

**NEW DATA ON DISTRIBUTION OF *IDAEA FUSCOVENOSA* (GOEZE, 1781), *I. HUMILIATA* (HUFNAGEL, 1767) (LEPIDOPTERA, GEOMETRIDAE) AND *NYCTEOLA SPP.* (LEPIDOPTERA, NOLIDAE) IN LITHUANIA**

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**Introduction**

Whitish females of *Idea humiliata* (Hufnagel, 1767) are very similar to *Idea fuscovenosa* (Goeze, 1781) which are always whitish grey. Therefore these species can be recognised only by the structure of their genitalia. Similar situation is with the genus *Nycteola*, as it is not easy to identify species using morphological characters. The aim of this article is to present some data on distribution of these species in Lithuania based on the field research.

**Material and Methods**

Moths belonging to the *Idea* genus were collected during a daytime with an entomological net, while *Nycteola* moths were collected at night using 160–400W mixed light lamp bulbs. The material is preserved in the collection of the Museum of Zoology of Vilnius University, Lithuania.

List of localities

Anykščiai district	Mickūnai (near the Šventoji river)	55°38'N, 25°17'E
Biržai district	Ažuolynė (Birž.)	56°03'N, 25°03'E
Ignalina district	Ažuolynė (Ign.)	55°34'N, 26°20'E
	Grikiapelė	55°19'N, 26°02'E
Jurbarkas district	Seredžius	55°04'N, 23°24'E
Kaunas district	Netoniai	54°56'N, 23°43'E
	Raudondvaris	54°56'N, 23°46'E
Molėtai district	Sližiškiai (near Virinta lake)	55°17'N, 25°28'E
Neringa t.	Nida	55°18'N, 20°59'E
	Preila	55°22'N, 21°04'E
Palanga		55°55'N, 21°03'E
Panevėžys district	Žalioji Giria f. (Stumbriškės)	55°51'N, 24°31'E
Pasvalys		56°04'N, 24°24'E
Švenčionys district	Perūnas lake env.	54°59'N, 25°57'E
Trakai district	Paraisčiai	54°43'N, 24°53'E
	Senieji Trakai	54°36'N, 24°58'E
	Stirniai (near the Neris river)	54°43'N, 25°03'E
Varėna		54°13'N, 24°35'E

Varėna district	Bingeliai	54°09'N, 24°15'E
	Kapiniškiai	54°02'N, 24°17'E
	Krokšlys	54°03'N, 24°41'E
	Margionys	54°00'N, 24°17'E
	Merkinė	54°10'N, 24°10'E
	Pamerkiai	54°19'N, 24°42'E
	Perloja	54°13'N, 24°25'E
	Puvočiai	54°07'N, 24°18'E
Vilnius	Karoliniškės	54°41'N, 25°12'E
	Karveliškės	54°42'N, 25°05'E

## List of species

### GEOMETRIDAE

#### *Idaea fuscovenosa* (Goeze, 1781)

Nida, 05 08 1978, 1 spec., 25 06 1980, 1♂; Palanga, 26 07 1976, 1♂1♀ (A. Manikas), 08 07 1994, 1♂1♀ (A. Manikas), 08 07 1994, 2♂, 13 07 1994, 1♀; Preila, 20 07 1983, 2♀.

#### *Idaea humiliata* (Hufnagel, 1767)

Bingeliai, 16 07 1987, 2 spec., 20 07 1987, 1 spec.; Kapiniškiai, 04 07 1987, 1 spec.; Margionys, 03 07 1986, 2♂1♀; Merkinė, 10 07 1983, 1♂, 17 07 2004, 2♂, 12 07 2008, 1♂1♀; Mickūnai, 25 06 1973, 1 spec; Palanga, 01 08 1976, 2♂ (A. Manikas), 03 08 1976, 1♂, 3♀ (A. Manikas); Pamerkiai, 28 06 1972, 1 spec.; Perloja, 18 07 1978, 1♂1♀; Puvočiai, 03 07 1978, 1♂, 04 07 1984, 2 spec.; Žalioji Giria f. (Stumbriškės), 09 07 1984, 1♀.

### NOLIDAE

#### *Nycteola asiatica* (Krulikovsky, 1904)

Ažuolynė (Ign.), 24 07 1995, 1♂; Pasvalys, 05 09 1977, 1♂ (V. Pacevičius); Raudondvaris, 30 06 2001, 1♀ (D. Lukoševičius).

#### *Nycteola degenerana* (Hübner, 1799)

Ažuolynė (Birž.), 02 08 1984, 2♂1♀; Grikiapelė, 31 07 1998, 1♂ (V. Višinskas); Karveliškės, 04 05 1984, 1♂; Paraisčiai, 10 08 1990, 1♀; Perūnas lake env., 06 05 1990, 1♀; Sližiškiai, 2♂3♀; Stirniai, 22 04 1996, 1♀; Trakai, 15 07 1932, 1♂ (J. Prüffer); Vilnius, 22 05 1925, 1♀ (J. Prüffer), 22 07 1932, 1 spec. (J. Prüffer).

#### *Nycteola revayana* (Scopoli, 1772)

Netoniai, 24 07 2004, 2♂, 03 10 2004, 1♀; Raudondvaris, 03 10 2003, 1♂, 26 07 2004, 1♂ (D. Lukoševičius); Senieji Trakai, 03 05 1996, 1♀; Seredžius, 04 06 2002, 1♀; Stirniai, 09 05 1996, 1♂; Karoliniškės, 07 08 1996, 1♀ (G. Sasnauskas).

#### *Nycteola svecicus* (Bryk, 1941) (= *N. siculana svecicus* Bryk, 1941)

Čepkeliai, 18 04 1952, 1 spec.; Netoniai, 27 07 2004, 1♀; Vilnius, 04 10 1935, 1♀ (J. Prüffer), 04 10 1935, 1♀ (J. Prüffer).

## Discussion

In my book-atlas (Kazlauskas, 1984) I pointed out that *Idaea fuscovenosa* is found in Nida coastline in the sandy dunes. According to S. Bleszynski (1960), this species is

found at the coastal region of Poland (Gdansk, Sopot, Rowicze), as well as in Denmark and Sweden. Only J. Buszko (2000) states that *I. fuscovenosa* is widespread all over Poland and is found even in gardens. In Lithuania, *I. humiliata* is mainly found in low grass sandy dry meadows in southern part of the country, sometimes it is quite numerous. It is found in western Lithuania (e.g. Palanga region) as well, but in different habitats than *I. fuscovenosa*, and farther from dunes.

Genitalia of females of *I. fuscovenosa* and *I. humiliata* drawn in the atlas mentioned above (Bleszynski, 1960) differ significantly from the specimens found in Lithuania, we present the drawings of female genitalia of both species (Fig. 1).

Species belonging to the *Nycteola* genus vary in their appearance, so the identification of species based on wings' patterns and forms is quite difficult. We examined genitalia of *Nycteola* moths preserved in the collection of the Department of Zoology, Vilnius University. Males of the most frequently found in Lithuania *Nycteola revayana* and *N. degenerana* are easily distinguished by the form of edeagus because the inner end of the edeagus of *N. degenerana* is not round but with a notch cut-out.

*Nycteola siculana* (Fuchs, 1899) was included into the list of moths of Lithuania (Kazlauskas, 1984; Ivinskis, 2004) but there were doubts if our moths belong to the species prevailing in Central Europe. According to M. Fibiger *et al.* (2009), earlier these specimens were classified as *N. siculana svecicus* (Bryk, 1941), but they should belong to an independent species *N. svecicus* (Bryk, 1941) that was first found on the island of Gotland (Sweden). These moths were found in dry meadows of Lithuania.

## Acknowledgments

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**Nauji duomenys apie *Idaea fuscovenosa* (Goeze, 1781), *I. humiliata* (Hufnagel, 1767) (Lepidoptera, Geometridae) ir *Nycteola spp.* (Lepidoptera, Nolidae) paplitimą Lietuvoje**

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**Santrauka**

*Idaea fuscovenosa* ir *Idaea humiliata* patelės kartais būna labai panašios, todėl jas atskirti galima pagal genitalijų sandarą. Kadangi turimoje literatūroje šių drugių patelių genitalijų piešiniai labai skiriasi nuo mūsų šalyje aptinkamų patelių, tad pateikiame jų genitalijų schemas. *I. fuscovenosa* Lietuvoje rasta tik pajūrio kopose, o *I. humiliata* randama Lietuvoje smėlėtose sauspievėse, dažniausiai Pietų Lietuvoje.

Patikrinus *Nycteola* genties rūšių genitalijas, paaiškėjo, kad dažniausiai sutinkama *N. degenerana*, kiek retesnė *N. revayana* ir labai retos Lietuvoje *N. asiatica* ir *N. svecicus*. Nurodomos visų minėtų drugių radavietės Lietuvoje.

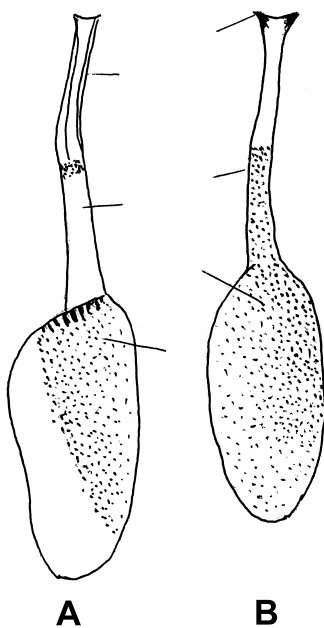


Figure 1. **A** – *Idaea fuscovenosa* ♀, **B** – *I. humiliata* ♀.

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