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**A NEW SPECIES OF THE GENUS *BRACHYPIPONA* GUSENLEITNER,
1967 (HYMENOPTERA: VESPIDAE: EUMENINAE)
FROM KAZAKHSTAN**

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Summary. *Brachypipona kurzenkoi* Fateryga, **sp. n.** is described by females from Aktobe, Jambyl, and Almaty provinces of Kazakhstan. The new species is closely related to *B. longicornis* (Morawitz, 1895) but differs from it by pronotal carina weakly developed and not acutely producing laterally, epicnemial suture not carinate, mesepisternum more sparsely punctured, with shining interstices reaching diameter of punctures, parategula and tergum 6 black. A preliminary key to species of *Brachypipona* from Kazakhstan and Central Asia (based on females) is provided.

Key words: potter wasps, taxonomy, Palaearctic region.

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Резюме. *Brachypipona kurzenkoi* Fateryga, **sp. n.** описан по самкам из Актюбинской, Жамбылской и Алматинской областей Казахстана. Новый вид близок к *B. longicornis* (Morawitz, 1895), но отличается от него слабо развитой окантовкой пронотума, не выступающей по бокам в виде острых уголков, эпикнемияльным швом, не окаймленным килем, более редкой пунктировкой мезэпистернума с блестящими промежутками между точками, достигающими диаметра точек, черными паратегулой и тергумом 6. Приводится определительная таблица видов рода *Brachypipona* из Казахстана и Средней Азии (по самкам).

INTRODUCTION

Brachypipona Gusenleitner, 1967 is a small Palaearctic genus of solitary wasps in the subfamily Eumeninae. Eight species of the genus have been described up to date. All of them are known from arid areas from Mediterranean to Central Asia. These are medium sized to rather small wasps with either black and yellow to black and white coloration or black with reddish pattern. The knowledge of this genus is still incomplete, since new species are described very recently (Gusenleitner, 2018). Bionomics of the genus *Brachypipona* are unknown. In this paper, a new species of *Brachypipona* from Kazakhstan is described.

MATERIAL AND METHODS

The studied specimens are deposited in the collections of the Zoological Institute of the Russian Academy of Sciences, Saint Petersburg, Russia [ZISP], the Federal Scientific Center of the East Asia Terrestrial Biodiversity of the Far East Branch of the Russian Academy of Sciences, Vladivostok, Russia [FSCV], and the collection of the author stored in T.I. Vyazemsky Karadag Scientific Station – Nature Reserve of RAS – Branch of A.O. Kovalevsky Institute of Biology of the Southern Seas of RAS, Feodosia, Russia [CAFK].

Photographs were taken in ZISP with a Canon EOS 70D digital camera attached to an Olympus SZX10 stereomicroscope and in FSCV with an Olympus DP74 digital camera attached to an Olympus SZX16 stereomicroscope. Multifocus-images were created from stacks of photographs using Helicon Focus 6 Pro software. Final illustrations were post-processed for sharpness, contrast, and brightness using Adobe Photoshop CS2 software.

The morphological terminology follows Yamane (1990).

RESULTS

Genus *Brachypipona* Gusenleitner, 1967

Brachypipona Gusenleitner, 1967: 671–672 (as subgenus of *Pseudepipona* de Saussure, 1856); 2001: 235–236; 2004: 1102–1104; 2013: 20; 2018: 303–304; Kurzenko, 1982: 104; Castro & Dvořák, 2009: 296; Antropov & Fateryga, 2017: 180.

Desertodynerus Kurzenko, 1977: 957–958. Type species *Desertodynerus gratus* Kurzenko, 1977, by monotypy and original designation; synonymized by Kurzenko, 1982: 104.

Type species *Pseudepipona (Brachypipona) schmidti* Gusenleitner, 1967, by original designation.

DIAGNOSIS. Representatives of the genus can be distinguished from the closely related genus *Pseudepipona* de Saussure, 1856 by having tegula coarsely punctured and propodeal valvula acutely pointed posteriorly. Females of *Brachypipona* also have broader clypeus with more broadly emarginate anterior margin and shorter mandibles in comparison with the females of *Pseudepipona*.

SPECIES INCLUDED. *Brachypipona grata* (Kurzenko, 1977) (Kazakhstan), *B. hispanica* (Giordani Soika, 1974) (Spain), *B. kurzenkoi* Fateryga, **sp. n.** (Kazakhstan), *B. laticeps* (Morawitz, 1895) (Russia, Kazakhstan), *B. longicornis* (Morawitz, 1895) (Turkmenistan, Uzbekistan), *B. nigripes* Gusenleitner, 2018 (Kazakhstan), *B. orientalis* Gusenleitner, 2004 (Turkey, Iran), *B. schlaeflei* Gusenleitner, 2001 (Jordan, Israel), *B. schmidti* (Gusenleitner, 1967) (Turkey).

Brachypipona kurzenkoi Fateryga, **sp. n.**

<http://zoobank.org/NomenclaturalActs/31A04036-CB9B-4D66-AA49-7071CE795C4F>

Figs 1–7

DIAGNOSIS. The new species is closely related to *Brachypipona longicornis* (Morawitz, 1895) but differs by having pronotal carina weakly developed and not acutely producing laterally, epicnemial suture not carinate, mesepisternum more sparsely punctured, with shining interstices reaching diameter of punctures, parategula and tergum 6 black (in *B. longicornis*, pronotal carina producing laterally in the form of small but distinct acute angles, epicnemial carina in the form of a well developed keel, mesepisternum densely punctured, with narrow interstices several times less than diameter of punctures, parategula and tergum 6 with large yellow spots). Another closely related species *B. orientalis* Gusenleitner, 2004 has pronotal carina with even more distinct lateral angles than in *B. longicornis*, clypeus with

deeper apical emargination, and also parategula and tergum 6 with large yellow spots (Gusenleitner, 2004).



Figs 1–7. *Brachytipona kurzenkoi* Fateryga, **sp. n.**: 1–4 – ♀, holotype (1 – habitus, dorsal view; 2 – habitus, lateral view; 3 – head, frontal view; 4 – labels); 5–7 – ♀, paratype, Almaty Prov. (5 – head, pronotum, and part of scutum, dorsal view; 6 – habitus, lateral view; 7 – head, frontal view).

MATERIAL EXAMINED. **Holotype:** ♀, [Kazakhstan] Ber Tschogur Mugodjargebirge [currently Birshoghyr, Aktobe Prov.] L. Wollmann // к.[оллекция] Вольмана [collection of Wollmann] // *O. interpositus* n. sp. G. Kostylev det. [19]35 // Holotypus *Desertodynerus wollmanni* sp. n. det. Kurzenko 1976 ♀ <red label> // Holotypus, ♀ *Brachypipona kurzenkoi* Fatoryga <red label> [ZISP] (Figs 1–4). **Paratypes:** ♀, [Kazakhstan] Джамбулская обл.[асть] р.[ека] Чу, Малая Арка [Dzhambul (currently Jambyl) Prov., Chu River, Malaya Arka, 27.V.1959 // Paratypus *Desertodynerus wollmanni* sp. n. det. Kurzenko 1976 ♀ <red label> // Paratypus, ♀ *Brachypipona kurzenkoi* Fatoryga <red label> [FSCV]; ♀, Казахстан Алматинская обл.[асть], окр. Акжар [Kazakhstan, Almaty Prov., vicinity of Akzhar], h 397 m N 44°52'49" E 75°53'11" leg. Фадеев К.И. [Fadeev K.I.] 26.05.2015 // собран на [collected on]: *Euphorbia* L., Молочай [spurge] // *Brachypipona* sp. ♀ det. Fatoryga, 2018 // *Brachypipona longicornis* (Mor.) ♀ J. Gusenleitner, det. 2018 // Paratypus, ♀ *Brachypipona kurzenkoi* Fatoryga <red label> [CAFK] (Figs 5–7).

DESCRIPTION. *Female.* Body length (from head to apical margin of tergum 2) 7–8 mm; fore wing length 6.5–7 mm.

Head 1.2× as wide as long in frontal view. Vertex with dense deep punctures, interstices less than diameter of punctures. Temples, frons and ocular sinuses with sparser and finer punctures, interstices reach several puncture diameters. Clypeus with sparse fine punctures, interstices reach several puncture diameters; 1.5× as wide as long; apical emargination shallow, taking 1/3 of clypeal anterior margin, broader than distance between antennal foveae; apical teeth blunt. Scape with sparse fine punctures. Pronotal carina weakly developed, distinct only laterally. Pronotum and mesonotum with dense punctures as on vertex. Tegula with sparser and somewhat finer punctures. Mesepisternum with deep punctures, shining interstices reach puncture diameter. Scutellum convex. Metanotum with punctures somewhat denser and finer than on mesonotum and diminishing towards propodeum; punctures form serrate dorsal surface visible in anterior view. Metapleuron and lateral part of propodeum rugose, without distinct punctures. Dorsolateral part of propodeum punctured as mesonotum; propodeal concavity rugose, with indistinct punctures. Punctuation on terga 1–5 rather deep and dense; interstices vary in size but approximately equal to puncture diameter, with distinct microsculpture. Punctuation on tergum 6 very dense and fine. Sternum 2 elevated behind basal sulcus and then evenly rounded in lateral view, with indistinct, short and very shallow longitudinal furrow at base. Punctuation on sterna 2–5 several times sparser than on terga, interstices have distinct microsculpture. Sternum 6 shagreened, without punctures.

Pubescence of body weakly developed. Mouthparts with pale setae ± equal in length to scape diameter. Clypeus anteriolateral margins, edge of anterior face of pronotum, and pleuron with shorter setae, ± equal to ocellus diameter. Legs with very short, minute pale pubescence. Sterna with even shorter, unnoticeable pale pubescence. Other structures bare.

Basal color black. The holotype has orange-yellow pattern: mandible except teeth, labrum, clypeus, large triangular spot on frons, stripes along inner margins of eyes from clypeus to ocular sinuses, large spots on temples at dorso-lateral corners of head, scape, dorsal face of pronotum, tegula, large spot on dorsal mesepisternum, scutum, metanotum, two large spots on dorsolateral parts of propodeum, apical bands on terga 1, 2, 4, and sterna 2 and 3. Apical band on tergum 3, lateral spots on terga 2 and 4, and basal half of sterna 2 and 3 ferruginous. Both paratypes have rather lemon-yellow pattern than orange-yellow, except mandible and labrum in the second paratype (from Almaty Prov.), and do not have ferruginous pattern on metasoma. The paratype from Jambyl Prov. also has yellow spot on tergum 5. The second paratype has central black spot on clypeus and apical band on sternum 3 reduced to small lateral spots. Pedicel, ventral side of flagellum, and legs from base of femorae orange in all

three specimens. First flagellomere nearly entirely orange in the holotype and the first paratype but black dorsally in the second paratype. Wings distinctly fuscous, especially on marginal cell.

Male. Unknown.

ETYMOLOGY. The species is named after Nikolay V. Kurzenko, a Russian taxonomist on Eumeninae who firstly recognized this species but never describe it.

DISTRIBUTION. Kazakhstan (Aktobe, Jambyl, and Almaty Provinces).

BIONOMICS. Unknown.

Preliminary key to species of *Brachypipona* from Kazakhstan and Central Asia (females)

1. Clypeus entirely black2
– Clypeus yellow or orange, sometimes with central black spot.....4
2. Vertex distinctly elevated behind ocelli; body black with reddish pattern, lacking any yellow or whitish elements; metanotum and propodeum reddish *B. grata* (Kurzenko)
– Vertex \pm flat; body black with pale yellow or whitish pattern; metanotum and propodeum black3
3. Anterior margin of clypeus with emargination which is 0.7 \times as deep as wide; distal half of femora and entire tibiae reddish *B. laticeps* (Morawitz)
– Anterior margin of clypeus with emargination which is 0.3 \times as deep as wide; fore femora and tibiae black or dark brown with yellowish pattern, entire mid and hind femora and tibiae black or dark brown *B. nigripes* Gusenleitner
4. Pronotal carina not acutely producing laterally; epicnemial suture not carinate; mesepisternum sparsely punctured, interstices reach diameter of punctures; parategula, tergum 6, and often tergum 5 black *B. kurzenkoi* Fateryga, **sp. nov.**
– Pronotal carina producing laterally as small but distinct acute angles; epicnemial carina as a well developed keel; mesepisternum densely punctured, interstices much less than diameter of punctures; parategula and terga 5–6 yellow *B. longicornis* (Morawitz)

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