

The first records of *Pammene querceti* (GOZMÁNY, 1957) from Romania and of *Dioszeghyana schmidtii* (DIÓSZEGHY, 1935) from Satu Mare County (Lepidoptera, Tortricidae, Noctuidae)

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Summary: On the spring of 2025 in the north-western part of Romania, to Dealurile Tășnadului, in two neighbouring localities, both edges of mixed forests dominated by *Quercus cerris* L., three specimens of *Pammene querceti* (GOZMÁNY, 1957) were attracted to artificial light. This is the first record of the species from Romania. It was found to be sympatric and synchronic with *Dioszeghyana schmidtii* (DIÓSZEGHY, 1935) (Noctuidae), which was collected in larger number and also in another locality, and is new record to Satu Mare County.

Key words: *Pammene querceti*, first record, *Dioszeghyana schmidtii*, Satu Mare County, Romania.

Introduction

In north-western Romania in Satu Mare County, to Dealurile Tășnadului, in neighbouring localities, all edges of mixed forests dominated by *Quercus cerris* L., on the spring of 2025 two interesting Lepidoptera species were attracted to artificial light by the first two authors: the tortricid *Pammene querceti* (GOZMÁNY, 1957), which is the first record of the species from Romania, and the noctuid *Dioszeghyana schmidtii* (DIÓSZEGHY, 1935), which was collected for the first time from this part of the country. The two species have mostly similar ecological needs and distribution. In the followings we present detailed data about the two species and a concise characterisation of the area of Dealurile Tășnadului.

Material and methods

The material examined was collected during the night by the first two authors. All of the *P. querceti* and most of the *D. schmidtii* specimens were collected in two localities on white sheets illuminated with two 160 W mercury vapour lights. In a third locality one more *D. schmidtii* specimen was collected with an automatic trap equipped with 12V UV LED source of light. The three collecting sites are close to each other, at around 2–3 km, they all are similar habitats, edges of mixed forests dominated by *Q. cerris* (Fig. 1).

The identification of both taxa was based on the phenotypical appearance alone.

Photographs were taken by E. Enghiș with Canon EOS 6 D camera, the habitat with a Canon Zoom Lens EF 17–40 mm 1:4 L, and the specimens with a Canon Macro Lens EF 100 mm 1:2.8 L.

Results

Pammene querceti (GOZMÁNY, 1957) (Tortricidae)

Material examined: 1 ♂, Dealurile Tășnadului, Chegea [Satu Mare County], Poiana Perilor, [276 m], [47°24'15"N, 22°40'05"E], 20.IV.2025, E. Enghiș & A. Iacob leg., E. Enghiș coll. (Fig. 2); 1 ♂, 1 ♀, Dealurile Tășnadului, Chegea [Satu Mare County], Pădure Coamă, [253 m], [47°25'22"N, 22°39'43"E], 30.IV.2025, E. Enghiș & A. Iacob leg., E. Enghiș coll. (Figs 3–4). The moths were attracted to light between 22:40 and 23:10 hour (GMT + 2) summer time.

Hemimene querceti GOZMÁNY, 1957 was described based on 21 specimens of both sexes from Hungary (Budakeszi, Hársbokorhegy, the holotype and 18 paratypes, and Kaposvár, 1 paratype), Serbia (Deliblatska Peščara as Deliblát, Flamunda, 1 paratype) and Austria (Wien, Tivoli Remise, 1 paratype), collected in the period between 2 May and 7 June, the collecting habitat to the type locality was defined as *Quercetum pubescentis–Festucetum sulcatae* mosaic complex (GOZMÁNY 1957: 133–134). Later the species was transferred into the genus *Pammene* HÜBNER, [1825]. Currently is also known from Slovakia (REIPRICH 1989; PASTORÁLIS 2012: 67; F. Kosorín in Lepiforum), Czech Republic (southern Moravia) (LAŠTŮVKA 1993: 57; LAŠTŮVKA & LIŠKA 2011: 63; LAŠTŮVKA *et al.* 2023: 43; Z. Laštůvka in Lepiforum), southern Italy (TREMATERA 2003), France (RAZOWSKI 2003: 131), Bulgaria (B. Zlatkov in BOLD), Turkey and Azerbaijan (Lepiforum).

The moths were compared to the description and figure of the adult in RAZOWSKI (2003: 131, pl.16 species no 453). The characteristic external



Fig. 1. The habitat of *Pammene querceti* and *Dioszeghyana schmidtii* at Chegea, Poiana Perilor (Satu Mare County), 20.IV.2025.



Fig. 2. *Pammene querceti* (GOZMÁNY, 1957), adult, male, Chegea, Poiana Perilor, 20.IV.2025.



Fig. 3. *Pammene querceti* (GOZMÁNY, 1957), adult, female, Chegea, Pădure Coamă, 30.IV.2025.

morphology of the adult with its extended white ground colour of the forewing is unmistakable within the European representatives of the genus *Pammene* HÜBNER, [1825]. The wingspan of the Romanian specimens varies between 13–14 mm. The extended white ground colour of the forewing, forming a wide median transverse fascia, combined with the relative reduced, fine, blackish and grey markings, restricted to the base and the sub-terminal and terminal areas are the characteristics of *P. querceti*. The sexual dimorphism consists of the slightly narrower base of the forewing, the only to the base convex costal margin, and the extended white coloured base and brownish grey margins of the hindwing to the male (Fig. 2), compared to the female, to which the base

of the forewing is wider, the costal margin evenly convex along its whole length, and the colour of the hindwing uniformly brownish grey (Fig. 3).

The record of *P. querceti* from the north-western part of Romania was not surprising or even predictable taking in account its preferred habitat and the known distribution. We suppose the species should also be present in the similar habitats of the western and south-western regions of Romania, in Crișana, Banat and Oltenia, and probably also in the south and south-east of the country, in Muntenia and Dobrogea.

In the latest Romanian checklist (RÁKOSY & GOIA 2021: 86) *Pammene querceti* should be placed between *P. amygdalana* (DUPONCHEL, 1842) and *P. fasciana* (LINNAEUS, 1761).



Fig. 4. *Pammene querceti* (GOZMÁNY, 1957), Chegea, Pădure Coamă, 30.IV.2025, living specimen.



Fig. 6. *Dioszeghyana schmidtii* (DIÓSZEGHY, 1935), adult, male, Chegea, Poiana Perilor, 4.IV.2025, living specimen.

***Dioszeghyana schmidtii* (DIÓSZEGHY, 1935)**
(Noctuidae)

Material examined: 1 ♂, Dealurile Tășnadului, Chegea [Satu Mare County], Valea Bercului, [225 m], [47°24'46"N, 22°41'47"E], 28.III.2025, E. Enghiș & A. Iacob leg., E. Enghiș coll.; 11 ♂, Dealurile Tășnadului, Chegea [Satu Mare County], Poiana Perilor, [276 m], [47°24'15"N, 22°40'05"E], 4.IV.2025, E. Enghiș leg. & coll. (Figs 5–6); 2 ♂, 1 ♀, the same locality, but 20.IV.2025, E. Enghiș & A. Iacob leg., E. Enghiș coll.; 1 ♀, Dealurile Tășnadului, Chegea [Satu Mare County], Pădure Coamă, [253 m], [47°25'22"N, 22°39'43"E], 30.IV.2025, E. Enghiș & A. Iacob leg., E. Enghiș coll. The moths were attracted to light between 22:10 and 24:00 hour (GMT + 2) summer time.

Monima schmidtii DIÓSZEGHY, 1935 was described



Fig. 5. *Dioszeghyana schmidtii* (DIÓSZEGHY, 1935), adult, male, Chegea, Poiana Perilor, 4.IV.2025.

from Romania (Ineu in Crișana), based on unspecified number of specimens of both sexes obtained in the last 10 days of March from 16 pupae; the eggs and first instar larvae were also described and the adult figured (DIÓSZEGHY 1935: 128–130, pl. 1 fig. 10). CĂPUȘE (1965) figured its male genitalia, compared it with the Romanian representatives of the genus *Orthosia* OCHSENHEIMER, 1816, and concluded that it is not closely related to *O. cruda*. KÖNIG (1971) recorded it from several localities in Banat (Timișoara and its surroundings), clarified its biology, figured the adults and the valva of the male genitalia, all compared to the most similar species *Orthosia cruda* ([DENIS & SCHIFFERMÜLLER], 1775). RÁKOSY (1996: 181, 403 figs 456–457, 606 pl. 22 figs 7–8) treats it in the subgenus *Parorthosia* RÁKOSY, 1991 as *schmidti* (sic!) within the genus *Orthosia*, with *Dioszeghyela* HREBLAY, 1993 (sic!) as its synonym, and figured the adults and the genitalia of both sexes. RÁKOSY & GOIA (2021: 162) treat *Parorthosia* RÁKOSY, 1991 as valid genus with *Dioszeghyana* HREBLAY, 1993 as its synonym. According to RÁKOSY (1996: 181) *Parorthosia* is valid, however, current literature classifies the species as *Dioszeghyana* following RONKAY *et al.* (2001: 22), who dispute the validity of *Parorthosia*. To resolve this nomenclatural dispute is beyond the purpose of this article. *Dioszeghyela* and *schmidti* are both incorrect subsequent spellings. The genus *Dioszeghyana* was specially erected to accommodate this species (HREBLAY 1993: 80–81), later two more Palearctic species were transferred into the genus, but none of them is present in Europe (RONKAY *et al.* 2001: 21).

The nominotypical subspecies is distributed from southern Slovakia through Hungary and western

Romania to Serbia, Bulgaria and northern Greece, in Turkey the ssp. *pinkeri* (HREBLAY & VARGA, 1993) occurs (HREBLAY 1993: 81; RONKAY *et al.* 2001: 23; Lepiforum).

The wingspan of the collected specimens is 26–29 mm. The vestiture of the head, thorax, ground-colour and fringes of the forewing are all dark ochreous brown, the ochreous or yellowish pattern is reduced, consists of the outlines of orbicular and reniform stigmata, subterminal (interrupted or not) and terminal lines. The hindwing is dark brownish grey, darker in marginal area. The main diagnostic character in the external morphology is the conspicuously asymmetrical pectination of the male antenna, which differentiate it from the sometimes very similar *O. cruda*, to which the pectination of the antenna is symmetrical; the genitalia of the two species differ significantly (RONKAY *et al.* 2001: 22–23).

Its habitats are the lowland and hilly oak forests with larger (at least 60–70 years old) stands of *Quercus cerris* L. where the litter is thick enough for the overwintering of pupae. The main host-plant is the *Quercus cerris* L., also other *Quercus* species are used, but the earlier presumed host-plants, *Acer tataricum* L. and *Acer campestre* L., are not (RONKAY & RONKAY 2006: 169; TURČÁNI *et al.* 2010: 121; KOROMPAI 2016: 396; RONKAY *et al.* 2024: 147).

In Dealurile Tășnadului it was collected from

the end of March to the end of April, at the end of the period together with *P. querceti*. This is the first record of *D. schmidtii* from the north-western part of Romania, from Satu Mare County, which fills a gap within the known distributional range of the species.

In the Romanian Red List of Lepidoptera *D. schmidtii* is considered as near threatened (NT), a species whose conservation requires the designation of special areas of conservation, and is protected by law. It is threatened by both chemical treatments and the cutting-silvicultural system, the latter is usually applied when the forests are 80–90 years old (RÁKOSY *et al.* 2021: 58, 159, 168; KOROMPAI 2016). It is important to note that the procedure to designate a part of the Dealurile Tășnadului as a Natura 2000 Protected Area has already been initiated, to which the first two authors of this paper contributed with the list of the protected Lepidoptera collected in the area.

Discussion

The collecting locality, Chegea village, is about 10 km east of the town Tășnad in Satu Mare County, in the hilly area of Dealurile Tășnadului (Hills of Tășnad) situated at the joining of the counties Satu Mare, Sălaj and Bihor, in the north-western part of Romania (Fig. 7). Dealurile Tășnadului are of low elevation, the highest peak, Vârful Dorian, is only

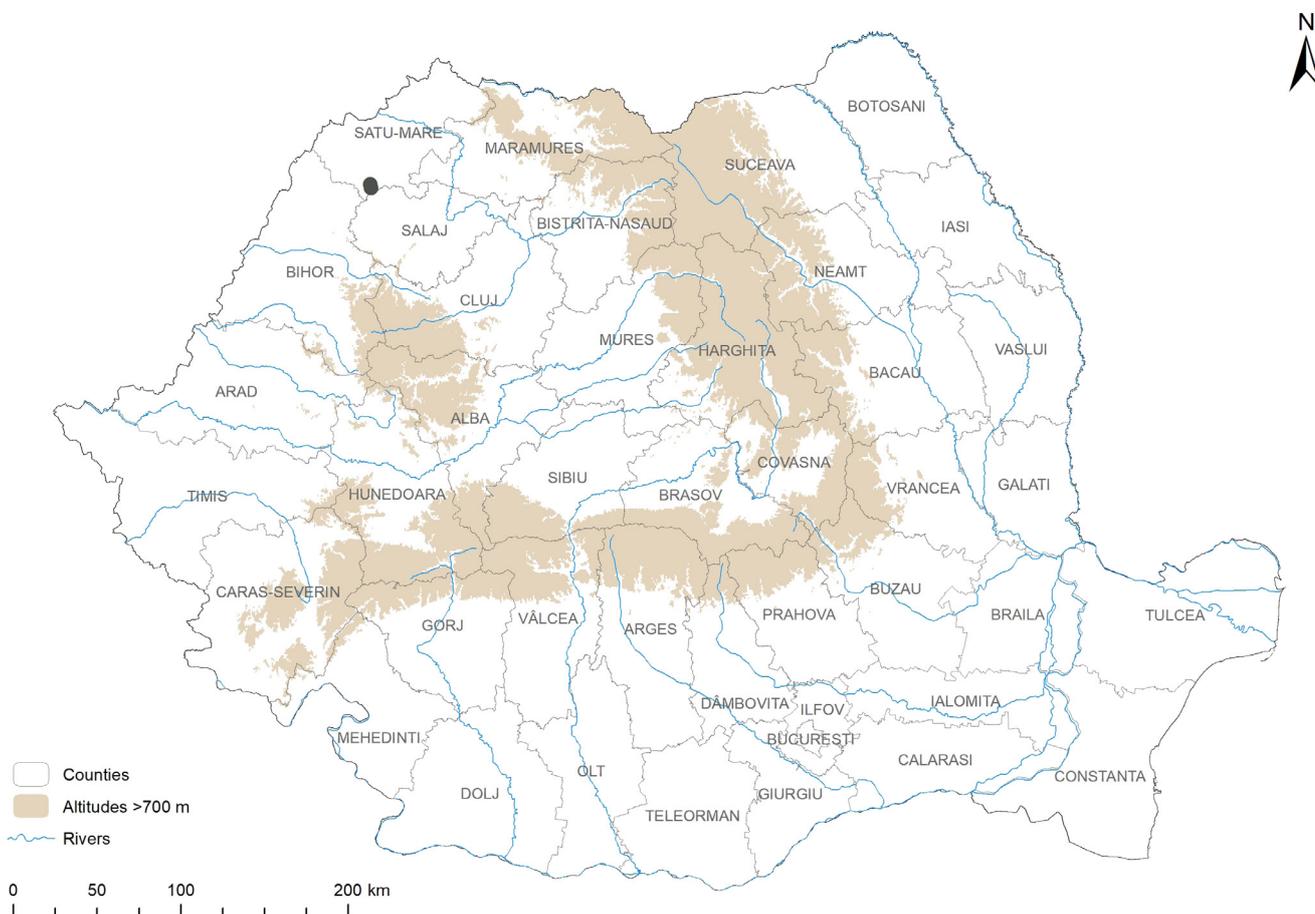


Fig. 7. The collecting sites of *Pammene querceti* (GOZMÁNY, 1957) and *Dioszeghyana schmidtii* (DIÓSZEGHY, 1935) in Chegea area, Satu Mare County, Romania.

381.5 m a. s. l. high, the collecting localities are at 225, 253 and 276 m. They are in fact a subunit of the Dealurile Silvano-Someșene, which, however, are part of the great western hilly area of Dealurile de Vest. Dealurile Tășnadului, also known as Dealurile Vișoarei, are bordered to the north by the Câmpia Pirului and Câmpia Someșului; to east by the river Crasna; to south by the valley of the river Barcău; and to west by the hills from the north of the town Marghita to the Dealul Cetății near Otomani. The substrates are soft sedimentary rocks formed mainly by horizontal layers of loam, sand and sandstone covered with a layer of clay (BOGDAN & CĂLIMAN 1976; POP 2005). They are even today covered with extensive mixed forests dominated by *Quercus* species. According to KARÁCSONYI (2011) this hilly area has a temperate continental climate with slight sub-atlantic influences. Because of the fragmented relief, the cold air accumulates in the valleys and humid depressions, the hills are covered with warm air, therefore the flora and vegetation are rich in sub-thermophile elements, and, both the forests and the undergrowth are well preserved.

The Lepidoptera fauna of this area is poorly known. Only a few literature data refer to this area. Collecting trips were made in the second half of the 20th century by the late Gyula Szabó (RÁKOSY 2015) on localities of the northern part of the area, mainly in the Pădurea Heresteț (in the environs of Tășnad), but also in the surroundings of the localities Pir, Supurul de Sus, Săcășeni, Sărăuad, Cehal, Blaja, Cean and Chegea. However, only a part of these results were published (SZABÓ 1990; SZABÓ 1996; ARDELEAN 1998; KOVÁCS & KOVÁCS 2007: 13). Recently, starting with 2017, the first two authors of the paper regularly collect in this area, but currently only their contribution to the knowledge of the butterfly fauna was published (ENGIȘ & IACOB 2022).

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