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Contribution to the knowledge on the distribution of  
*Macrolepidoptera* in Bulgaria \*

Materiały do poznania rozszedlenia *Macrolepidoptera* w Bułgarii

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ABSTRACT: The present paper includes data obtained during the collecting trip by the authors in Bulgaria on 1–9 June 1998. For all collected or observed species the localities are given, for some species also short comments are provided. For most of the species the localities constitute new records, for other species new phenological data are given. *Hyles hippophaes* (ESPER, 1793) was collected for the second time in Bulgaria. *Valerietta bulgarica* (DRENOVSKY, 1953) has two generations in Bulgaria.

KEY WORDS: *Lepidoptera*, *Macrolepidoptera*, Bulgaria, records

The fauna of the Bulgarian *Lepidoptera*, especially the *Macrolepidoptera*, is relatively well studied. However, there still remain areas in the country, where the available data are very limited or not satisfactory. Most papers, dealing with the Bulgarian *Lepidoptera*, contain only data on species which are new for the country, rare or interesting records. This is the reason, why some "rare" species have more literature records, than the common ones. This obscures the real pattern of species distribution. For this reason, we have listed here all species collected during the trip. For most of them the localities given below are new for the area, for other species new phenological data or some other comments are given. The systematics used here follows KARSHOLT & RAZOWSKI (1996).

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The moths were collected using two generators, one with 160 W Osram MVL bulb combined with 25 W black lamp, and the second one with 160 W Osram MVL bulb. Both lamps were placed in a distance of about 150-300 m from each other and in a different exposure. 15 W light trap was placed throughout the night in a distance of about 100 – 1000 m from the lamps supported by generators, but in a different habitat. The specimens were identified mostly in the field, except for those which were determined later by examination of genitalia. The identity of all doubtful species was checked in this way. The obtained material is stored in the collections of the authors.

**List of the main collecting localities:**

- Roupite - SW Bulgaria, under the Volcanic hill "Kozhuh" near Petrich Town, ca. 100 m a.s.l., 1 VI 1998, J. NOWACKI, K. PAŁKA & M. BUNALSKI leg. at a lamp and during day time.
- Lubovishte - SW Bulgaria, Pirin Mts, near Lubovishte Village, above Melnik Town, ca. 700 m a.s.l., 3 VI 1998, J. NOWACKI, K. PAŁKA & M. BUNALSKI leg. at a lamp and during day time.
- Orelyak - SW Bulgaria, Pirin Mts, under "Orelyak" Top, above Popovi Livadi, ca. 1800 m a.s.l., 4 VI 1998, J. NOWACKI, K. PAŁKA & M. BUNALSKI leg. at a lamp and on a day time.
- Kozhuh - SW Bulgaria, Volcanic hill "Kozhuh" near Petrich Town, ca. 100 m a.s.l., 5 VI 1998, J. NOWACKI, K. PAŁKA & M. BUNALSKI leg. at a lamp and during day time.
- Silen-Madzhari - East Rhodopi Mts, between Silen and Madzhari Villages, 6 VI 1998, S. BESHKOV, J. NOWACKI, K. PAŁKA & M. BUNALSKI leg. during day time.
- Dolno Thcerkovishte - East Rhodopi Mts., by the bridge on Arda River near Dolno Thcerkoviste Village, 180 m a.s.l., 6 VI 1998, S. BESHKOV, J. NOWACKI, K. PAŁKA & M. BUNALSKI leg. at lamps, light trap, sugar bait and during day time.
- Arkoutino-beach - South Black Sea Coast, the beach with dunes between Primorsko and Sozopol, 7 VI 1998, S. BESHKOV, J. NOWACKI, K. PAŁKA & M. BUNALSKI leg. at a lamp, light trap, sugar bait and during day time.
- Arkoutino-forest - South Black Sea Coast, deciduous forest (*Quercus-Fraxinus-Carpinus* mixed forest) by "Arkoutino" hunt chalet near "Arkoutino" Swamp, between Primorsko and Sozopol, 8 VI 1998, S. BESHKOV, J. NOWACKI, K. PAŁKA & M. BUNALSKI leg. at lamps, light trap, sugar bait and during day time.

– Balchik (=Balcic) - North Black Sea Coast, 2 km SW from "Tuzlata", between Balchik and Kavarna Towns, 9 VI 1998, S. BESHKOV, J. NOWACKI, K. PAŁKA & M. BUNALSKI leg. at lamps, light trap and during day time.

**List of the species:**

Family *PSYCHIDAE*

*Canephora hirsuta* (PODA, 1761) [= *C. unicolor* (HUFNAGEL, 1766)] – Arkoutino-beach, one male at a lamp.

Family *LIMACODIDAE*

*Apoda limacodes* (HUFNAGEL, 1766) – Dolno Thcerkovishte, Arkoutino-beach, Arkoutino-forest.

Family *ZYGAENIDAE*

*Zygaena ephialtes* (LINNAEUS, 1767) – Balchik.

Family *SESIIDAE*

*Chamaesphexia tentrediniformis* ([DENIS et SCHIFFERMÜLLER], 1775) – Dolno Thcerkovishte.

Family *COSSIDAE*

*Cossus cossus* (LINNAEUS, 1758) – Dolno Thcerkovishte.

*Parahypopta caestrum* (HÜBNER, 1808) – Roupite.

*Dyspessa ulula* (BORKHAUSEN, 1790) – Arkoutino-beach.

*Phragmataecia castaneae* (HÜBNER, 1790) – Arkoutino-beach, Balchik.

Family *THYRIDIDAE*

*Thyris fenestrella* (SCOPOLI, 1763) – Dolno Thcerkovishte.

Family *LASIOCAMPIDAE*

*Malacosoma neustria* (LINNAEUS, 1758) – Dolno Thcerkovishte, Arkoutino-beach, Arkoutino-forest.

*Malacosoma castrensis* (LINNAEUS, 1758) – Dolno Thcerkovishte.

*Phyllodesma tremulifolia* (HÜBNER, 1810) – Dolno Thcerkovishte.

*Gastropacha quercifolia* (LINNAEUS, 1758) – Arkoutino-beach.

*Odonestis pruni* (LINNAEUS, 1758) – Dolno Thcerkovishte, Arkoutino-beach, Arkoutino-forest.

Family *SPHINGIDAE*

*Mimas tiliae* (LINNAEUS, 1758) – Dolno Thcerkovishte.

*Sphinx ligustri* LINNAEUS, 1758 – Balchik.

*Sphingoneopsis gorgoniades* (HÜBNER, 1819) – Balchik, one male specimen in the first minutes of darkness. Up to now this species is known in Bulgaria from only two specimens, both collected in July in this area, but not exactly in the same locality (BESCHKOW 1990; BESHKOV 1995).

*Proserpinus proserpina* (PALLAS, 1772) – Dolno Thcerkovishte.

*Hyles euphorbiae* (LINNAEUS, 1758) – Dolno Thcerkovishte, Balchik.

*Hyles hippophaes* (ESPER, 1793) – Balchik, two males. In Bulgaria known exactly from the same locality, but from August (BESHKOV 1998; BESHKOV & NOWACKI 1998). This species probably has two generations in Bulgaria.

*Hyles livornica* (ESPER, 1779) – Balchik.

*Deilephila elpenor* (LINNAEUS, 1758) – Balchik.

*Deilephila porcellus* (LINNAEUS, 1758) – Dolno Thcerkovishte, Balchik.

Family *HESPERIIDAE*

*Spialia orbifer* (HÜBNER, 1823) – Dolno Thcerkovishte.

*Pyrgus sidae* (ESPER, 1784) – Lubovishte, Roupite.

*Pyrgus malvae* (LINNAEUS, 1758) – Orelyak 1700.

*Thymelicus lineola* (OCHSENHEIMER, 1808) – Arkoutino-beach.

*Thymelicus sylvestris* (PODA, 1761) – Lubovishte, Roupite.

Family *PAPILIONIDAE*

*Zerynthia cerisyi ferdinandi* STICHEL, 1907 – Kozhuh, Dolno Thcerkovishte, Dolno Thcerkovishte village - 07.VI.1998, several specimens in the village.

*Iphiclides podalirius* (LINNAEUS, 1758) – Arkoutino-forest.

Family *PIERIDAE*

*Leptidea sinapis* (LINNAEUS, 1758) – Orelyak 1500, Roupite.

*Euchloe ausonia* (HÜBNER, 1804) – Kozhuh, Roupite.

*Aporia crataegi* (LINNAEUS, 1758) – Dolno Thcerkovishte.

*Pieris brassicae* (LINNAEUS, 1758) – Orelyak 1700, Dolno Thcerkovishte.

*Pieris rapae* (LINNAEUS, 1758) – Dolno Thcerkovishte.

*Pieris napi* (LINNAEUS, 1758) – Dolno Thcerkovishte.

*Pontia daplidice* (LINNAEUS, 1758) – Dolno Thcerkovishte.

*Colias croceus* (FOURCROY, 1785) – Dolno Thcerkovishte, Kozhuh, Orelyak 1700, Roupite.

*Gonepteryx rhamni* (LINNAEUS, 1758) – Arkoutino-beach.

Family LYCAENIDAE

*Lycaena phlaeas* (LINNAEUS, 1761) – Kozhuh, Roupite, Dolno Thcerkvishte, Arkoutino-beach.

*Lycaena tityrus* (PODA, 1761) – Kozhuh, Roupite.

*Neozephyrus quercus* (LINNAEUS, 1758) – Arkoutino-forest.

*Callophrys rubi* (LINNAEUS, 1758) – Balchik, Orelyak 1700.

*Satyrrium spini* (DENIS et SCHIFFERMÜLLER, 1775) – Roupite.

*Satyrrium ilicis* (ESPER, 1779) – Dolno Thcerkvishte, Roupite.

*Pseudophilotes vicrama* (MOORE, 1865) – Kozhuh, Roupite.

*Iolana iolas* (OCHSENHEIMER, 1816) – Dolno Thcerkvishte.

*Plebejus argus* (LINNAEUS, 1758) – Balchik, Dolno Thcerkvishte.

*Aricia agestis* ([DENIS et SCHIFFERMÜLLER], 1775) – Balchik, at a lamp.

*Aricia anteros* (FREYER, 1838) [= *orpheus* (NEKRUTENKO, 1980)] – Dolno Thcerkvishte. The individuals from this locality are very variable. In some specimens a small blackish basal spot is present on the underside of the forewings, in other individuals it is absent. There are also specimens with such a spot placed asymmetrically only on one of the wings. The mentioned character is the reason why the specimens from Eastern Rhodopi Mts. may be considered as *Aricia anteros* and we support the opinion that *A. orpheus* (NEKRUTENKO, 1980) is its junior synonym.

*Polyommatus amandus* (SCHNEIDER, 1792) – Lubovishte.

*Polyommatus icarus* (ROTTEMBURG, 1775) – Dolno Thcerkvishte, Roupite.

*Meleageria bellargus* (ROTTEMBURG, 1775) – Orelyak 1500.

Family NYMPHALIDAE

*Argynnis paphia* (LINNAEUS, 1758) – Dolno Thcerkvishte.

*Issoria lathonia* (LINNAEUS, 1758) – Kozhuh, Roupite.

*Brenthis daphne* ([DENIS et SCHIFFERMÜLLER], 1775) – Dolno Thcerkvishte.

*Boloria euphrosyne* (LINNAEUS, 1758) – Orelyak.

*Vanessa atalanta* (LINNAEUS, 1758) – Kozhuh, Dolno Thcerkvishte.

*Vanessa cardui* (LINNAEUS, 1758) – Dolno Thcerkvishte.

*Polygonia c-album* (LINNAEUS, 1758) – Dolno Thcerkvishte, Orelyak 1700.

*Melitaea phoebe* (DENIS et SCHIFFERMÜLLER, 1775) – Kozhuh, Lubovishte, Roupite.

*Melitaea trivialis* ([DENIS et SCHIFFERMÜLLER], 1775) – Dolno Thcerkvishte.

*Melitaea didyma* (ESPER, 1778) – Kozhuh.

*Melitaea athalia* (ROTTEMBURG, 1775) – Balchik, Dolno Thcerkvishte, Lubovishte.

- Limenitis reducta schiffmulleri* HIGGINS, 1933 – Dolno Thcerkovishte.
- Apatura metis* FREYER, 1829 – Dolno Thcerkovishte. This species has not been recorded from this part of the country (south-eastern Bulgaria). *Apatura metis* is considered to be a very rare species in Bulgaria, due to confusion with closely related *Apatura ilia* ([DENIS et SCHIFFERMÜLLER], 1775). Besides the morphological differences there are differences in the flight period. *Apatura ilia* has a single generation and is on wing during June-July. *Apatura metis* has the second generation during July-August.
- Kirinia roxelana* (CRAMER, 1777) – Dolno Thcerkovishte, a single male specimen collected at a lamp.
- Lasiommata megera* (LINNAEUS, 1767) – Orelyak 1500 – 1700, Roupite.
- Lasiommata petropolitana* (FABRICIUS, 1787) – Orelyak 1500.
- Coenonympha pamphilus* (LINNAEUS, 1758) – Kozhuh, Roupite.
- Maniola jurtina* (LINNAEUS, 1758) – Kozhuh, Roupite, Dolno Thcerkovishte, Arkoutino-beach.
- Hyponephele lupinus* (O. COSTA, 1836) – Roupite.
- Erebia medusa* (DENIS et SCHIFFERMÜLLER, 1775) – Orelyak 1500.
- Melanargia galathea* (LINNAEUS, 1758) – Balchik.
- Hipparchia semele* (LINNAEUS, 1758) – Kozhuh, Roupite.
- Brintesia circe* (FABRICIUS, 1775) – Roupite.

#### Family DREPANIDAE

- Habrosyne pyritoides* (HUFNAGEL, 1766) – Arkoutino-beach, Arkoutino-forest.
- Cilix glaucata* (SCOPOLI, 1763) – Arkoutino-beach, Balchik.

#### Family GEOMETRIDAE

- Stegania dilectaria* (HÜBNER, 1790) – Dolno Thcerkovishte.
- Heliomata glarearia* ([DENIS et SCHIFFERMÜLLER], 1775) – Arkoutino-forest, Balchik.
- Macaria liturata* (CLERCK, 1759) – Dolno Thcerkovishte.
- Tephrina arenacearia* ([DENIS et SCHIFFERMÜLLER], 1775) – Arkoutino-beach.
- Therapis flavicaria* ([DENIS et SCHIFFERMÜLLER], 1775) – Balchik.
- Pseudopanthera macularia* (LINNAEUS, 1758) – Balchik.
- Apeira syringaria* (LINNAEUS, 1758) – Dolno Thcerkovishte.
- Nychiodes waltheri* WAGNER, 1919 – Dolno Thcerkovishte.
- Synopsia sociaria* (HÜBNER, 1799) – Arkoutino-beach, Balchik.
- Peribatodes rhomboidaria* ([DENIS et SCHIFFERMÜLLER], 1775) – Dolno Thcerkovishte, Arkoutino-beach.

- Peribatodes umbraria* (HÜBNER, 1809) – Lubovishte, Dolno Thcerkovishte.  
*Hypomecis roboraria* ([DENIS et SCHIFFERMÜLLER], 1775) – Arkoutino-forest.  
*Ascotis selenaria* ([DENIS et SCHIFFERMÜLLER], 1775) – Arkoutino-beach, Balchik.  
*Campaea margaritata* (LINNAEUS, 1767) – Dolno Thcerkovishte, Arkoutino-beach, Arkoutino-forest.  
*Cabera pusaria* (LINNAEUS, 1758) – Dolno Thcerkovishte.  
*Charissa variegata* (DUPONCHEL, 1830) – Dolno Thcerkovishte.  
*Semiaspilates ochrearia* (ROSSI, 1794) – Balchik.  
*Dyscia sicanaria* (OBERTHÜR, 1923) – Roupite, Dolno Thcerkovishte, Balchik.  
*Perconia strigillaria* (HÜBNER, 1787) – Lubovishte, Dolno Thcerkovishte.  
*Orthostixis cribraria* (HÜBNER, 1799) – Arkoutino-beach, Balchik.  
*Aplasta ononaria* (FUESSLY, 1783) – Dolno Thcerkovishte, Arkoutino-beach.  
*Pseudoterpna pruinata* (HUFNAGEL, 1767) – Lubovishte.  
*Comibaena bajularia* ([DENIS et SCHIFFERMÜLLER], 1775) – Arkoutino-beach, Arkoutino-forest.  
*Antonechloris smaragdaria* (FABRICIUS, 1787) – Lubovishte, Dolno Thcerkovishte, Balchik.  
*Hemithea aestivaria* (HÜBNER, 1787) – Arkoutino-forest.  
*Chlorissa viridata* (LINNAEUS, 1758) – Dolno Thcerkovishte.  
*Chlorissa cloraria* (HÜBNER, 1813) – Dolno Thcerkovishte.  
*Euchrostes indigenata* (VILLERS, 1789) – Dolno Thcerkovishte.  
*Scopula ornata* (SCOPOLI, 1763) – Balchik.  
*Scopula submutata* (TREITSCHKE, 1828) – Dolno Thcerkovishte.  
*Scopula marginepunctata* (GOEZE, 1781) – Dolno Thcerkovishte.  
*Scopula flaccidaria* (ZELLER, 1852) – Balchik.  
*Idaea filicata* (HÜBNER, 1799) – Balchik.  
*Idaea subsericeata* (HAWORTH, 1809) – Arkoutino-beach.  
*Idaea ostrinaria* (HÜBNER, 1813) – Arkoutino-beach.  
*Idaea aversata* (LINNAEUS, 1758) – Arkoutino-beach, Arkoutino-forest.  
*Idaea degeneraria* (HÜBNER, 1799) – Dolno Thcerkovishte, Arkoutino-beach, Balchik.  
*Idaea deversaria* (HERRICH-SCHÄFFER, 1847) – Arkoutino-beach.  
*Rhodostrophia tabidaria* (ZELLER, 1847) – Roupite.  
*Catarhoe putridaria* (HERRICH-SCHÄFFER, 1852) – Balchik.  
*Catarhoe rubidata* ([DENIS et SCHIFFERMÜLLER], 1775) – Balchik.  
*Epirrhoe galiata* ([DENIS et SCHIFFERMÜLLER], 1775) – Dolno Thcerkovishte, Balchik.  
*Costaconvexa polygrammata* (BORKHAUSEN, 1794) – Arkoutino-beach.

- Camptogramma bilineata* (LINNAEUS, 1758) – Dolno Thcerkovishte, Balchik.  
*Cosmorhoe ocellata* (LINNAEUS, 1758) – Dolno Thcerkovishte, Arkoutino-beach, Balchik.  
*Horisme vitalbata* ([DENIS et SCHIFFERMÜLLER], 1775) – Balchik.  
*Horisme corticata* (TREITSCHKE, 1835) – Dolno Thcerkovishte, Balchik.  
*Horisme tersata* ([DENIS et SCHIFFERMÜLLER], 1775) – Arkoutino-beach.  
*Philereme vetulata* ([DENIS et SCHIFFERMÜLLER], 1775) – Arkoutino-beach, Balchik.  
*Eupithecia haworthiata* DOUBLEDAY, 1856 – Dolno Thcerkovishte, Arkoutino-beach.  
*Eupithecia pyreneata* MABILLE, 1871 – Dolno Thcerkovishte.  
*Eupithecia centaureata* ([DENIS et SCHIFFERMÜLLER], 1775) – Balchik.  
*Eupithecia breviculata* (DONZEL, 1837) – Dolno Thcerkovishte, Arkoutino-beach, Balchik.  
*Gymnoscelis rufifasciata* (HAWORTH, 1809) – Balchik.  
*Chloroclystis v-ata* (HAWORTH, 1809) – Balchik.  
*Aplocera plagiata* (LINNAEUS, 1758) – Dolno Thcerkovishte, Balchik.

#### Family NOTODONTIDAE

- Clostera anastomosis* (LINNAEUS, 1758) – Dolno Thcerkovishte.  
*Furcula bifida* (BRAHM, 1787) – Arkoutino-beach.  
*Paradrymonia vittata bulgarica* DE FREINA, [1983] 1982 – Dolno Thcerkovishte.  
*Pterostoma palpina* (CLERCK, 1759) – Dolno Thcerkovishte.  
*Stauropus fagi* (LINNAEUS, 1758) – Dolno Thcerkovishte.  
*Spatalia argentina* ([DENIS et SCHIFFERMÜLLER], 1775) – Arkoutino-beach, Arkoutino-forest.

#### Family NOCTUIDAE

- Moma alpium* (OSBECK, 1778) – Arkoutino-beach.  
*Acrionicta psi* (LINNAEUS, 1758) – Dolno Thcerkovishte, at sugar bait.  
*Acrionicta euphorbiae* ([DENIS et SCHIFFERMÜLLER], 1775) – Lubovishte.  
*Acrionicta orientalis* MANN, 1862 – Roupite.  
*Acrionicta rumicis* (LINNAEUS, 1758) – Dolno Thcerkovishte.  
*Simyra dentinosa* FREYER, 1839 – Silen-Madzhari, numerous cterpillars of the last instar on *Euphorbia*.  
*Idia calvaria* ([DENIS et SCHIFFERMÜLLER], 1775) – Arkoutino-forest.  
*Paracolax tristalis* (FABRICIUS, 1794) (= *glaucinalis* auct., nec LINNAEUS, 1758, nec [DENIS et SCHIFFERMÜLLER], 1775) – Arkoutino-forest.  
*Herminia tarsicrinalis* (KNOCH, 1782) – Arkoutino-beach.



- Microphtha crinalis* (TREITSCHKE, 1829) (= *plumigeralis* HÜBNER, [1825] auct.) – Dolno Thcerkovishte, at sugar bait. *M. crinalis* (TREITSCHKE, 1829) has to replace reported from Bulgaria *Pechipogo plumigeralis* HÜBNER, [1825] erroneously.
- Catocala eutychea* (TREITSCHKE, 1835) – Roupite.
- Dysgonia algira* (LINNAEUS, 1767) – Kozhuh, Dolno Thcerkovishte.
- Prodotis stolidus* (FABRICIUS, 1775) – Roupite, Kozhuh.
- Lygephila cracca* ([DENIS et SCHIFFERMÜLLER], 1775) – Balchik.
- Lygephila procax* (HÜBNER, 1813) (= *limosa* TREITSCHKE, 1826) – Dolno Thcerkovishte.
- Catephria alchymista* ([DENIS et SCHIFFERMÜLLER], 1775) – Lubovishte.
- Aedia funesta* (ESPER, 1786) – Dolno Thcerkovishte, Balchik.
- Aedia leucomelas* (LINNAEUS, 1758) – Roupite, Balchik.
- Tyta luctuosa* ([DENIS et SCHIFFERMÜLLER], 1775) – Roupite, Dolno Thcerkovishte, Arkoutino-beach, Balchik.
- Gonospileia triquetra* ([DENIS et SCHIFFERMÜLLER], 1775) – Kozhuh.
- Laspeyria flexula* ([DENIS et SCHIFFERMÜLLER], 1775) – Arkoutino-forest.
- Zethes insularis* RAMBUR, 1833 – Dolno Thcerkovishte, at sugar bait. In Bulgaria *Z. insularis* was known only from SW Bulgaria and from the southern slopes of the West Rhodopi Mts.
- Scoliopteryx libatrix* (LINNAEUS, 1758) – Dolno Thcerkovishte, at sugar bait.
- Rhynchodontodes antiqualis* (HÜBNER, 1809) – Dolno Thcerkovishte, Balchik.
- Rivula sericealis* (SCOPOLI, 1763) – Dolno Thcerkovishte, Arkoutino-beach, Arkoutino-forest.
- Eutelia adulatrix* (HÜBNER, 1823) – Roupite, Dolno Thcerkovishte, Arkoutino-beach.
- Panchrysia deaurata* (ESPER, 1787) – Balchik. This is the only coastal locality of this species in Bulgaria. In Bulgaria known mostly from the mountains, up to 1650 m. Sometimes not rare near Balchik (BESCHKOW 1990).
- Diachrysia chrysitis* (LINNAEUS, 1758) – Dolno Thcerkovishte, Arkoutino-beach, Arkoutino-forest, Balchik.
- Autographa gamma* (LINNAEUS, 1758) – Balchik.
- Trichoplusia ni* (HÜBNER, 1803) – Balchik.
- Abrostola tripartita* (HUFNAGEL, 1766) – Arkoutino-beach.
- Abrostola triplasia* (LINNAEUS, 1758) (= *trigemina* (WERNEBURG, 1864) – Dolno Thcerkovishte.
- Abrostola asclepiadis* ([DENIS et SCHIFFERMÜLLER], 1775) – Dolno Thcerkovishte.
- Emmelia trabealis* (SCOPOLI, 1763) – Balchik.
- Acontia lucida* (HUFNAGEL, 1766) – Roupite, Kozhuh, Arkoutino-beach.

- Acontia urania* FRIVALDSZKY, 1835 – Roupite, Balchik.  
*Phyllophila obliterated* (RAMBUR, 1833) – Kozhuh, Arkoutino-beach.  
*Protodeltote pygarga* (HUFNAGEL, 1766) – Arkoutino-forest.  
*Odice suava* (HÜBNER, 1813) – Roupite.  
*Eublemma ostrina* (HÜBNER, 1808) – Roupite.  
*Eublemma parva* (HÜBNER, 1808) – Roupite.  
*Eublemma amoena* (HÜBNER, 1803) (= *respersa* HÜBNER, 1790, sensu auct., nec [DENIS et SCHIFFERMÜLLER], 1775; = *grata* TREITSCHKE, 1826) – Balchik.  
*Eublemma purpurina* ([DENIS et SCHIFFERMÜLLER], 1775) – Roupite, Dolno Thcerkvishte.  
*Glossodice polygramma* (DUPONCHEL, 1842) – Roupite, Balchik.  
*Meganola togatulalis* (HÜBNER, 1796) – Kozhuh, Lubovishte.  
*Meganola strigula* ([DENIS et SCHIFFERMÜLLER], 1775) (= *kolbi* DANIEL, 1935, auct.) – Arkoutino-beach, Arkoutino-forest. Probably one more taxon (undescribed) of this species group occurs in Bulgaria. The genitalia of our specimens differ from those illustrated in RÁKOSY & SZEKELY (1995) and in RÁKOSY (1996). Another possibility is that the illustrations of genitalia in the quoted above papers are not precise enough. In our female specimens the bursa copulatrix is composed of two membranous sections, situated longitudinally and separated from each other by a short narrow isthmus: small (superior) and large (interior), the last one with two signa.  
*Meganola gigantula* (STAUDINGER, 1879) – Lubovishte. In Bulgaria *M. gigantula* is known only from south-western part of the country: Struma Valley and the adjacent slopes of the mountains up to 750 m, from Kresna Gorge to the Volcanic Hill of Kozhuh near Petrich Town, where it is not rare.  
*Meganola albula* ([DENIS et SCHIFFERMÜLLER], 1775) – Arkoutino-beach.  
*Nola cucullatella* (LINNAEUS, 1758) – Balchik.  
*Nola aerugula* (HÜBNER, 1793) – Kozhuh.  
*Nola chlamitulalis* (HÜBNER, [1813]) – Arkoutino-beach, Balchik.  
*Nycteola asiatica* (KRULIKOVSKY, 1904) – Kozhuh.  
*Bena bicolorana* (FUSSLY, 1775) (= *prasinana* auct., nec LINNAEUS, 1758, = *quercana* ([DENIS et SCHIFFERMÜLLER], 1775)); for synonymy see MIK-KOLA & HONEY (1993) – Arkoutino-beach.  
*Shargacucullia blattariae* (ESPER, 1790) – Kozhuh, Roupite.  
*Shargacucullia verbasci* (LINNAEUS, 1758) – Arkoutino-beach, Balchik.  
*Calophasia opalina* (ESPER, 1793) (= *casta* BORKHAUSEN, 1793, nec PALLAS, 1767) – Dolno Thcerkvishte, Balchik.  
*Omphalophana antirrhinii* (HÜBNER, 1803) – Lubovishte, Arkoutino-beach.  
*Copiphana olivina* (HERRICH-SCHÄFFER, 1852) – Dolno Thcerkvishte.

*Valerietta bulgarica* (DRENOWSKI, 1953), sensu HREBLAY, 1992 – Arkoutino-forest, 2 males specimens, one at 22:40 and another at 23:30 local time, gen. preps with everted vesica 1-2/ 3 VII 1998, S. BESHKOV. *Valerietta bulgarica* seems to be a very local species. Both specimens were attracted to one of the lamps (160 W Osram MWL & 25 W black lamp), although the second one (160 W Osram MWL) was placed at a distance of about 100 – 150 m and the light trap operated in another direction, less than 100 m from the lamp where *Valerietta bulgarica* was caught. The lamp was placed at the border between the humid leaved forest (*Quercus-Fraxinus-Carpinus* mixed forest with lianas (*Smilax excelsa*, etc.) and shrubs and grass vegetation on the wet ground, close to the swamp), and the dry *Quercus* forest, where the second lamp was located. The light trap was situated in the deciduous forest. Although we used at the same time sugar bait on the tree trunks, there was no evidence of *Valerietta bulgarica*. *Crypsedra niphopasta bulgarica* DRENOVSKY, 1953 is described from Vitosha Mts., Dragalevski Manastir Cloister, 930 m alt. Later HACKER (1989: 183) mentioned the taxon *Valerietta niphopasta bulgarica* (DRENOWSKI, 1955) [sic!], following the previous report for Vitosha, and that by SLIVOV (1984) from Kresna Gorge, and for the first time mentioned new locality: „Arkoutino”. Later, from "Arkoutino" material (3 VIII 1973) HREBLAY (1992) designated the neotype of *bulgarica* and considered it as a valid species. For now only Vitosha and Arkoutino remain known localities of *Valerietta bulgarica bulgarica* (DRENOVSKY, 1953) (BESHKOV & SLIVOV in press.). Our finding confirmed that *Valerietta bulgarica* (DRENOVSKY, 1953) has two generations. *Valerietta niphopasta niphopasta* (HAMPSON, 1906) is also known from Bulgaria. The specimen in the collection of A. SLIVOV labelled "Spirka Kresna, 25-27 V 1976, leg. Al. SLIVOV" and determined by him as "*Crypsedra niphopasta bulgarica*" (SLIVOV, 1984) belongs to *Valerietta niphopasta niphopasta* (HAMPSON, 1906). The examination of the genitalia including the everted vesica, as well as the external characters, shows that it belongs to *V. niphopasta niphopasta* (HAMPSON, 1906). For more detailed information see BESHKOV & SLIVOV (in press.). In Turkey *Valerietta niphopasta* has two generations – first in May-June and the second in August-September (HACKER 1996).

*Aegle vespertalis* (HÜBNER, 1813) – Roupite, Kozhuh.

*Aegle kaekeritziana* (HÜBNER, 1799) – Dolno Thcerkovishte.

*Shinia scutosa* ([DENIS et SCHIFFERMÜLLER], 1775) – Arkoutino-beach.

*Helicoverpa armigera* (HÜBNER, 1808) – Roupite.

*Chazaria incarnata* (FREYER, 1838) – Roupite, Kozhuh, Lubovishte.

*Apaustes rupicola* ([DENIS et SCHIFFERMÜLLER], 1775) – Roupite, Kozhuh.

According to some authors *A. rupicola* and *A. theophila* are conspecific.

- Apaustes theophila* (STAUDINGER, 1866) – Roupite, Kozhuh.
- Platyperigea kadenii* (FREYER, 1836) – Roupite, Lubovishte, Dolno Thcerkovishte, Arkoutino-beach.
- Paradrina clavipalpis* (SCOPOLI, 1763) – Balchik.
- Paradrina wulschlegeli schwingenschussi* (BOURSIN, 1936) – Balchik, a single male specimen. In Bulgaria *P. wulschlegeli schwingenschussi* is known mostly from the mountains (Pirin, Ossogovo, Vitosha, Plana, Stara Planina) at elevations 1400 – 1750 m. The specimen from Balchik in appearance looks completely different from other populations of *P. wulschlegeli schwingenschussi*, but in genital features, including everted vesica, corresponds well with the specimens from Bulgaria and Turkey (examined by S. BESHKOV). Among the Bulgarian *Paradrina* species, *P. wulschlegeli schwingenschussi* is the only one with a single subbasal diverticulum, which is strongly covered by elongated fine spines. The other *Paradrina* species have two subbasal diverticulata, but they are always less covered by spines. Of the valval features, *P. wulschlegeli schwingenschussi* has longer clasper than the other *Paradrina* species.
- Paradrina flavirena* (GUENÉE, 1852) – Roupite, Dolno Thcerkovishte.
- Hoplodrina ambigua* ([DENIS et SCHIFFERMÜLLER], 1775) – Dolno Thcerkovishte, Balchik.
- Charanyca trigrammica* (HUFNAGEL, 1766) – Dolno Thcerkovishte, Arkoutino-beach, Arkoutino-forest, Balchik.
- Proxenus hospes* (FREYER, 1831) – Roupite. *P. hospes* was reported from Volcanic Hill of Kozhuh near Petrich Town as a new species for Bulgarian fauna (GANEV 1982; GANEV 1984). Known also from SW Bulgaria, Kresna [Gorge] (MÉSZÁROS at al. 1984); SW Bulgaria, S. Pirin Mts., Liljanovo Village above Sandanski Town, 500 m alt. (EICHLER, HACKER & SPEIDEL 1996), from Ograzhden Mts., Sestrino Village, 650 m a.s.l., 11 V 1983, 6 VI 1984, 7 VIII 1986, J. GANEV leg., in the collection of GANEV in National Museum of Natural History (Sofia) and from Alibotoush Mts., 31 VII 1930, K. TOULESCHKOW leg., in coll. National Museum of Natural History (Sofia). Flight period from May to the middle of September.
- Trachea atriplicis* (LINNAEUS, 1758) – Balchik.
- Phlogophora meticulosa* (LINNAEUS, 1758) – Balchik.
- Dypterygia scabriuscula* (LINNAEUS, 1758) – Dolno Thcerkovishte, Balchik.
- Chloanthia hyperici* ([DENIS et SCHIFFERMÜLLER], 1775) – Roupite, Lubovishte, Oreljak, Dolno Thcerkovishte.
- Parastichtis suspecta* (HÜBNER, [1817]) – Roupite, Kozhuh.
- Parastichtis ypsilon* ([DENIS et SCHIFFERMÜLLER], 1775) – Lubovishte, Dolno Thcerkovishte at lamps and at a sugar bait.

- Dicycla oo* (LINNAEUS, 1758) – Roupite, Lubovishte, Dolno Thcerkovishte, Arkoutino-beach.
- Cosmia confinis* HERRICH-SCHÄFFER, 1849 – Balchik.
- Cosmia pyralina* ([DENIS et SCHIFFERMÜLLER], 1775) – Arkoutino-beach.
- Mniotype adusta* (ESPER, 1790) – Orelyak.
- Apamea sicula* (TURATI, 1909) (= *syriaca* (OSTHELDER, 1933); = *tallosi* KOVACS et VARGA, 1969 – Arkoutino-forest. *A. sicula* is reported as a new species for the country from SE Bulgaria, Simeonovo (Otmanli) Village near Burgas Town (GANEV & BESCHKOV 1987). Known also from: SW Bulgaria, "Roupite" near Volcanic Hill of Kozhuh, Petrich Town Region and from East Rhodopi Mts.: Arda Chalet near Dabovetz Village and by Momina Skala Chalet near Madzharovo Town (BESHKOV & GASHTAROV in press). Probably *A. sicula* is not so rare in the temperate areas at low altitudes in Bulgaria. The very limited number of the published localities is probably due to confusion with a closely related species *A. monoglypha* (HUFNAGEL, 1766). However, both species have a different flight period. *A. sicula* has a single brood and is on wing in May-July, while the flight period of *A. monoglypha* extends from the end of June to the beginning of October.
- Apamea caracterea* ([DENIS et SCHIFFERMÜLLER], 1775) (= *epomidion* HAWORTH, 1809; = *hepatica* auct.) – Dolno Thcerkovishte.
- Apamea illyria* FREYER, 1846 – Orelyak.
- Apamea anceps* ([DENIS et SCHIFFERMÜLLER], 1775) – Balchik.
- Apamea sordens* (HUFNAGEL, 1766) – Balchik.
- Oligia strigilis* (LINNAEUS, 1758) – Arkoutino-beach, Balchik.
- Oligia latruncula* ([DENIS et SCHIFFERMÜLLER], 1775) – Arkoutino-beach, Arkoutino-forest, Balchik.
- Oligia* sp. (undescribed ?) – Dolno Thcerkovishte, 1 female, Gen. prep. 2./ 8 VII 1998. The genital armature does not correspond with any of the described taxa and shows very distinct differences. It may be either a distorted specimen or a representative of a new taxon.
- Oria musculosa* (HÜBNER, 1808) – Roupite.
- Discestra mendax* (STAUDINGER, 1879) – Lubovishte.
- Lacanobia w-latinum* (HUFNAGEL, 1766) – Dolno Thcerkovishte, Balchik.
- Lacanobia praedita* (HÜBNER, 1813) – Balchik. In Bulgaria known only from the area near Balchik.
- Lacanobia oleracea* (LINNAEUS, 1758) – Dolno Thcerkovishte, Balchik.
- Hecatera dysodea* ([DENIS et SCHIFFERMÜLLER], 1775) – Roupite.
- Hecatera bicolorata* (HUFNAGEL, 1766) – Roupite, Kozhuh, Lubovishte.
- Hecatera cappa* (HÜBNER, 1809) – Roupite.

- Hadena magnolii* (BOISDUVAL, 1829) – Dolno Thcerkovishte, Arkoutino-beach.
- Hadena compta* ([DENIS et SCHIFFERMÜLLER], 1775) – Roupite.
- Hadena filigrana* (ESPER, [1788]) (= *filigrana* ESPER, [1796], an unjustified emendation of *Noctua filigrana* ESPER, [1788]) – Lubovishte.
- Hadena syriaca podolica* (KREMKY, 1937) – Dolno Thcerkovishte, Arkoutino-beach.
- Hadena perplexa* ([DENIS et SCHIFFERMÜLLER], 1775) – Roupite.
- Papestra biren* (GOEZE, 1781) – Orelyak.
- Mythimna albipuncta* ([DENIS et SCHIFFERMÜLLER], 1775) – Dolno Thcerkovishte, Arkoutino-beach, Balchik.
- Mythimna vitellina* (HÜBNER, 1808) – Roupite, Lubovishte, Dolno Thcerkovishte at sugar bait, Arkoutino-beach, Balchik.
- Mythimna l-album* (LINNAEUS, 1767) – Dolno Thcerkovishte, Arkoutino-beach, Balchik.
- Mythimna andereggii pseudocomma* (REBEL et ZERNY, 1931) – Orelyak.
- Mythimna scirpi* (DUPONCHEL, 1836) – Kozhuh, Lubovishte.
- Axylia putris* (LINNAEUS, 1761) – Dolno Thcerkovishte, Balchik.
- Basistriga flammata* ([DENIS et SCHIFFERMÜLLER], 1775) – Orelyak.
- Noctua pronuba* (LINNAEUS, 1758) – Dolno Thcerkovishte, Balchik.
- Noctua orbona* (HUFNAGEL, 1766) – Roupite.
- Noctua comes* (HÜBNER, [1813]) – Roupite.
- Chersotis rectangula* ([DENIS et SCHIFFERMÜLLER], 1775) – Lubovishte.
- Rhyacia simulans* (HUFNAGEL, 1766) – Orelyak.
- Xestia c-nigrum* (LINNAEUS, 1758) – Dolno Thcerkovishte, Balchik.
- Euxoa segnilis corti* WAGNER, 1930 – Roupite.
- Dichagyris renigera argentina* (CARADJA, 1930) (= *renigera argentea* CARADJA, 1931) (homonym); = *Agrotis pontica* BURESCH (unpublished), nomen nudum) – Balchik, more than 20 specimens at both lamps and a light trap. The type locality of *renigera argentina* CARADJA is on Bulgarian Black Sea Coast: "Silberküste", Balchik (CARADJA 1930; CARADJA 1931). Known also from Euksinograd and Varna Town, both on the Black Sea Coast as well. In BURESCH & TULESCHKOW (1932) "*Agrotis renigera* HB. ssp. *argentina* CAR. (= *Agrotis pontica* BUR., in litt.)". As far as we know, the description of *Agrotis pontica* BUR. (nomen nudum) has never been published. Recently ssp. *argentina* CAR. has been found near Durankoulak Lake (North Black Sea Coast) (BESHKOV & RADEV in press.). The flight period extends from the first half of May (12 V 1921) to the middle of July (15 VII 1930). Not rare at light in the district of Balchik during the first half of June.

- Yigoga nigrescens* (HÖFNER, 1888) – Lubovishte.  
*Yigoga forcipula* ([DENIS et SCHIFFERMÜLLER], 1775) – Roupite.  
*Agrotis ipsilon* (HUFNAGEL, 1766) – Balchik.  
*Agrotis exclamationis* (LINNAEUS, 1758) – Dolno Thcerkovishte, Balchik.  
*Agrotis cinerea* ([DENIS et SCHIFFERMÜLLER], 1775) – Orelyak.

#### Family LYMANTRIIDAE

- Lymantria dispar* (LINNAEUS, 1758) – Silen-Madzhari, a great number of caterpillars on *Quercus*, *Crataegus*, *Urtica*, etc., Arkoutino-beach, caterpillars very abundant on the trees near the beach, Arkoutino-forest, abundant on the *Quercus* trees. Caterpillars of *L. dispar* were observed in a large number almost everywhere in some areas, even in the forests some trees were almost completely defoliated by the caterpillars. However, in summer the adults were rare and not abundant at lamps and in light traps. It seems that the natural enemies, both predators and parasites, can regulate the density of the species very effectively.  
*Parocneria terebinthi* (FREYER, 1838) – Roupite.  
*Actornis l-nigrum* (MÜLLER, 1764) – Dolno Thcerkovishte, Arkoutino-beach, Arkoutino-forest.

#### Family ARCTIIDAE

- Lithosia quadra* (LINNAEUS, 1758) – Arkoutino-beach, Arkoutino-forest.  
*Eilema caniola* (HÜBNER, 1808) – Arkoutino-beach.  
*Eilema sororcula* (HUFNAGEL, 1766) – Dolno Thcerkovishte, Balchik.  
*Dysauxes famula pontica* FRESE, 1959 – Roupite, Dolno Thcerkovishte, Arkoutino-beach, Balchik.  
*Amata kruegeri marjana* (STAUDER, 1913) – Kozhuh.  
*Spilosoma lutea* (HUFNAGEL, 1766) – Dolno Thcerkovishte, Arkoutino-forest, Balchik.  
*Diaphora mendica* (CLERCK, 1759) – Balchik.  
*Arctia villica* (LINNAEUS, 1758) – Roupite, Lubovishte, Dolno Thcerkovishte, Arkoutino-beach, Arkoutino-forest.

### STRESZCZENIE

Fauna *Macrolepidoptera* Bułgarii jest stosunkowo dobrze poznana. Jednak znajomość rozszedlenia poszczególnych gatunków na obszarze tego kraju nie jest zadawalająca, ponieważ zwykle publikowane są jedynie dane o nowych bądź rzadkich gatunkach. Spowodowało to, że często dla gatunków rzadko spotykanych znanych jest więcej stanowisk

występowania jak dla gatunków bardziej powszechnych. W pracy przedstawiono wykaz wszystkich gatunków *Macrolepidoptera* stwierdzonych w okresie 1 – 9 czerwca 1998 r. na 9 różnych stanowiskach w Bułgarii. Materiał gromadzony był w dzień na upatrzonego oraz w nocy z zastosowaniem odłowów na światło i przynęty pokarmowe.

Większość z stwierdzonych 275 gatunków wykazana jest z przedstawionych stanowisk po raz pierwszy. Dla kilku z nich ustalono nowe dane dotyczące biologii i fenologii.

## REFERENCES

- BESCHKOW S., 1990: *Sphingonaepiopsis gorgoniades* (HÜBNER, [1819]) (*Lepidoptera, Sphingidae*) – a new genus and a new species for the Bulgarian fauna. Acta zool. bulg., **40**: 75-77.
- BESHKOV S., 1995: A contribution to the knowledge of the Bulgarian *Lepidoptera* fauna (*Lepidoptera: Macrolepidoptera*). Phegea, **23** (4): 201-218.
- BESHKOV S., NOWACKI J., 1998: New records of *Macrolepidoptera* from Bulgaria. Roczn. Muz. górnośl. (Przyr.), **15**: 45-51.
- BESHKOV S., SLIVOV A., [in press]: On the presence of *Valerietta niphopasta niphopasta* (HAMPSON, 1906) in Europe and of *Chersotis andereggii* (BOISDUVAL, [1837]) on the Balkan Peninsula (*Lepidoptera: Noctuidae*). Phegea.
- BURESCH I., TULESCHKOW K., 1932: Die horizontale Verbreitung der Schmetterlinge (*Lepidoptera*) in Bulgarien. III(1). Teil: Noctuiiformes. Mitt. Kgl. Naturwiss. Inst. Sofia, **5**: 67-144.
- CARADJA A., 1930: Beitrag zur Lepidopterenfauna der südlichen Dobrogea, insbesondere der sogenannten „Coasta de Argint”. Bull. Sect. Scient. Acad. Romaine, **13**: 31-51.
- CARADJA, A. 1931: Beiträge zur Lepidopterenfauna Grossrumäniens für das Jahr 1930. Memorille Sect. Scient. Acad. Rom., Seria III, Tomul VII, Mem., **8**: 293-332.
- DRENOVSKY A., 1953: *Gripsedra niphopasta* OBRTH. (*Insecta, Lepidopt.*) subsp. *bulgarica* aus Bulgarien. Académie Bulgare des Sciences, Bulletin de l'Institut de Zoologie, II: 373-376.
- EICHLER F., HACKER H., SPEIDEL W., 1996: Weiterer Beitrag zur Kenntnis der Schmetterlingsfauna des Pirin-Gebirges im Südwestern Bulgariens (*Lepidoptera*). Beitrag 1. Esperiana, **4**: 263-268.
- GANEV J., 1982: Records of new and local species of *Heterocera* from Bulgaria. Nota lepid., **5** (4): 157-168.
- GANEV J., 1984: Die Schmetterlingsfauna des Vulkanhügels Kozuch in Südwest-Bulgarien (*Lepidoptera: Macrolepidoptera*). Phegea, **12** (4): 121-136.
- GANEV J., BESCHKOW S., 1987: Records of *Macrolepidoptera* from Bulgaria (*Lepidoptera*). Phegea, **15** (2): 113-117.
- HACKER H., 1989: Die *Noctuidae* Griechendlands. Mit einer Übersicht über die Fauna des Balkanraumes (*Lepidoptera, Noctuidae*). Herbiopoliana, 2. Eitschberger, Markleuthen. 589 + XII pp.



- HACKER H., 1996: Ergänzungen zu „Die *Noctuidae* Vorderasiens” und Neuere Forschungsergebnisse zur Fauna der Türkei II (*Lepidoptera*). *Esperiana*, **4**: 273-330 + Taf. R-S.
- HREBLAY M., 1992: Revision der Gattung *Valerietta* DRAUDT, 1938. *Esperiana* **3**: 235-241 + Taf. I: 5-8.
- KARSHOLT O., RAZOWSKI J. (eds.), 1996: The *Lepidoptera* of Europe. Apollo Books, Stenstrup. 380 pp.
- MÉSZÁROS Z., RONKAY L., HERCZIG B., SZEÓKE K., SZABÓKY CZ., 1984: Datos para el Conocimiento de la fauna de los Lepidopteros de Bulgaria: Fam. *Noctuidae* (2.a Parte). *SHILAP Revta lepid.*, **12** (47): 199-201.
- MIKKOLA K., HONEY M., 1993: The *Noctuoidea* (*Lepidoptera*) described by LINNAEUS. *Zool. J. Linn. Soc.*, **108**: 103-169.
- RÁKOSY L., 1996: Die *Noctuidae* Rumäniens (*Lepidoptera Noctuidae*). Druckerei Gutenberg, Linz-Dornach. 648 pp.
- RÁKOSY L., SZEKELY L., 1994 (1995): Subfamilia *Nolinae* in fauna Romaniei (*Lepidoptera, Noctuidae*). *Bul. Inf. Soc. Lepid. Rom.*, Cluj-Napoca, **5** (3-4): 169-186.
- SLIVOV A., 1984: New and Rare Butterfly Species of Family *Noctuidae* (*Lepidoptera*) in the Bulgarian Fauna. *Acta zool. bulg.*, **25**: 56-66.