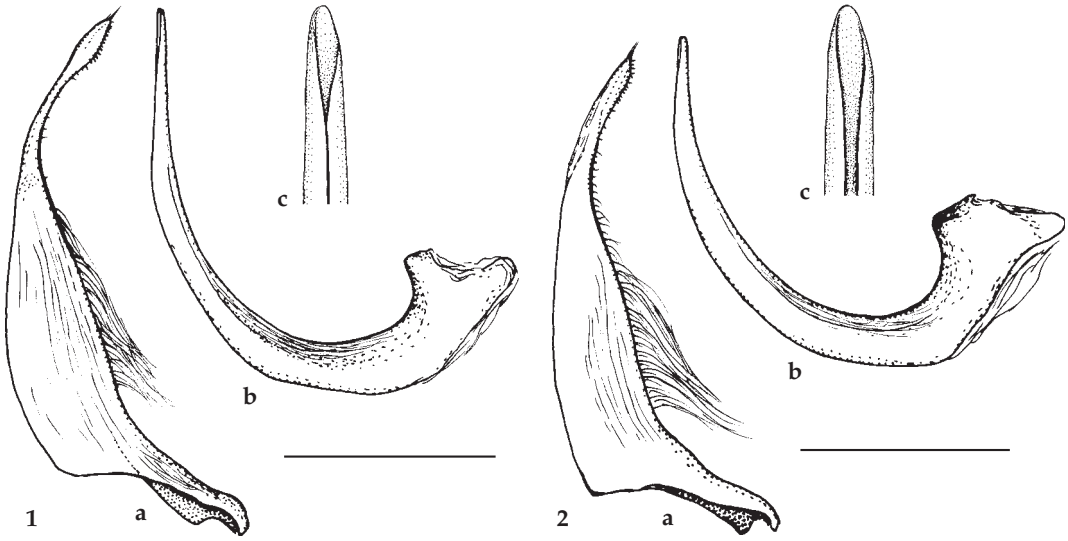

Fig. 1. *Ilybius enpalaiatheka* spec. nov., holotype. **a.** Right paramere. **b.** Median lobe in lateral view. **c.** Apex of median lobe in ventral view. Scale bar 0.5 mm (a, b) and 0.25 mm (c), respectively.
Fig. 2. *Ilybius jaechi*, paratype from the locus typicus. **a.** Right paramere. **b.** Median lobe in lateral view. **c.** Apex of median lobe in ventral view. Scale bar 0.5 mm (a, b) and 0.25 mm (c), respectively.

short before apex broader; with weak longitudinal striae in proximal two thirds; more or less at mid length of dorsal margin with long soft non-adhesive setae; from here to apex with a few rather short setae; apex with several very short bristles.

Female. Unknown.

Variability. Unknown because so far only the holotype could be studied.

Measurements. Total length: 8.1 mm, total length without head: 7.4 mm, maximum width: 4.5 mm, WC/WS = 2.5 (ratio between width of metacoxal plate and width of metasternum; cf. Fery & Nilsson 1993: 80, 86 and Petrov et al. 2010: 43).

Notes: Originally, the holotype was pinned; we have glued the specimen onto a cardboard. The right elytron is somewhat torn. The last four right metatarsomeres are lacking.

Derivatio nominis. The specific epithet is Latinised from the Greek "ἐν παλαῖᾳ θήκῃ" which means "in an old box". This is due to the discovery of the holotype among **old** material **in** a **box** which was stored apart from the main collection in the ZSM. That name is a compound word ("noun phrase") and must be treated like a noun in apposition in the nominative case (see ICZN 1999: article 31, and Glossary, p. 112). In terms of the classification of specific names given by Nilsson (2010) this would be "other, Greek" and "noun in apposition".

Biology. Nothing is known about the biology of the new species. We assume, however, that the holotype has not been collected in the Lake Eğirdir.

Distribution. Western Turkey, Isparta province; so far *I. enpalaitheka* spec. nov. is only known from the locus typicus.

Notes: The collector of the holotype was Hans Kulzer (born 15.11.1889, deceased 1976). According to Scherer (1982: 60), he worked as taxidermist in the ZSM from 1920 until 1939. After World War II, Kulzer worked in the Museum G. Frey, Tutzing, Germany. According to Horn et al. (1990: 218) Kulzer collected in Asia Minor in the years 1926 and 1928 and the respective material came to the ZSM.

Comparison with other members of the *montanus* subgroup

Members of the *montanus* subgroup (like other members of the *chalconatus* group) are externally very similar, only males can be safely determined and this in most cases only by the shape of the median lobe and the parameres. The new species can be separated externally by the lack of evident rugae before the posterior margin of the last abdominal ventrite from *I. lenkoranensis* (Fery & Nilsson, 1993), *I. pederzanii* (Fery & Nilsson, 1993) and *I. pseudoneglectus* (Franciscolo, 1972). Clear differences in the shapes

of parameres and the median lobes are also present (cf. figs 32–34 in Fery & Nilsson 1993).

Ilybius montanus and the still more similar *I. jaechi* also lack the rugae on the last abdominal ventrite, but both can be separated from the new species as follows (cf. Figs 1, 2 in the present work and fig. 30 in Fery & Nilsson 1993):

– *I. montanus* with median lobe in lateral view distinctly broader apically; parameres similar;
– *I. jaechi* with median lobe shorter, in lateral view more curved over proximal three fourth; distal fourth of paramere broader, hardly narrowed before apex, less deflexed dorsally, and proximal setae longer than in *I. enpalaiatheka* spec. nov.

We found a few further characters which deviate in the latter two species, however, we could study only the holotype *I. enpalaiatheka* spec. nov. and, thus, are not sure about their importance. They may be due to individual variation and should be used at most as additional characters for distinguishing *I. enpalaiatheka* spec. nov. from *I. jaechi* before more material has become available:

– areas with secondary microreticulation inside larger meshes on dorsal and ventral surface much more extended in the new species;
– lateral lobes of metasternum of the new species slightly more bent backwards and narrower in apical part;
– elytral puncture lines more distinct than those in *I. jaechi*;
– proximal setae shorter than in *I. jaechi*;
– apex of median lobe with slight asymmetry more prominent than in *I. jaechi*;
– shallow furrow on dorsal surface of the median lobe present in both species, but not reaching so far forwards in *I. jaechi*; carinae on dorsal surface less evident in *I. jaechi*.

Notes: The brownish parts on dorsal and ventral surface of *I. enpalaiatheka* spec. nov. are distinctly more extended than in *I. jaechi*. This may be due to a slight immaturity of the holotype of the new species and, at present, should not be used for distinguishing both species.

Modified complete key to males of the *Ilybius erichsoni* and *chalconatus* groups

Since Fery & Nilsson (1993) published the first version of the key to species for the *Ilybius erichsoni* and *chalconatus* group, two new species were published and each time a modified version of the relevant parts of the key given. We believe that it will strongly help potential users to determine their specimens if they can work with a complete key instead of modified parts of it due to the incorporation of *I. enpalaiatheka* spec. nov. In addition, some parts of the old version have proved not to work perfectly and some others need corrections because a few terms are not any more accepted in more modern works. For instance under couplet 11 we do not use any more the character "ventral groove narrow/broad subapically" because it depends strongly on the maturity and preparation of the median lobe, and whether it is observed in wet condition or not. Furthermore it seems to be generally accepted that the term "sternite" should be replaced by "ventrite". Other changes are due to today's use of the terms "ventral view" and "dorsal view" for male genitalia (cf. Miller & Nilsson 2003). We had also the idea to reproduce all figures of genitalia (c. 40) given in Fery & Nilsson (1993), Petrov et al. (2010), and Fery & Przewoźny (2011), however, this proved to go beyond the scope of the present work. This is why we keep the numbers of the figures in the respective works and mark them by a single asterisk (*) for those in Fery & Nilsson (1993), by two asterisks for those in Petrov et al. (2010), and by a hash-mark (#) for those in Fery & Przewoźny (2011).

Notes: Due to the secondary homonymy of *Ilybius aenescens* Thomson, 1870 with *Ilybius aenescens* (Poppius, 1905) – originally described in *Agabus* – the latter name had to be replaced by its objective synonym *Ilybius lenensis* Nilsson, 2000 (see couplet 9).

1. Pronotum with lateral margin sinuate near anterior angle (figs 53*–55*). Metatarsomere 1 with two or more PV spines (fig. 17*). Male metatarsus basally with anteroventral bead; tarsomere 2 with ventral setal fringe; tarsomere 5 with ventral furrow. Male anterior protarsal claw with basal excavation (figs 59*–61*). Body length 9.0–11.0 mm (*erichsoni* group). 2
– Pronotum with lateral margin evenly curved. Metatarsomere 1 in most species without PV spines. Male metatarsus without anteroventral bead; tarsomere 2 without ventral setal fringe; tarsomere 5 without ventral furrow. Male anterior protarsal claw without basal excavation. Body length 7.3–10.5 mm (*chalconatus* group). 4
2. Pronotum with anterior angle acute in lateral view (fig. 53*). Male metatarsomere 5 ventrally with strong sinuation. Median lobe and paramere long and slender (fig. 58*). Body length 9.0–10.7 mm. ..... *I. subtilis* (Erichson, 1837)
– Pronotum with anterior angle broadly rounded in lateral view (fig. 54*). Male metatarsomere 5 ventrally with weak sinuation. Median lobe and

paramere short and robust (figs 56*, 57*). Body length 9.5–11.0 mm. 3

3. Median lobe with ventral groove subapically twisted to right and visible in lateral view (figs 57*b,c); without apical dilatation. .... *I. balkei* (Fery & Nilsson, 1993)

– Median lobe with ventral groove straight and not visible in lateral view (figs 56*b,c); apex dilated. .... *I. erichsoni* (Gemminger & Harold, 1868)

4. Median lobe with ventral groove subapically twisted to right and visible in lateral view (figs 10*–15*b,c). Anterior protarsal claw with ventral margin more or less sinuate (figs 25*–29*) (*neglectus* subgroup). 5

– Median lobe with ventral groove more or less straight and not visible in lateral view (e. g. figs 8*–9*b,c). Anterior protarsal claw with ventral margin sinuate or not. 10

5. Last abdominal ventrite with distal margin truncate (figs 18*, 19*). 6

– Last abdominal ventrite with distal margin rounded (figs 20*, 21*). 7

6. Paramere broad in distal half (fig. 13*a). Metatarsomere 1 frequently with 1–5 PV spines (fig. 17*). Body length 8.5–9.3 mm. .... *I. lagabrunensis* (Schizzerotto & Fery, 1990)

– Paramere narrow in distal half (fig. 10*a). Metatarsomere 1 without PV spines. Body length 8.1–9.1 mm. ..... *I. neglectus* (Erichson, 1837)

7. Paramere without tuft of subapical setae (fig. 12*a). Body length 8.1 mm. .... *I. samokovi* (Fery & Nilsson, 1993)

– Paramere with tuft of subapical setae (figs 11*a, 14*a, 15*a). 8

8. Median lobe broad in lateral view (fig. 15*b); ventral groove subapically broadly open in lateral view (fig. 15*b). Body length 7.7–8.9 mm. . ..... *I. albarracinensis* (Fery, 1986)

– Median lobe narrow in lateral view; ventral groove subapically narrow in lateral view (figs 11*b, 14*b). 9

9. Median lobe long (figs 14*b,c). Paramere broad (fig. 14*a). Body length 7.6–8.6 mm. .... *I. satunini* (Zaitzev, 1913)

– Median lobe short (figs 11*b,c). Paramere narrow (fig. 11*a). Body length 7.2–7.8 mm. .... *I. lenensis* Nilsson, 2000

10. Paramere with distal ¼ narrow and with few and very short, almost imperceptible setae (figs 30*–34*a; Figs 1a, 2a) (*montanus* subgroup). 11

– Paramere with distal ¼ relatively broad and with many distinct setae (figs 8*–9*a, 41*a, 44–49*a, 7**, 7#). 16

11. Last abdominal ventrite with longitudinal rugae in distal half (fig. 37*). 12

– Last abdominal ventrite without evident rugae. 13

12. Paramere with strong transverse striae and distal part narrow (fig. 33*a). Body length 8.3–9.4 mm. ..... *I. pederzanii* (Fery & Nilsson, 1993)

– Paramere with striation slightly weaker and more longitudinal; distal part broad (fig. 32*a). Body length 8.4–9.4 mm. .... *I. lenkoranensis* (Fery & Nilsson, 1993)

13. Median lobe with distal part thin in lateral view, almost pointed (fig. 34*b). Paramere broad and with evident striation (fig. 34*a). Body length 7.7–8.8 mm. .... *I. pseudoneglectus* (Franciscolo, 1972)

– Median lobe with distal part not thin in lateral view, not pointed (figs 30*–31*b; Figs 1b, 2b). Paramere narrow and with very weak striation (figs 30*–31*a; Figs 1a, 2a). 14

14. Median lobe with apex broader in lateral view (fig. 30*b). Paramere with distal narrow part distinctly dorsally deflexed (fig. 30*a). Body length 7.6–8.7 mm. .... *I. montanus* (Stephens, 1828)

– Median lobe with apex narrower in lateral view (fig. 31*b; Figs 1b, 2b). 15

15. Distal part of paramere relatively broad, hardly constricted far before apex, less dorsally deflexed (fig. 31*a; Fig. 2a). Median lobe in lateral view more curved over proximal three fourth, more bent proximally (fig. 31*b; Fig. 2b). Body length 7.5–8.1 mm. .... *I. jaechi* (Fery & Nilsson, 1993)

– Distal part of paramere relatively narrow, distinctly constricted before enlarged apical part, more strongly dorsally deflexed (Fig. 1a). Median lobe in lateral view less curved, almost straight in distal ⅓ (Fig. 1b). Body length 8.1 mm. ..... *I. enpalaiatheka* spec. nov.

16. Paramere without proximal setae and with apical setae thin, not adhesive (figs 8*–9*a). Metatarsus without AD spiniferous punctures (*hulae* subgroup). 17

– Paramere with proximal setae and apically also with thick, adhesive setae (figs 41*a, 44*–49*a) or with a fringe of many rather short, but well perceptible setae (figs 7**, 7#). Metatarsus with or without AD spiniferous punctures (*chalconatus* subgroup). 18

17. Median lobe with apex rounded in lateral view (fig. 9*b). Paramere subapically broad and with short setae (fig. 9*a). Body length 7.7–8.1 mm. ..... *I. hulae* (Wewalka, 1984)

– Median lobe with apex pointed in lateral view (fig. 8*b). Paramere subapically narrow and with long setae (fig. 8*a). Body length 8.6 mm. ..... *I. wewalkai* (Fery & Nilsson, 1993)

18. Paramere with strong transversal striae (figs 48*a–49*a); apical and proximal setal fringes fused. Body length 9.3–10.7 mm (Nearctic species). 19

– Paramere with longitudinal striae strong or weak; apical and proximal setal fringes distinctly separated (figs 41*a, 44*a–47*a, 7**, 7#) (Palearctic species). 20

19. Median lobe broad in lateral view, with apex broadly rounded in ventral view (figs 49*b,c). Body length 9.3–10.7 mm. ..... *I. larsoni* (Fery & Nilsson, 1993)

– Median lobe narrow in lateral view, with apex sharply pointed in ventral view (figs 48*b,c). Body length 9.8 mm. ..... *I. gagates* (Aubé, 1938)

20. Paramere rather broad also in distal ¼ and with strong more or less longitudinal striae over entire surface (figs 7**, 7#). Apical setae rather short, proximal setae present, poorly perceptible in external view, but obvious in internal view (fig. 8#). Median lobe with apex sharply pointed in lateral view (figs 5**, 2#, 5#, and 6#), in ventral view distal portion thin and apex rounded (figs 6**, 2#). 21

– Paramere narrowed in distal ¼, striae rather weak, more transverse, in particular near base (figs 41*a–47*a). Apical setae longer. Median lobe with apex distinctly rounded in lateral view, rounded or pointed in ventral view. 22

21. Smaller species (7.6–8.0 mm). Median lobe in lateral view near base distinctly curved (figs 2#, 5#) (endemic of the European part of Turkey). ..... *I. thynias* Fery & Przewoźny, 2010

– Larger species (8.2–8.9 mm). Median lobe in lateral view near base less curved (figs 5** and 6#) (endemic to the Russian Caucasus). ..... *I. adygheanus* Petrov, Shapovalov & Fery, 2010

22. Median lobe short, with apex more broadly rounded in ventral view; body length in most specimens less than 9.4 mm. 23

– Median lobe long, with apex more pointed in ventral view; body length in most specimens more than 9.4 mm. 24

23. Paramere with striation more developed and basal setae long (figs 41*a, 44*a). Last abdominal ventrite in most specimens rugose in distal half (fig. 36*). Body length 7.6–9.5 mm. ..... *I. chalconatus* (Panzer, 1796)

– Paramere with only traces of striation and proximal setae short (fig. 45*a). Last abdominal ventrite without rugae. Body length 7.8–8.9 mm. ..... *I. dettneri* (Fery, 1986)

24. Last abdominal ventrite rugose in distal half. Median lobe slightly dilated apically in lateral view (fig. 46*b). Paramere with proximal setal fringe long (fig. 46*a). Body length 9.8–10.6 mm. ..... *I. bedeli* (Zaitzev, 1908)

– Last abdominal ventrite at most with very weak rugae. Median lobe evenly tapering to apex in lateral view (fig. 47*b). Paramere with proximal setal fringe short (fig. 47*a). Body length 9.0–10.6 mm. ..... *I. hozgargantae* (Burmeister, 1983)

First record of *Ilybius lenensis* for Kazakhstan, and notes on *I. samokovi* and *I. pseudoneglectus*

Ilybius lenensis Nilsson, 2000 can be recorded for the first time from Kazakhstan. We studied a male of this species which has the following collecting data: "NE Kazakhstan, Kolpekty vill., 23.VI.1999" (in coll. Hendrich). The species was described from Yakutsk (under the name *Agabus aenescens*) and so far was known from western and eastern Siberia (Russia) and from "Manchuria" (north-eastern China) (Nilsson 2011).

Ilybius samokovi (Fery & Nilsson, 1993) was described as a member of the *Ilybius neglectus* group solely on the basis of the holotype which had been collected in the year 1911. Since then no new record was known. Colleague J. Šťastný (Liberec, Czech Republic) rediscovered this species and published the collecting data in Šťastný (2010). Because this journal may not be so well-known outside Czech Republic, we reproduce the data of this remarkable record here: 20.6.2007, Bulgaria, Rila Mountains, Trestenek environs, 42°05' N 23°36' E, ca. 2020 m, J. Šťastný leg. In the same work, the author gives also the first record of *I. pseudoneglectus* from Romania: 30.8.1996, Romania bor. occ., Munţi Bihor, Groapa de la Barsa near Pestera Focul Viu, Taul Negru lake, M. Boukal leg.

Erratum

In Petrov et al. (2010: 41) the number of *Ilybius* distributed in the Palearctic was given as 65, in the Nearctic as 2, and one species was given as Holarctic. A similar mistake was made in Fery & Przewoźny (2011: 59). The source of these mistakes is unclear. Anyway, including the recently described species *I. adygheanus*, *I. thynias*, and *I. enpalaiatheka* spec. nov., the correct numbers are: total 71, Palearctic 41, Nearctic 22, Holarctic 8; one of the Palearctic species is bitypic (*I. fuliginosus fuliginosus* and *I. fuliginosus turcestanicus* Gschwendtner, 1934).

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