

Original Article

## Nesting Biology and Behavior of *Euodynerus dantici* (Rossi, 1790) (Hymenoptera: Vespidae: Eumeninae) in Central Mongolia

Batchuluun Buyanjargal<sup>1,2</sup> & Roman Yu. Abasheev<sup>2</sup>

<sup>1</sup>Laboratory of Entomology, Institute of General and Experimental Biology, Mongolian Academy of Sciences, Ulaanbaatar 210351, Mongolia; martahgui\_11@yahoo.com

<sup>2</sup>Department of Zoology and Ecology, Buryat State University, Ulan-Ude 67000, Russia; abashrom@yandex.ru

### Abstract

---

**Key words:**

*Euodynerus dantici*, solitary wasp, nesting biology, nest architecture, parasitoid

**Article information:**

Received: 18 Sept. 2015

Accepted: 30 Nov. 2015

Published: 02 Dec. 2015

**Correspondence:**

martahgui\_11@yahoo.com

**Cite this paper as:**

Nesting biology of *Euodynerus dantici* (Rossi, 1790) was studied in the Khugnu-Khaan Mountains of Khugnu-Tarna National Park, central Mongolia in 2014 using nest traps. *Euodynerus dantici* is univoltine in the study site, with one generation per growth season. Nest architecture and its structural parts were described in details. The inner cells of the nests were longer and contained a proportionately larger amount of food than the shorter outer cells. Females developed in inner cells and males developed in outer cells. Developmental stages of *E. dantici* is studied with details of pupation period. All basic behavioral elements of nesting females are described. A nest parasitoid, *Chrysis ignita* (Linnaeus, 1758) (Hymenoptera, Chrysididae) was reared from *E. dantici* nests for the first time. For provisioning, caterpillars of the family Noctuidae (Lepidoptera) were hunted by females. Diversity in nest architecture is possibly a result of nest parasite pressure.

Buyanjargal, B. & Abasheev, R. Yu. 2015. Nesting biology and behavior of *Euodynerus dantici* (Rossi, 1790) (Hymenoptera: Vespidae: Eumeninae) in central Mongolia. *Mong. J. Biol. Sci.*, 13(1-2): 25-33.

---

### Introduction

*Euodynerus dantici* (Rossi, 1790) is a solitary wasp of the family Vespidae (Hymenoptera), widely distributed in the Palearctic region. In Mongolia, this species is recorded only from Khovd, Bulgan and Umnugovi provinces (Buyanjargal *et al.*, 2013). As all other vespid wasps, *E. dantici* provisions food in the nest after laying eggs. The egg is suspended from the ceiling by a thin flexible stalk (Krombein, 1967). As most other hunting wasps in temperate areas, *E. dantici* survives cold winters as prepupae within nest cells, emerging as adults only with the return of favorable conditions during the following summer. The nest of *E. dantici* consists of a consecutive row of provisioned cells

separated by transverse partitions made of mud as in other tube-renters (Blüthgen, 1961; Iwata, 1976; Fateryga, 2012). Nesting biology of this species was studied by Iwata (1976) in Japan and Fateryga (2012) in Crimea (formerly Ukraine, currently Russia). However, the nesting biology, including larval development of this species has still in sufficiently been studied, especially in the arid region. The main aim of this study is to reveal the nesting biology and behavior of *E. dantici* in a dry country, Mongolia. In order to achieve this aim, the following purposes were set up:

- to describe the nest structure,
- to measure the difference in cell size and