

# First record of *Aedophron eos* Varga & L. Ronkay, 1991 (Insecta: Lepidoptera, Noctuidae) from China

**Anton V. Volynkin**

Altai State University, South Siberian Botanical Garden, Lenina str. 61, RF-656049, Barnaul, Russia; Tomsk State University, Institute of Biology, Ecology, Soil Science, Agriculture and Forestry, Lenina Avenue, 36, RF-634050, Tomsk, Russia  
E-mail: [volynkin\\_a@mail.ru](mailto:volynkin_a@mail.ru)

**Abstract:** A little-known lepidopteran, *Aedophron eos* Varga & L. Ronkay, 1991, is recorded in China for the first time. Adults and male genitalia of the species are illustrated.

**Key words:** Central Asia; Xinjiang; fauna; Heliothinae

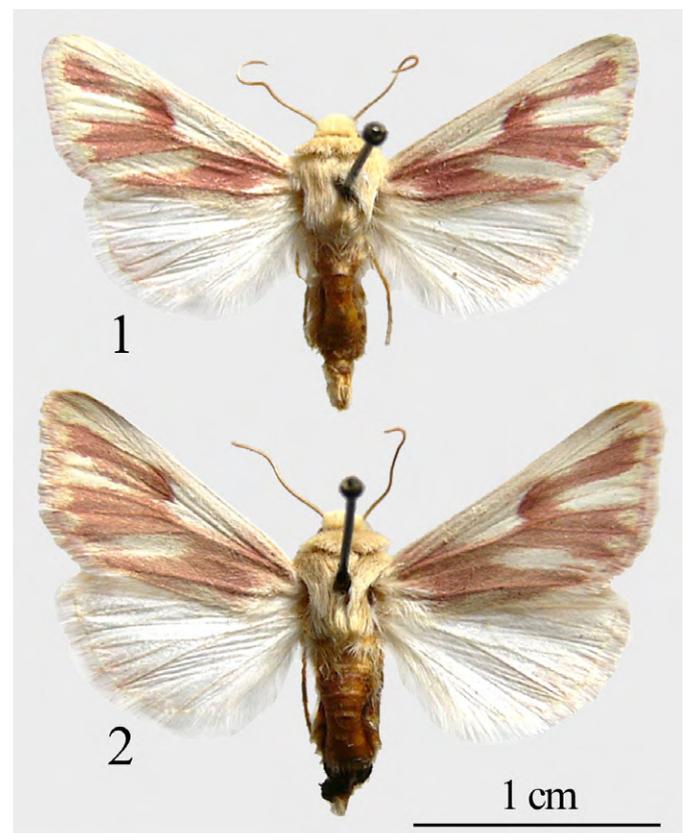
The genus *Aedophron* Lederer, 1857 (Noctuidae: Heliothinae) comprises five xerophilous species that are distributed in southeast Europe, as well as Western and Central Asia. The systematics of the genus was revised by Fibiger et al. (2009).

*Aedophron eos* Varga & L. Ronkay, 1991 was described based on a single female from Dzungar Gobi desert in southwestern Mongolia (Varga and Ronkay 1991). Later, the species was reported from western and southeastern Kazakhstan but without exact locations (Ronkay 2002; Fibiger et al. 2009; Gorbunov 2011). The bionomics of the species were not studied, and the early stages and host plants are unknown. According to Gorbunov (2011), the species rarely occurs in deserts, imagines fly from late May to early June.

In the present paper, *A. eos* is reported from China for the first time.

Since 2003, the author has conducted an intensive faunistic study of the Noctuoidea fauna of the Altai Mountains. In the course of studies on noctuids from Mongol part of the Altai collected by G. E. Grum-Grzhimailo in 1903, a couple of *A. eos* (Figures 1 and 2) from Koksun Mountains in “West Mongolia” were found. However, the Koksuntau Mountains (also known as the Koksen Tau or Koksun Mountains) are located in the northern part of Xinjiang province, China, and not in Mongolia. Based on these data, *A. eos* is reported here for the fauna of China for the first time (Figure 3).

The specimens examined are deposited in the collection of Zoological institute of Russian Academy of Sciences, St. Petersburg, Russia (catalogue numbers

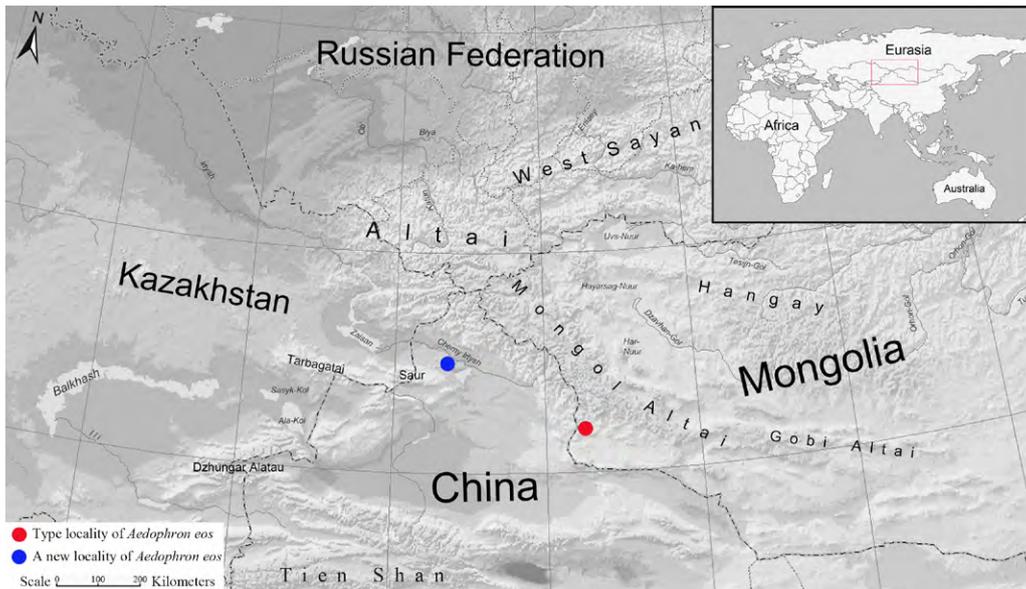


**Figures 1 and 2.** *Aedophron eos*, adults (dorsal view) and male genitalia (ventral view). **1:** Male, northwest China (ZISP); **2:** Female, northwest China (ZISP).

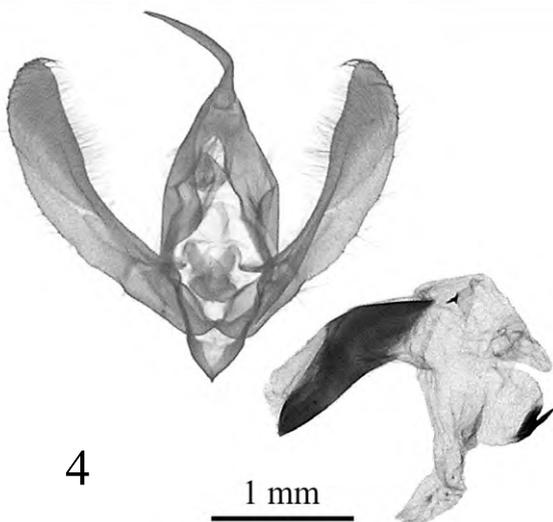
ZISP-Aedophron-001 and ZISP-Aedophron-002). The material was examined using modern dissection standards for preparation of genitalia of Lepidoptera.

***Aedophron (Askemosynephron) eos*** Varga & L. Ronkay, 1991

*Aedophron eos* Varga and L. Ronkay (1991): 299, pl. 3, fig. 36 (type locality: “Mongolia, Chovd aimak, Dzhungar Gobi, 40 km W[est of] Bulgan sum”).



**Figure 3.** Map of the new and the type localities of *Aedophron eos* in Paelearctic region. Note: The type locality cited (Varga and Ronkay 1991) as well as the old labels of specimens cited have no geographical coordinates, so both localities on the map are present as relatively big dots to guarantee the geographic compliance. The records for Kazakhstan do not contain of concrete localities so it is impossible to mark on the map the distribution within Kazakhstan.



**Figure 4.** *Aedophron eos*. Male genitalia, northwest China, slide AV0146 Volynkin.

**Material examined:** 1 male, 1 female, [northwest China, Xinjiang, Koksuntau Mountains] “Koksun Mts, W Mongolia, 3.vi.1903, Gr.-Grzhimailo [leg.]”, genital slide AV0146 Volynkin, catalogue numbers: ZISP-Aedophron-001, ZISP-Aedophron-002.

The identification of these specimens was confirmed using the original description of the species (Varga and Ronkay 1991) and the later paper by Ronkay (2002) which published a description of the male genitalia of the species.

*Aedophron eos* is an unmistakable species and stands out among its congeners by the body structure, presence of conspicuous corona in male genitalia, and small papillae anales with blunt apex in female genitalia. For these reasons it placed in a separate subgenus, *Askemosynephron* Zilli & L. Ronkay, 2009 (Fibiger et al. 2009).

In the wing pattern and coloration, the Chinese specimens of *A. eos* (Figures 1 and 2) have no differences from the holotype and specimens collected in Kazakhstan (see Ronkay 2002). In the male genitalia (Figure 3), the structure of the vesica is very similar to that of Kazakhstan specimen (see Ronkay 2002), and valvae are somewhat narrower distally, but this difference is not significant because of the high interspecific variability of male genitalia in *Aedophron* (Fibiger et al. 2009).

Earlier, *A. eos* was known from the type locality in the Dzungar Gobi desert of southwestern Mongolia as well as the Mangyshlak Plateau and the regions surrounding the Aral Sea and Balkhash Lake in western and

**Table 1.** Data on the distribution of *Aedophron eos*.

| Localities  | References              | Comments   |
|---|-------------------------|--|
| “Mongolia, Chovd aimak, Dzhungar Gobi, 40 km W[est of] Bulgan sum”                  | Varga and Ronkay (1991) | The type locality.   |
| “Kazakhstan”  | Ronkay (2002)           | The first record for Kazakhstan, but no exact locality given.  |
| Kazakhstan: “the Mangyshlak plateau, the Aral Sea region, the Balkhash Lake region” | Gorbunov (2011)         | The first more detailed data on the species distribution in Kazakhstan, but no exact locality given. |
| “Koksun Mts, W[estern] Mongolia” [= northwest China, Xinjiang, Koksuntau Mountains] | –                       | The new locality published here: a first record for China.   |

southeastern Kazakhstan (Table 1; Varga and Ronkay 1991; Ronkay 2002; Fibiger et al. 2009; Gorbunov 2011). The new locality of this species in Xinjiang is a first record for the Chinese fauna. It also fills a distributional gap of about 1,000 km between southwestern Mongolia and the Balkhash Lake region).

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