

## New Data on the Lepidoptera in the North-East of Romania

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### Abstract

The next species are recorded for the first time in the Moldavia (North-East of Romania): *Nascia ciliaris* (HÜBNER, 1796), *Kentrochrysalis elegans steffensi* Popescu-Gorj, 1971.

New faunistical data are also provided for several species with few records from Romania, such as: *Euthrix potatoria* (LINNAEUS, 1758); *Maculinea teleius* (BERGSTRÄSSER, 1779); *Maculinea nausithous* (BERGSTRÄSSER, 1779); *Aricia eumedon* (ESPER, 1780); *Argynnis pandora* (DENIS & SCHIFFERMÜLLER, 1775); *Eulithis testata* (LINNAEUS, 1761); *Aedia leucomelas* (LINNAEUS, 1758); *Arytrura musculus* (MÉNÉTRIÉS, 1859); *Calocucullia celsiae* (HERRICH-SCHÄFFER, 1850); *Ulochlaena hirta* (HÜBNER, 1813); *Hydraecia ultima* Holst, 1965; *Archanara neurica* (HÜBNER, 1808); *Hyssia cavernosa* (EVERSMANN, 1842); *Pericallia matronula* Linnaeus, 1758.

**Keywords:** Lepidoptera, distribution, Romania

### Introduction

Reported species have been found in the North-East of Romania, between the Prut River and the Carpathian Mountains. This area is located in the Moldavia Plain and the Suceava Plateau. The altitude varies between 50 meters on the bank of the Prut River and 600 meters, in the hill and plateau areas.

The climate is excessive continental. The average temperatures range from 9,6<sup>0</sup> C – in Iași, 8,6<sup>0</sup> C – in Botoșani and 6,9<sup>0</sup> C – in Rădăuți.

The average annual rainfall varies between 517 mm/year – in Iași, 569 mm/year – in Botoșani and 643 mm/year – in Rădăuți.

To the East, there is a sylvo-steppe vegetation and to the west it is specific to the oak and beech forests. The studied area is part of the Continental biogeographical region.

### Material and Methods

The nocturnal species were collected using a light trap (125-250 watt). The diurnal species were captured using an entomological net.

(FORSTER 1955), (HIGGINS & HARGREAVES 1991), (RÁKOSY 1996) were used in the diagnosis of the species.

The systematic of Lepidoptera, according to (KARSHOLT & RAZOWSKI 1996) and (RÁKOSY & all. 2003).

## Results

### *Nascia ciliaris* (Hübner, 1796)

A new species from Moldavia! (RÁKOSY & all. 2003). It has been found in two wet areas from where the first results were recently published (CORDUNEANU 2007, CORDUNEANU & all. 2007).

Material: 1 specimen, Horodnic de Sus, humid area „Valea Seacă”, (Suceava county), 375 m, 28.VII.2007; 4 specimens, Orășeni Vale, humid area, (Botoșani county), 160 m, 19.VII.2007, 28.VII.2008 (3 sp.).

### *Euthrix potatoria* (Linnaeus, 1758)

Species critically endangered in Romania (RÁKOSY & all. 2003). It is probably present in other wet areas from the North-East of Romania.

Material: 17 specimens, Horodnic de Sus, humid area „Valea Seacă”, (Suceava county), 375 m, 13.VII.2002 (5 ♂♂), 14.VIII.2004 (2 ♂♂), 30.VII.2005 (8 ♂♂, 2 ♀♀); 1 specimen, Șupitca, (Botoșani county), 170 m, 05.VIII.1997.

### *Kentrochrysalis elegans steffensi* Popescu-Gorj, 1971

A new species from Moldavia! In Romania it has been reported until now in two regions from the south of the country: Muntenia and Oltenia (RÁKOSY & all. 2003).

Material: 1 specimen, Iași, forest Cîrîc, (Iași county), 60 m, – 19.VI.2007.

### *Maculinea teleius* (Bergsträsser, 1779)

The species is to be found in a wet area, rich in *Sanguisorba officinalis* L., situated nearby the city of Radauti, county of Suceava (CORDUNEANU 2007).

Material: 5-20 specimens observed per year, Horodnic de Sus, humid area „Valea Seacă”, (Suceava county), 375 m, 14.VI – 16.VIII.

### *Maculinea nausithous* (Bergsträsser, 1779)

It is present in the same wet area together with *M. nausithous* (CORDUNEANU 2007).

Material: 5-20 specimens observed per year, Horodnic de Sus, humid area „Valea Seacă”, (Suceava county), 375 m, 14.VI – 16.VIII.

### *Aricia eumedon* (Esper, 1780)

A few specimens have been collected in the same habitat where *Maculinea teleius* and *M. Nausithous* can also be found (CORDUNEANU 2007).

Material: 1-5 specimens observed per year, Horodnic de Sus, humid area „Valea Seacă”, (Suceava county), 375 m, 14.VI – 05.VIII.

### *Argynnis pandora* (Denis & Schiffermüller, 1775)

Migrating species, often reported from the south of Romania (SZÉKELY 2008). Only this specimen was reported from the North-East of Romania.

Material: 1 specimen, Cătămărești Deal, Sitna valley, (Botoșani county), 120 m, 08.IX.1994.

### *Eulithis testata* (Linnaeus, 1761)

Rare species reported in Romania only from Transilvania and Moldavia (before 1980) (RÁKOSY & all. 2003).

Material: 1 specimen, Horodnic de Sus, humid area „Valea Seacă”, (Suceava county), 375 m, 14.VIII.2004.

### *Aedia leucomelas* (Linnaeus, 1758)

Species reported from the south of the country: Muntenia and Dobrogea, especially from the Danube Delta (RÁKOSY 1996). These are the first specimens collected from the North-East of Romania.

Material: 5 specimens, Schit Orășeni, (Botoșani county), 190 m, 20.VIII.2008 (2 sp.), 23.VIII.2008 (2 sp.), 03.X.2008.

### *Arytrura musculus* (Ménétriés, 1859)

A rare species of Eastern-Asian origin (Korea, Japan), which is considered to be ancient from the old pre-glacial fauna. In Romania, it was only known from the Danube Delta, South Dobrogea and the meadow of the Mureș River (RÁKOSY 1996). I have found this interesting species in a wet area rich in *Salix*, situated in a small basin surrounded by hills with forests, at about 10 km

South from the city of Botosani (CORDUNEANU & all. 2007). The collected specimens have come towards light immediately after sunset, never after midnight.

Material: 1-5 specimens observed per year, Orășeni Vale, humid area, (Botoșani county), 160 m, 15.VI-11.VII.; 1 specimen, Schit Orășeni, forest district „Albia”, (Botoșani county), 260 m, 03.VII.1995.

***Calocucullia celsiae* (Herrich-Schäffer, 1850)**

Species known in the past only from the Baile Herculane surroundings. Afterwards it has been found also at Canaraua Fetii (South Dobrogea) and Rimetea (Transilvania) (RÁKOSY 1996).

Material: 2 specimens, Schit Orășeni, (Botoșani county), 190 m, 01.V.1995., 03.IV.1998; 1 specimen, Schit Orășeni, forest district „Albia”, (Botoșani county), 260 m, 19.IV.1995.; 1 specimen, Baisa, forest, (Botoșani county), 300 m, 06.V.1996.

***Ulochlaena hirta* (Hübner, 1813)**

Rare species, reported in Romania in the last 50 years only from Dobrogea (RÁKOSY 1996). The two specimens have been collected at light, in the same night, at a distance of approximately 8 km, Schit Oraseni (leg. C. CORDUNEANU) and Șupica (leg. I. SURUGIU).

Material: 1 specimen, Schit Orășeni, (Botoșani county), 190 m, 16.X.2004; 1 specimen, Șupitca, (Botoșani county), 170 m, 16.X.2004.

***Hydraecia ultima* Holst, 1965**

Species reported only from the North of Moldavia and the South Dobrogea (RÁKOSY 1996).

Material: 3 specimens, Rădăuți, (Suceava county), 375 m, 20.VII.1998, 24.VII.2002. (2 sp.); 5 specimens, Horodnic de Sus, humid area „Valea Seacă”, (Suceava county), 375 m, 30.VII.2005.

***Archanara neurica* (Hübner, 1808)**

Rare species, reported especially from Dobrogea (RÁKOSY 1996).

Material: 2 specimens, Orășeni Vale, humid area, (Botoșani county), 160 m, 11.VII.2006, 21.VI.2007.

***Hyssia cavernosa* (Eversmann, 1842)**

Species considered rare in Romania. It is probably more frequent in the North-East of Romania.

Material: 1 specimen, Schit Orășeni, (Botoșani county), 190 m, 11.V.1999; 2 specimens, Horodnic de Sus, humid area „Valea Seacă”, (Suceava county), 375 m, 30.VII.2005, 28.VII.2007; 2 specimens, Șupitca, (Botoșani county), 170 m, 20.VII.1999, 25.VII.2008; 1 specimen, Sulița (Botoșani county), 150 m, 04.IX.2004.

***Pericallia matronula* Linnaeus, 1758.**

Species reported frequently in Romania from the Oriental Carpathians. The two specimens collected in deciduous forests, situated at the limits between The Moldavia Plain and The Suceava Plateau, represent an interesting exception.

Material: 1 specimen, Schit Orășeni, (Botoșani county), 190 m, 02.VII.1997; 1 specimen, Cătămărești, forest, (Botoșani county), 210 m, 29.VI.2005.

## Conclusions

Through the researches we have made in the North-East of Romania in the last years we tried to cover as many of the white spots existing on the spreading maps of many species of Lepidoptera.

This way new species have been found for the Moldavia area, among which we distinguish *Kentrochrysalis elegans steffensi* and *Calocucullia celsiae*.

Powerfull populations for the protected species have been found, included in the ANNEX 2 from The Habitats Directive of the European Union, *Maculinea teleius* and *Maculinea nausithous*, in the humid area „Valea Seacă” (CORDUNEANU 2007), but also *Arytrura musculus* in the humid area „Orășeni Vale” (CORDUNEANU & all. 2007).

New species for the North of Moldavia have been indentified, known to be present only in the South of the country: *Argynnis pandora*, *Ulochlaena hirta*, *Aedia leucomelas*, *Archanaura neurica*.

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