

# A Contribution to Insect Studies in Ikh Nart Nature Reserve, Mongolia: Vespid Wasps (Hymenoptera, Vespidae)

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## Abstract

**Key words:** Vespidae, solitary wasps, Ikh Nart Nature Reserve, Mongolia

**Article information:**  
Received: 06 Nov. 2017  
Accepted: 05 Dec. 2017  
Published online:  
23 Dec. 2017

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**Cite this paper as:**

Ikh Nart Nature Reserve remains poorly studied for invertebrates, especially for vespid wasps. A total of 14 vespid species belonging to seven genera of the subfamily Eumeninae were recorded from different habitats (rocky outcrops, springs, tall vegetation habitats, shrub-lands and short grass steppes) in the nature reserve during three-year studies (2015-2017). These species represent 27 percent of the vespid fauna of the desert-steppe zone of Mongolia. We found the highest species richness in areas where water was available (near springs and wells), and the lowest richness in habitats with tall vegetation. Among the different habitat types, vespid species composition was most similar (91% shared species) between rocky outcrops and spring habitats. Six vespid species range from Kazakhstan to Mongolian, and one species is sub-endemic to Mongolia. Availability of water sources and nesting sites were possibly the main factors influencing the distribution of vespid wasps. It is necessary to conduct comprehensive research into the insect community of Ikh Nart Nature Reserve.

Buyanjargal, B. & Jigmidmaa, B. 2018. A contribution to insect studies in Ikh Nart Nature Reserve, Mongolia: Vespid wasps (Hymenoptera, Vespidae). *Mong. J. Biol. Sci.*, 16(1): 3-9.

## Introduction

Ikh Nart Nature Reserve protects areas in Southeastern Mongolia for their specific natural landscapes, where semi-desert and desert-steppe habitats meet. The reserve also includes suitable habitats for threatened and endangered species, such as argali sheep (*Ovis ammon*) and ibex (*Capra sibirica*).

Invertebrate studies in Ikh Nart remain in their initial stages. A few bachelor and master thesis studies (through the National University of Mongolia), and short-term projects on different groups of invertebrates have been conducted since 2007. Research to date has recorded 110 species of insects belonging to 29 families and 10 orders in Ikh Nart (Aibek, 2015; Altangerel,

2015; Reading *et al.*, 2016; Jigmidmaa, 2017; Choidondov, 2017). However, no vespid wasp species were previously recorded in the published literature from the reserve.

The Vespidae (Hymenoptera) is a diverse and cosmopolitan family of wasps, including almost all the known social wasps and many solitary species. There are 100 species of vespid wasps recorded in Mongolia, which belong to 26 genera and 4 subfamilies (Buyanjargal, 2016). From these, 54 species are recorded in desert steppe region of Mongolia where the study area is located (Buyanjargal & Gantigmaa, 2016).

This study aimed to determine the species composition of vespid wasps in Ikh Nart Nature