

Recent field observations of *Eriogaster lanestris* (Linnaeus, 1758) from northeastern Greece, with ecological notes (Lepidoptera: Lasiocampidae)

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Abstract

Eriogaster lanestris (Linnaeus, 1758) is reported for the first time from northeastern Greece. Multiple larval nests were discovered on *Prunus spinosa* L. and *Ulmus minor* Mill. near the village of Paradeisos (Kavala regional unit), within the boundaries of the Natura 2000 site GR1150010. The record fills a biogeographic gap in the southern Balkans and highlights the importance of riparian hedgerow habitats for larval development. Ecological and behavioral observations are discussed in the context of larval sociality and conservation threats. **Keywords:** Lepidoptera, Lasiocampidae, *Eriogaster lanestris*, Natura 2000, host plants, larval sociality, Greece.

Observaciones recientes sobre el terreno de *Eriogaster lanestris* (Linnaeus, 1758) en el noreste de Grecia, con notas ecológicas (Lepidoptera: Lasiocampidae)

Resumen

Eriogaster lanestris (Linnaeus, 1758) se ha registrado por primera vez en el noreste de Grecia. Se han descubierto múltiples nidos larvarios en *Prunus spinosa* L. y *Ulmus minor* Mill. cerca de la aldea de Paradeisos (unidad regional de Kavala), dentro de los límites del espacio Natura 2000 GR1150010. Este registro llena un vacío biogeográfico en el sur de los Balcanes y destaca la importancia de los hábitats de setos ribereños para el desarrollo larvario. Se discuten las observaciones ecológicas y de comportamiento en el contexto de la socialidad larvaria y las amenazas para su conservación.

Palabras clave: Lepidoptera, Lasiocampidae, *Eriogaster lanestris*, Natura 2000, plantas nutricias, socialidad larvaria, Grecia.

Introduction

Eriogaster lanestris (Linnaeus, 1758) is a widespread but locally declining species across the Western Palearctic. Its distribution spans from Western Europe through the Balkans to Central Asia, except in tundra habitats and in the southernmost parts of the Mediterranean basin. (Dubatolov & Zolotuhin, 1992; Ebert, 1994; Ruf et al. 2003; Sitar & Ciorîță, 2019). Despite its broad range, its presence in the southern Balkans remains poorly documented.

The species is best known for its gregarious larval behavior. Larvae are central-place foragers, constructing silk nests from which they make foraging excursions on deciduous host plants. While records from Central Europe have documented the species' use of *Prunus spinosa* L., *Crataegus monogyna* Jacq., and *Ulmus* spp. (Ebert, 1994; Ruf & Fiedler, 2002; Sitar et al. 2019), Greek host plant associations remain unreported.

Here, the first record of *E. lanestris* is provided from the Nestos River valley, with observations on host

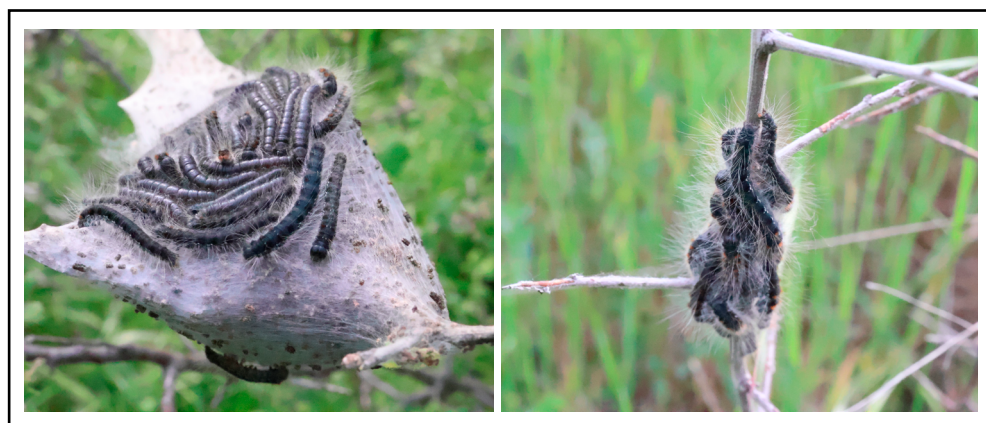
plant use, nest construction, and larval social behavior. This new record adds valuable data to the regional faunistics and may contribute to future conservation assessments for Lasiocampidae in the Balkans.

Material and methods

On 26-IV-2025, during a survey of riparian habitats near the village of Paradeisos (Kavala regional unit), 4 larval nests of *E. lanestris* were discovered. The locality lies at 41.093205° N, 24.757842° E (32 m a.s.l.), within the protected area GR1150010, designated under the European Union's Natura 2000 network. The site is situated in a lowland river valley, where remnant hedgerows and native shrubs persist along agricultural margins and riverbanks.

Larvae were found in tightly woven communal nests constructed on the branches of *Prunus spinosa* L. and *Ulmus minor* Mill. (Figures 1-2). Identification was based on nest architecture, larval morphology (including characteristic dorsal markings), and comparisons with published diagnostic keys and images (Ebert, 1994). High-resolution photographs were taken using a Canon EOS R50 mirrorless camera equipped with a macro lens.

Figure 1-2. 1. Web and larvae of *Eriogaster lanestris* (Linnaeus, 1758) observed on *Ulmus minor* Mill. near Nestos River, Eastern Macedonia and Thrace (Kavala Prefecture), 26-IV-2025. 2. Larvae of *Eriogaster lanestris* (Linnaeus, 1758) observed on *Prunus spinosa* L. near Nestos River, Eastern Macedonia and Thrace (Kavala Prefecture), 26-IV-2025.



Results and discussion

This observation confirms the first known occurrence of *Eriogaster lanestris* in the Nestos River valley. The presence of multiple active larval nests on different host plants supports a stable local population, at least in this season. Notably, the species was associated with *U. minor*, which is a lesser-documented host relative to *P. spinosa* but has been reported in urban and peri-urban populations in Central Europe (Ruf & Fiedler, 2002; Ruf et al. 2003).

The larvae exhibited classic traits of central-place foraging behavior. Their nests, formed of dense silk, were positioned close to the main stem of the host shrubs, serving as both protection and resting sites. Larvae emerged synchronously during sunlit periods to forage in coordinated groups, returning to the nest at night or during unfavorable weather conditions. Such behavior is characteristic of many Lasiocampidae and reflects a complex social structure aimed at thermoregulation, predator avoidance, and feeding efficiency (Ruf et al. 2003).

The habitat in which the species was found is under increasing anthropogenic pressure. Threats include encroachment by invasive trees (*Robinia pseudoacacia* L.), grazing by livestock, seasonal fluctuations in water levels due to upstream interventions and wildfires. Although the site falls within a designated Natura 2000 area, on-the-ground conservation measures appear insufficient to protect early-successional shrubs and riparian mosaics-key habitats for species like *E. lanestris*.

Elsewhere in Europe, declines in *E. lanestris* populations have been linked to the removal of hedgerows

and traditional land-use abandonment (Sáfián, 2006). The newly documented Greek population may represent a southern relict, sustained by the unique microhabitat of the Nestos River valley. This observation underscores the value of even fragmented riparian habitats for the conservation of declining Lepidoptera and calls for targeted habitat preservation strategies.

Given its ecological specificity and declining trend in parts of its range, *E. lanestris* may serve as an indicator species for semi-natural hedgerow and shrubland ecosystems. The species' occurrence highlights the site's potential importance for other declining Lasiocampidae, such as *Eriogaster catax* (Linnaeus, 1758), a species protected by law at European level by the Directive 92/43/EEC, Annexes II and IV and the Berne Convention, Annex II which shares similar ecological requirements and sometimes even the same shrub during their larval development stage (Sitar et al., 2019). Continued monitoring in the region is needed to determine the extent of its distribution and to assess population stability in the face of habitat degradation and climate variability, as well as the potential coexistence with *E. catax*.

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Conflict of Interest

The authors declare that they have no known financial interest or personal relationship that could have influenced the work presented in this article.

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