



To the knowledge of the solitary vespid wasps (Hymenoptera: Vespidae: Masarinae and Eumeninae s. l.) of Uzbekistan

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Abstract

The knowledge of the solitary Vespidae of Uzbekistan is very poor and a preliminary list of species is provided. The list contains 105 species of 34 genera: seven species of three genera in the subfamily Masarinae, 96 species of 29 genera in Eumeninae s. str., one species in Raphiglossinae and one in Zethinae. Among them, eight genera and 27 species are reported from Uzbekistan for the first time; their label data and general distribution are reported. New synonymies are proposed: *Leptochilus* (*Lionotulus* Blüthgen, 1938) = *L. (Neoleptochilus)* Blüthgen, 1961, **syn. nov.** = *L. (Sarochilus)* Gusenleitner, 1970, **syn. nov.**; *Leptochilus* (*Lionotulus*) *crassiceps* (Kostylev, 1940) = *L. (L.) flavicornis* Giordani Soika, 1970, **syn. nov.**; *Euodynerus* (*Pareuodynerus*) *cylindriventris* (Kostylev, 1935) = *E. (P.) distinctus* (Kostylev, 1935), **syn. nov.**; *Eustenancistrocerus* (*Eustenancistrocerus*) *askhabadensis* (Radoszkowski, 1886) = *E. (E.) jerichoensis* (von Schulthess, 1928), **syn. nov.** = *E. (E.) askhabadensis danticoides* (Giordani Soika, 1943), **syn. nov.** = *E. (E.) jerichoensis iconius* Blüthgen, 1957, **syn. nov.** The synonymy of *Eumenes* (*Eumenes*) *sareptanus* André, 1884 with *E. (E.) crimensis* Blüthgen, 1938 is rejected. A nest of *Stenodynerus chitgarensis* Giordani Soika, 1970 is briefly described for the first time; it consisted of a constructed mud cell, with a turret-like entrance, attached to a subvertical surface of a stone. Bionomical observations on some other species are reported including prey records for three species, flower-visiting records for nine species, a sleeping aggregation of two species, and a Strepsiptera parasite of one species.

Key words: pollen wasps, eumenine wasps, fauna, taxonomy, new synonymy, trophic relationships, nesting biology, Central Asia, Palaearctic region

Introduction

Solitary wasps of the family Vespidae are represented in the Palaearctic region by the eumenine wasps (subfamily Eumeninae s. l.) and the pollen wasps (subfamily Masarinae). The eumenine wasps are the most diverse group of vespid wasps with more than 3900 described species (Luo *et al.* 2022). According to the modern taxonomic treatments, they should be subdivided into three subfamilies: Eumeninae s. str., Raphiglossinae, and Zethinae (Bank *et al.* 2017; Piekarski *et al.* 2018; Mauss *et al.* 2019). Females of these wasps nest in pre-existing cavities or either excavate their own nest burrows in the ground (or rarely in wood) or construct aerial nests of either mud or plant material (rarely combining them). These wasps provision their nest cells with paralyzed larvae of phytophagous insects: moths and butterflies, beetles, or rarely sawflies (Spradbery 1973; Iwata 1976; Cowan 1991). There are

The most interesting bionomical observation made during the last expedition to Uzbekistan was the nest of *Stenodynerus chitgarensis*. Most species of the genus *Stenodynerus* nest in pre-existing cavities while some American species are known to excavate their own burrows in the ground (Blüthgen 1961; Krombein 1979). Some of them, such as *Stenodynerus microstictus* (Viereck, 1906), *S. otomitus* (de Saussure, 1857), and *S. papagorum* (Viereck, 1908) construct entrance turrets made of mud (Evans 1956, 1970; Evans, Matthews, 1974) while others such as *S. fundatiformis* (Robertson, 1901) nest in sandy soil and do not construct turrets (Evans 1956). Fully aerial nests constructed on stone surfaces seem to be not previously reported for the genus *Stenodynerus* de Saussure, 1863. The Palaearctic species *S. fastidiosissimus* (de Saussure, 1855), closely related to *S. chitgarensis*, was reported to nest both in the ground (without a mud turret) and pre-existing cavities of plant stems (Ferton 1901, 1905, as *Odynerus punctuosus* Ferton, 1901 and *O. rossii* auct., see Berland 1927 for clarification). The nest of *S. chitgarensis* is, however, most similar to that of the Nearctic species *S. canus* Bohart, 1966. The latter one nests in pre-existing cavities of stone crevices but constructs aerial entrance turrets made of mud (Clement 1972). The difference is that the observed nest of *S. chitgarensis* was attached to a relatively flat surface, not a crevice. Among other genera of the eumenine wasps, it resembles well-known mud nests of *Ancistrocerus oviventris* (Wesmael, 1836) (Mjöberg 1909; Micheli 1930; Nielsen 1932; Olszewski & Fateryga 2023). At the same time, it is of note that the genus *Stenodynerus* is more closely related to the ground-nesting genus *Pseudepipona* de Saussure, 1856 than to *Ancistrocerus* Wesmael, 1836 (Bank *et al.* 2017; Piekarski *et al.* 2018; Luo *et al.* 2022), which is more similar in its bionomics to *Stenodynerus* (Blüthgen 1961; Spradbery 1973; Iwata 1976; Krombein 1979; Cowan 1991).

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