

New contributions to the knowledge of the Lepidoptera fauna of Romania: first record of *Athetis hospes* (FREYER, 1831), new distribution data for *Dioszeghyana schmidtii* DIÓSZEGHY, 1935 and *Polymixis flavicincta* (DENIS & SCHIFFERMÜLLER, 1775)

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Abstract: This study provides significant contributions to the knowledge of the Lepidoptera fauna of Romania by reporting species newly recorded for the national fauna, as well as by adding distributional data for already known taxa.

We report the first record of *Athetis hospes* (FREYER, 1831) (Lepidoptera: Noctuidae) in Romania, based on observations carried out in several localities in the western and south-western parts of the country: Cefa Nature Park (Bihar County), Sfânta Elena (Caraș-Severin County, within the Iron Gates Natural Park), and the Foieni sand dunes (Satu Mare County). This finding represents a notable extension of the known distribution range of the species at the European level.

For *Dioszeghyana schmidtii* DIÓSZEGHY, 1935, a Natura 2000 species listed in Annex II of the Habitats Directive (92/43/EEC), new distribution data were presented from several sites in Bihar County (Cefa, Betfia, Cetariu) and Satu Mare County (Chegea). These results confirm the persistence and possible expansion of its populations in north-western Romania and emphasize the importance of maintaining conservation measures for this species at both national and European levels. Furthermore, the presence of *Polymixis flavicincta* (DENIS & SCHIFFERMÜLLER, 1775) in Dobrogea is discussed, highlighting a broader distribution than previously known for Romania. In addition to morphological identification and genitalia dissection, the authors recommend complementary genetic analyses to strengthen taxonomic and distributional assessments.

The study also reports the first record of *Pancalia nodosella* MANN, 1854 (Lepidoptera: Cosmopterigidae) in the Romanian fauna, identified in 2012 in Babadag Forest (Tulcea County). This discovery places Romania within the wide European and Eurasian distribution range of the species. Additional noteworthy observations include *Calloplistria latreillei* (DUPONCHEL, 1827) and *Dasycorsa modesta* (STAUDINGER, 1879), which further contribute to updating the knowledge of the national Lepidoptera diversity and their distribution.

The results underline the importance of field entomological surveys in updating our knowledge of Romania's lepidopterological biodiversity. The newly reported species and additional distributional data confirm the essential role of protected natural areas, such as Cefa Nature Park, the Iron Gates Natural Park, the Foieni sand dunes, and Babadag Forest, in safeguarding species diversity. Moreover, these findings provide a solid foundation for future taxonomic, ecological, and applied research, with direct implications for the management and conservation of Romania's Lepidoptera fauna.

Keywords: Lepidoptera, species distribution, new records, biodiversity, Romania, Natura 2000, conservation.

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