

**First record of *Sceliphron madraspatanum* (Fabricius, 1781)
from Hungary (Hymenoptera: Sphecidae)**

Péter PAULOVICS¹ & Zoltán VAS^{2*}

¹ *University of Szeged, Juhász Gyula Faculty of Education, Interactive Science Museum,
H-6725 Szeged, Boldogasszony sugárút 6, Hungary. E-mail: sirhegy@gmail.com*

² *Hungarian Natural History Museum, Department of Zoology, Hymenoptera Collection,
H-1088 Budapest, Baross utca 13, Hungary. E-mail: vas.zoltan@nhmus.hu*

Abstract – *Sceliphron madraspatanum* (Fabricius, 1781) is firstly reported from Hungary. As the collected specimens belong to *Sceliphron madraspatanum* ssp. *tubifex* (Latreille, 1809), a mainly Mediterranean subspecies of the widely distributed Oriental, Australasian and Palaearctic species, its occurrence is most probably due to natural area expansion.

Key words – Mud-Dauber, area expansion, Mediterranean species

INTRODUCTION

The Hungarian Mud-Dauber fauna (*Chalybion* Dahlbom, 1843 and *Sceliphron* Klug, 1801 species, Hymenoptera: Sphecidae) was recently reviewed by VAS & JÓZAN (2014); in that work, one present and one expected *Chalybion* species, along with four present and three potentially expected *Sceliphron* species were listed and keyed. The mainly Mediterranean *Sceliphron madraspatanum* (Fabricius, 1781) is one of the potentially expected *Sceliphron* species in VAS & JÓZAN (2014); hereby, 7 years later, we report the first Hungarian data of this species.

Taxonomy and nomenclature follow BOHART & MENKE (1976). Identifications were based on BOHART & MENKE (1976), SCHMID-EGGER (2005), MADER (2013), and VAS & JÓZAN (2014). The voucher specimens are deposited in the Hungarian Natural History Museum (HNHM, Budapest).

* Corresponding author.

RESULTS AND DISCUSSION

Sceliphron madraspatanum (Fabricius, 1781) ssp. *tubifex* (Latreille, 1809)
(Figs 1–2)

Material – Hungary, Csongrád-Csanád county: Maroslele, Damjanich u. 62, 46°16'29.8"N 20°20'24.5"E, at least 4 female specimens were observed collecting mud during VIII–IX.2021 by P. Paulovics, 2 females were collected on 22.VIII.2021 by P. Paulovics (Fig. 1); Szeged: Gyálarét, Szercsika u. 6, 46°12'04.5"N 20°06'18.4"E, 3 females were observed on 12.IX.2021 by H. Gyurkovics (Fig. 2).

Remarks – First records of the species in Hungary. *Sceliphron madraspatanum* is a rather widespread Oriental, Australasian and Palaearctic species with several valid subspecies within its range (BOHART & MENKE 1976). As stated above, the specimens collected in Hungary belong to *Sceliphron madraspatanum tubifex*; this subspecies is known from the Mediterranean region (including the Balkan Peninsula up to Croatia), reaching Western Asia eastwards. In the last decade many Mediterranean species of various insect taxa were shown to demonstrate a natural area expansion from the Mediterranean towards northern parts of Europe, along with the growing abundance of several previously rare, southern species in northern parts – these phenomena are possibly driven by the effects of climate change (see e.g. OTT 2001, BANASZAK *et al.* 2019, FREY *et al.* 2020). The occurrence of *Sceliphron madraspatanum* in Hungary is most probably explained by similar natural area expansion of the Mediterranean populations of the species.

Identification – This species is included in the identification key published in Hungarian by VAS & JÓZAN (2014) as a species not yet known but expected to occur in Hungary. For foreign readers, the key of SCHMID-EGGER (2005) is appropriate for reliable identification.

Among the Mud-Dauber species presently known from Hungary, *Sceliphron madraspatanum tubifex* is easily recognisable by the following characters in combination: scapus dorsally black, legs black and yellow, petiole yellow (very rarely partly blackish), propodeum with large yellow patches, first tergite entirely black. It can be readily distinguished from *Sceliphron curvatum* (Smith, 1870) by its black-yellow legs, from *Sceliphron destillatorium* (Illiger, 1807) and *Sceliphron spirifex* (Linnaeus, 1758) by its extensively yellow-coloured mesosoma, and from *Sceliphron caementarium* (Drury, 1770) by its dorsally black scapus, entirely black first tergite, and more extensively yellowish propodeum and hind legs.

The mud nest structure is similar to that of other *Sceliphron* species except *Sceliphron curvatum*.



Figures 1–2. *Sceliphron madraspatanum* (Fabricius, 1781) ssp. *tubifex* (Latreille, 1809): 1 = one of the voucher specimens from Maroslele, deposited in HHNM (photo by Viktória Szőke), 2 = living specimen in Szeged: Gyálárét (photo by Henrik Gyrkovics)

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