

A new species of *Anagrus* HALIDAY, 1833 (Insecta: Hymenoptera: Mymaridae) from Austria

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Abstract

Anagrus (Anagrella) kashtanka sp.n. is described and illustrated from Lower Austria, Austria. This is the first record of the subgenus *Anagrella* BAKKENDORF, 1962 in Austria. A key to the Palearctic species of *Anagrella* is provided.

Key words: Hymenoptera, Mymaridae, *Anagrus*, *Anagrella*, new species, description, Austria.

Zusammenfassung

Anagrus (Anagrella) kashtanka sp.n. aus Niederösterreich, Österreich, wird als neu beschrieben und abgebildet. Es handelt sich um den Erstnachweis des Subgenus *Anagrella* BAKKENDORF, 1962 für Österreich. Ein Bestimmungsschlüssel für die paläarktischen Arten von *Anagrella* wird vorgestellt.

Introduction

Among the fairyflies (Hymenoptera: Mymaridae) that I collected in June 2007 using yellow pan traps near Hollern in Lower Austria, Austria, not far from Leitha River bank, a new species of the genus *Anagrus* HALIDAY, 1833 (subgenus *Anagrella* BAKKENDORF, 1962), was found; it was captured in the bowls placed in and next to a moist ditch at the edge of a low riverbank forest. This subgenus was diagnosed in detail by CHIAPPINI et al. (1996) and CHIAPPINI & LIN (1998) based on the Palearctic and both Oriental and Palearctic material, respectively. Members of *A. (Anagrella)* are rarely collected in Europe and North America, but they may be not that uncommon in certain regions like eastern tropical Africa or far eastern Palearctic and Oriental regions. They appear to be collected mainly in humid environments. *Anagrus (Anagrella) mockfordi* TRIAPITSYN, 2000 from Illinois, USA, was found in association with the culture of the psocid *Echmepteryx hageni* (PACKARD, 1870) (Psocoptera: Lepidopsocidae) (TRIAPITSYN 2000). Host associations of other described species of *A. (Anagrella)* are unknown, while known hosts of the Palearctic species in the other two subgenera of *Anagrus* include various Cicadellidae, Delphacidae and Miridae (Hemiptera) as well as Zygoptera and Anisozoptera (Odonata) (TRIAPITSYN & BEREZOVSKIY 2004).

The female specimen from Lower Austria, which was initially collected in 75% ethanol, then dried using a critical point drier, point-mounted, and eventually slide-mounted in Canada balsam (with both forewings and one hind wing detached from the body and

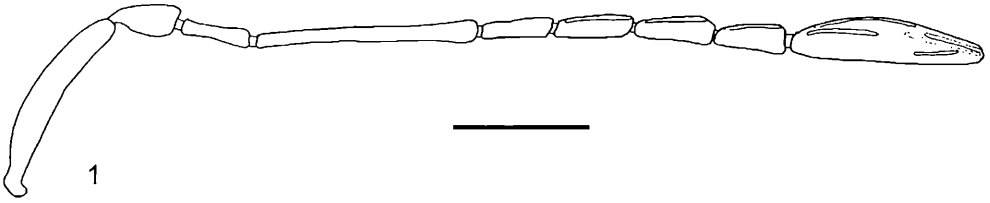


Fig. 1: *Anagrus (Anagrella) kashtanka* sp.n., holotype female: antenna [scale bar = 0.1 mm]

mounted under a separate coverslip), is described here as *A. (Anagrella) kashtanka* sp.n. Terminology used and the choice of morphological features measured follow CHIAPPINI & LIN (1998). An abbreviation used is: F = antennal funicle segment.

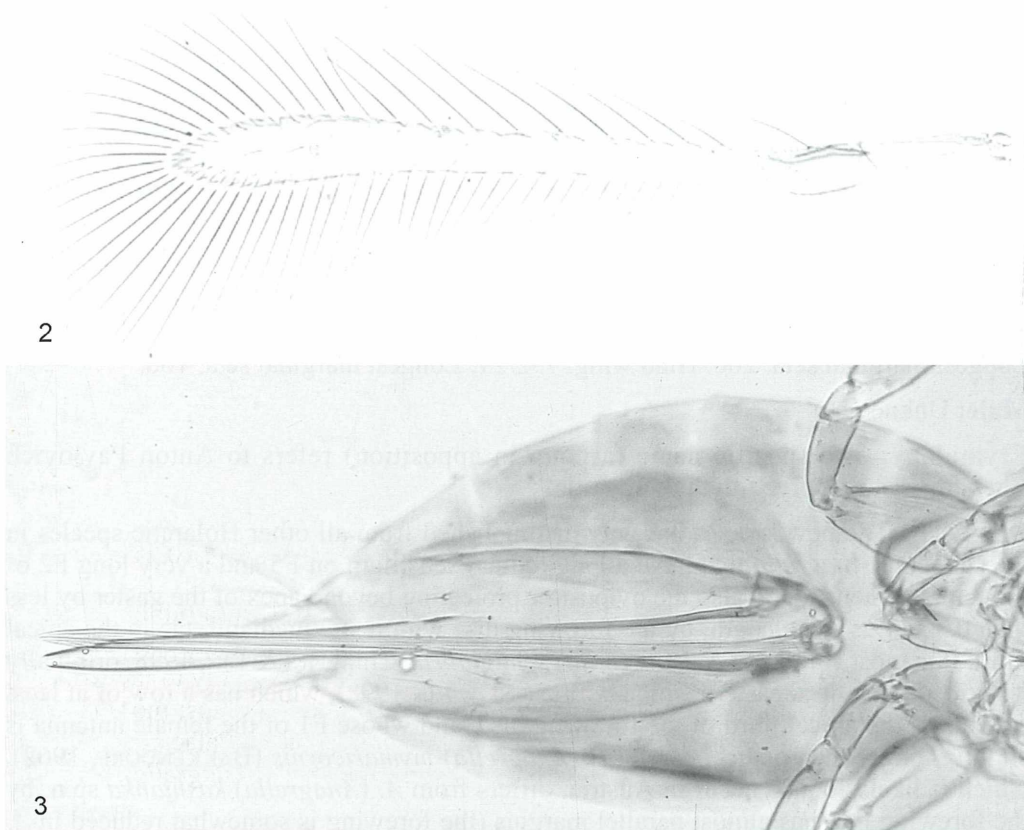
Taxonomy

Subgenus *Anagrella* BAKKENDORF, 1962 of genus *Anagrus* HALIDAY, 1833

SOYKA (1956) described a number of species of *Anagrus* from Austria (all belonging to the nominate subgenus), but most of them were later synonymized under the previously described taxa (CHIAPPINI 1989). CHIAPPINI et al. (1996) provided a key to the Holarctic species of *Anagrus* and diagnosed the genus and its subgeneric groups; more recently, TRIAPITSYN & BEREZOVSKIY (2004) added to the knowledge of the Palaearctic fauna of *A. (Anagrella)*. The key below serves as an update of the key to *Anagrella* species by TRIAPITSYN (2000) for the Palaearctic region.

Key to Palaearctic species of *Anagrus (Anagrella)*, females

- 1 F5 without sensory ridges (China, Japan, Republic of Korea, Far East of Russia) *A. (Anagrella) hirashimai* SAHAD, 1982
F5 with one sensory ridge 2
- 2 F2 about 1.4× length of F1 (China, Japan) .. *A. (Anagrella) brevis* CHIAPPINI & LIN, 1998
F2 at least 2.0× length of F1 3
- 3 Ovipositor projecting beyond apex of gaster by a little less than 0.5× of its own total length (France, Italy, Switzerland) *A. (Anagrella) mymaricornis* (BAKKENDORF, 1962)
Ovipositor projecting beyond apex of gaster by less than 0.3× of its own total length 4
- 4 Forewing disc with a complete median row of setae extending from apex of venation to wing apex (Bulgaria, Italy) *A. (Anagrella) rilensis* DONEV, 1996
Forewing disc with median setae at most in apical third 5
- 5 Forewing disc with a median row of at least 6 setae in apical third (?Australia, China, Far East of Russia) *A. (Anagrella) semiglabus* CHIAPPINI & LIN, 1998
Forewing disc with just 2 median setae in apical third (Fig. 2) (Austria) *A. (Anagrella) kashtanka* sp.n.



Figs. 2–3: *Anagrus (Anagrella) kashtanka* sp.n., holotype female: (2) forewing; (3) metasoma (ventral view).

***Anagrus (Anagrella) kashtanka* sp.n.** (Figs. 1–3)

Type material: Holotype female on slide [Entomology Research Museum, University of California, Riverside, California, USA (UCRC)]: "AUSTRIA: Lower Austria, 1 km W of Hollern, 150 m, 48°04'22"N 16°52'37"E, 16-17.vi.2007, S.V. Triapitsyn, C. Thuróczy, YPT"

Description: Female.

Color: Body brown to dark brown except posterior scutellum whitish and metanotum and propodeum light brown to brown; appendages light brown to brown. Head wider than mesosoma. Antenna (Fig. 1) with scape slender, slightly longer than clava; pedicel about as long as F1, F3, F4, F5, and F6; F2 the longest funicle segment, 3.2× as long as F1 and longer than scape or clava; F1-F3 without sensory ridges, F4-F6 each with 1 sensory ridge; clava 4.4× as long as wide (in lateral view), shorter than combined length of three preceding segments. Mesosoma about 0.6× as long as metasoma. Mesoscutum with a pair of short, weak adnotaular setae. Forewing (Fig. 2) a little shorter than body, 11.5× as long as wide; disc with a conspicuous brownish tinge throughout (less so behind submarginal vein) and bare, except for 2 median setae in its apical third; the

longest marginal seta $3.1\times$ maximum wing width. Lengths of distal and proximal macrochaetae in ratio 3.4:1. Hind wing $25\times$ as long as wide, disc slightly infumate and asetose, except for a complete row of small setae along posterior margin and a few setae at apex; the longest marginal seta $5.7\times$ maximum wing width. Metasoma (Fig. 3): Ovipositor long, anteriorly almost extending to mesophragma, posteriorly exerted beyond apex of metasoma by less than $0.3\times$ of its own length (ratio of total ovipositor length to length of its exerted part 3.8:1). External plates of ovipositor each with 2 setae. Ovipositor length: protibia length ratio 2.9:1.

Measurements (in microns [μm], as length or length/width): Body: 843; Ovipositor: 473. Antenna: Scape: 142; Pedicel: 52; F1: 52; F2: 164; F3: 50; F4: 52; F5: 54; F6: 52; Clava: 133. Forewing: 769/67; Proximal macrochaeta: 26; Distal macrochaeta: 89; Longest marginal seta: 206. Hind wing: 732/29; Longest marginal seta: 166.

Male: Unknown.

Etymology: The specific name (a noun in apposition) refers to Anton Pavlovich Chekhov's short story with the same title.

Diagnosis: The new species is easily distinguished from all other Holarctic species in the subgenus *Anagrella* that have a longitudinal sensillum on F5 and a very long F2 of the female antenna, and also the ovipositor projecting beyond apex of the gaster by less than $0.3\times$ of its own length, by the forewing disc with just 2 median setae in the apical third. It is most similar to *A. (Anagrella) semiglabrus* CHIAPPINI & LIN, 1998, originally described from northeastern China (CHIAPPINI & LIN 1998), which has a row of at least 6 setae on the apical third of the forewing disc, and whose F1 of the female antenna is slightly longer than pedicel. *Anagrus (Anagrella) mymaricornis* (BAKKENDORF, 1962), which is likely to also occur in Austria, differs from *A. (Anagrella) kashtanka* sp.n. by the forewing that has almost parallel margins (the forewing is somewhat reduced in *A. (Anagrella) mymaricornis*), and a much more projecting ovipositor, as indicated in the key above [ovipositor length: protibia length ratio about 3.2:1 in *A. (Anagrella) mymaricornis* (taken from CHIAPPINI 1989)].

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