

A catalogue of the Bulgarian Lepidoptera species reported and collected from the caves and galleries in Bulgaria

(Insecta, Lepidoptera)

by

STOYAN BESHKOV & BOYAN PETROV

received 2.II.1996

Abstract: In the "Catalogue" all existing speleological and entomological literature concerning Microlepidoptera and Macrolepidoptera (Butterflies and Moths) fauna, found in caves and galleries, are presented together with the results of several years' studies by the authors. For every individual species, that is extant in every reported cave and gallery, as well as the authors who have made the report, is included. New data, most recently gathered are reported as well. Several species are new for the cave fauna of Bulgaria, some others are all together new to the caves. One species is new for the Bulgarian fauna. The number of the established up until now Lepidoptera species in the caves and galleries in Bulgaria is 32.

Introduction

For a considerable length of time the Bulgarian cave fauna has been of interest to many researchers, both Bulgarians and foreign. Although considerable data concerning the fauna of Lepidoptera of the caves and galleries in Bulgaria exists, having been published in numerous articles, up until now only one study (SKALSKI, 1972) concerns the Lepidoptera cave fauna. This article however explores only a small part of the country, the Iskar Gorge, (the Lakatnik Railway Station area). All other data are published in the speleological literature (BERON, 1972, BERON, 1975, BERON, P. & V. GUÉORGUIEV, 1967, GUÉORGUIEV & BERON, 1962) and other, or in lepidopterological ones (BESHKOV, 1992, BESHKOV, 1995, BURESCH, 1934, BURESCH, 1936, BURESCH, 1939, BURESCH & TULESCHKOW 1932, 1935, 1936, GANEV, 1985, KOLEV, 1993) and others. For the above reasons, including the difficult access to most of the articles quoted, having been published in various journals in Bulgaria and abroad, and in several languages, we deemed it necessary to collect and publish all data concerning the Bulgarian butterflies and moths fauna reported from the caves and galleries. In this catalogue, we have provided the data we have collected over a period of years. For each of the species we offer all of the caves and galleries and the authors that have reported them, as well as our latest data. The order of the families is given according to LERAUT (1980) and ANE (1988). The systematics of the family Noctuidae is given according to FIBIGER & HACKER (1990; 1992).

Most of the unpublished data presented here has been collected by the authors (primary by B. PETROV) as a result of several years' research on the fauna of caves conducted throughout the country. The names of all of the colleagues and friends who were so kind to collect material for the preparation of this Catalogue are mentioned in the text. The materials without any mentioned collector have been collected by the author S. BESHKOV. The entire material has been determined by S. BESHKOV. For the purpose of avoiding future misunderstandings, all of the Microlepidoptera species, as well as the specimens of the genus *Autophila* and

some others Noctuidae and Geometridae, are determined taking into account their differences in the genitals. All the mentioned material is found in the collection of S. BESHKOV.

Family Tineidae

Tinea spec.

Mentioned as "trogloxen ?" in GUÉORGUIEV & BERON (1962).

Reported from:

"Souhata ("Razhishkata") Douпка" Cave near to Lakatnik Railway Station in the Iskar Gorge, 19.X.1939, two specimens, PITTIONI leg., det. BURESCH (GUÉORGUIEV & BERON, 1962; BERON, 1975).

Monopis obviella ([DENIS & SCHIFFERMÜLLER], 1775)

Trogloxen (GUÉORGUIEV & BERON, 1962; BERON, 1994).

The upper entrance of the "Parnitzite" Cave near to Bezhanovo Village, Cherven Bryag Region, 21.I.1995, B. PETROV & P. STOEV leg. 4 males specimens (Gen. preps 1–2./06.II.1995, BESHKOV) on guano and clay.

Reported from:

"Zmeiovi Douпки" Cave near to Sliven Town, one specimen in September 1942, N. RADEV leg., det. BURESCH as *Monopis ferruginella* HÜBNER, 1785 (GUÉORGUIEV & BERON, 1962). *Monopis ferruginella* HÜBNER, [1813] according to LERAUT (1983) and ANE (1988) is a synonym of *Monopis obviella* ([DENIS & SCHIFFERMÜLLER], 1775).

Monopis rusticella (HÜBNER, 1796) = *saturella* (HAWORTH, 1828)

Subtroglophil.

"Tilki-Inhi" Cave near to Ostrovitza Village, Kardzhali Region, East Rhodopi Mts, 17.XI.1991, one female specimen, B. PETROV & T. IVANOVA leg., Gen. prep. 3./19.XII.1994, BESHKOV.

"Kolibata" Cave near to Beledie Han Village, Kostinbrod Region, 02.III.1994, B. PETROV leg. one female specimen, Gen. prep. 4./19.XII.1994, BESHKOV.

The upper entrance of the "Parnitzite" Cave near to Bezhanovo Village, Cherven Bryag Region, 21.I.1995, B. PETROV & P. STOEV leg. 1 male specimen (Gen. prep. 3./06.II.1995, BESHKOV) on guano and clay.

New for the cave fauna of Bulgaria.

Further data of the cave-dwelling Tineid moths, as well as illustrations and descriptions of the species and their genitalia, wing venation, substrate and distribution of some species with a key to determination exist in the the Taxonomic Review of the World Cave-Dwelling Species from ROBINSON (1980).

Family Yponomeutidae

Ypsolophus wolfschlaegeri (REBEL, 1941)

Trogloxen (GUÉORGUIEV & BERON, 1962; BERON, 1975; BERON, 1994).

Reported from:

"Souhata Douпка" Cave near to Lakatnik Railway Station in the Iskar Gorge (REBEL, 1941; GUÉORGUIEV & BERON, 1962; BERON, 1975) as *Cerostoma wolfschlaegeri* RBL. "Souhata Douпка" Cave is the type locality of the species.

Digitivalva granitella TREITSCHKE, 1833

Trogloxen (GUÉORGUIEV & BERON, 1962; BERON, 1975; BERON, 1994).

"Doupcheto" Cave near to "Lepenitza" Pit, 16 km from Velingrad Town, West Rhodopi Mts, 25.XI.1993, in a depth 25–8 m, B. PETROV and P. STOEV collected 3 males specimens, Gen. preps. 5–7./19.XII.1994, BESHKOV.

Reported from:

"Temnata Douпка" Cave near to Lakatnik Railway Station in the Iskar Gorge (SKALSKI, 1972; BERON, 1972; BERON, 1975).

"Razhishkata" ("Souhata") Douпка" Cave, near to Lakatnik Railway Station in the Iskar Gorge, 19.X.1939, two specimens, PITTIONI leg., det. BURESCH (GUÉORGUIEV & BERON, 1962; SKALSKI, 1972; BERON, 1975).

"Bacho Kiro" Cave ("Dryanovskata Peshtera" Cave) near to Dryanovo, Gabrovo Region (GUÉORGUIEV & BERON, 1962; TULESHKOV, 1930; SKALSKI, 1972).

Digitivalva pulicariae (KLIMESCH, 1956)

Trogloxen (BERON, 1975; BERON, 1994).

Reported from:

"Temnata Douпка" Cave near to Lakatnik Railway Station in the Iskar Gorge (SKALSKI, 1972; BERON, 1972; BERON, 1975).

"Kozarskata Douпка" Cave near to Lakatnik Railway Station in the Iskar Gorge (SKALSKI, 1972; BERON, 1972; BERON, 1975).

Family Alucitidae

Alucita huebneri WALLENGREN, 1859

Trogloxen (GUÉORGUIEV & BERON, 1962; BERON, 1994).

Reported from:

"Temnata Douпка" Cave near to Lakatnik Railway Station in the Iskar Gorge as *Orneodes huebneri* (WALLENGREN, 1859) two specimens, 13.V.1924 leg. and det. BURESCH (GUÉORGUIEV & BERON, 1962; BERON, 1975).

"Golema Podliska" Cave, Tarnovo Region (BURESCH, 1936; GUÉORGUIEV & BERON, 1962).

"Kalugerova Douпка" Cave near to Tarnovo Town, one specimen, 21.II.1926, leg. and det. BURESCH (GUÉORGUIEV & BERON, 1962).

"Dalbokata Peshtera" Cave near to Kotel Town, Sliven Region, 27.IX.1924, one specimen RADEV leg., det. BURESCH (GUÉORGUIEV & BERON, 1962).

Alucita cymmatodactyla ZELLER, 1852

Subtroglophil.

"Prilepnata Peshtera" Cave, East Rhodopi Mts, Sredna Arda Railway Station, Kardzhali Region, 31.III.1992;

"Tilki-Inhi" Cave, near to Ostrovitza Village, Kardzhali Region, East Rhodopi Mts, 01.IV.1992, 1 male Gen. prep. BESHKOV, 4./23.IV.1993;
"Razklonenata Peshtera" Cave (Gugini) between Koulich and Oreshari Villages, Arda valley, East Rhodopi Mts. 03.IV.1992.
"Starshelitzha" Cave above Goleshovo Village, 1000 m, SW Bulgaria, South Pirin Mts, 29.XI.1992 three female specimens (B. PETROV leg. Gen. prep. BESHKOV, 2.–4./27.IV.1993.); Idem, 20.III.1993 five specimens Gen. prep. BESHKOV, 5.–9./23.IV.1993;
Kresnensko Defile Gorge, Station Stara Kresna, 200 m, 01.10.1988 in gallery; Idem, 05.III.1994, one female specimen, Gen. prep. 1./19.XII.1994, BESHKOV.
Melnik Town, Sandanski Region, 400 m, 02.II.1990 one female in gallery.
"Salievata Peshtera" Cave near to Gospodintzi Village, Gotze Delchev Region, SW Bulgaria, 02.XI.1994, B. PETROV leg. one female specimen, Gen. prep. 4./16.XI.1994, BESHKOV.
"Maarata" Cave by Madretz Village, Perperik Region, East Rhodopi Mt, 10.X.1995, B. PETROV and P. STOEV leg. 1 female specimen, Gen. prep. 3./26.XI.1995, BESHKOV.
New for the cave fauna of Bulgaria.

Alucita poecilodactyla ALPHERAKY, 1876

Trogloxen.

Gallery by Stara Kresna Railway Station, Sw Bulgaria, 05.III.1994, one male specimen, Gen. prep. 2./19.XII.1994, BESHKOV.

This species has never been reported for the fauna of caves and galleries in Bulgaria. New species for the Bulgarian fauna.

Family Nymphalidae

Inachis io (LINNAEUS, 1758)

Trogloxen.

"Emenskata Peshtera" Cave near to Emen Village, Veliko Tarnovo Region, 12.I.1989, VL. BESHKOV observed approximately 30 specimens at a depth between 30–80 m

"Starshelitzha" Cave above Goleshovo Village, 1000 m, Sw Bulgaria, South Pirin Mts, 29.XI.1992 (B. PETROV leg.).

Galleries "Katakombite" near to the Black-Sea Coast, Aladja Manastir, 31.VII.1993., P. MITOV leg. two male specimens.

"Souhata Peshtera" Cave near to Velingrad Town, West Rhodopi Mts, 25.XI.1993, one specimen, B. PETROV and P. STOEV observed.

"Goliamata Kauna" Cave, West Rhodopi Mts, near to Zabardo Village, 1250 m, 25.XI.1993, VL. BESHKOV observed 3 specimens;

Gallery near to Mala Tcharkva Village, Rila Mts, 05.II.1994, 1 specimen, VL. BESHKOV leg.

"Dinevata Pesh" Cave near to Gintzi Village, West Stara Planina Mts, 05.XI.1995, one specimen, VL. BESHKOV observed.

"Svinskara Douпка" Cave near to Lakatnik Railway Station, 27.XI.1994, B. PETROV observed. Gallery near to Dolna Byala Rechka Village, Barshetz Region, West Stara Planina Mts, 21.I.1995, VL. BESHKOV & I. PANDURSKI observed 10 specimens.

Gallery near to Rila Town, 600 m alt., 11.II.1995, VL. BESHKOV observed single specimen.

Gallery above Gorna Byala Rechka Village, Vrachanska Stara Planina Mts, 620 m, 24.XI.1995, VL. BESHKOV leg. 6 specimens.

Gininata Pestera Cave near to Sadovetz Village, Pleven Region, 17.XII.1995, B. PETROV leg. 1 specimen.

Cave No. 3218, Dodalitza 2, Thairdere, Trigrad Region in Rhodopi Mts, 30.XI.1995, B. PETROV leg. 1 specimen.

Gallery near to Melnik Town, Sandanski Region, SW Bulgaria, 21.X.1995, S. BESHKOV & V. GASHTAROV leg. 7 specimens.

Nymphalis polychloros (LINNAEUS, 1758)

Trogloxen.

Gallery near to Melnik Town, Sandanski Region, Sw Bulgaria, 13.IX.1992, one specimen; Idem, 21.X.1995, S. BESHKOV & V. GASHTAROV leg. 2 specimens; in the gallery of the Kordopulovata Kashta Museum in Melnik Town, 14.IX.1995, 11 specimens, S. BESHKOV & B. GOATER leg.

"Aramiiska Dupka" Cave near to Levunovo Village, Petrich Region, SW Bulgaria, 05.XII.1994, V. GASHTAROV leg., two specimens.

"Aramiiska Dupka" Cave near to Levunovo Village, Petrich Region, SW Bulgaria, I.1996, V. GASHTAROV leg., 1 male specimen.

The species has never been reported from the caves and galleries in Bulgaria.

Aglais urticae (LINNAEUS, 1758)

Trogloxen.

"Golyamata Kauna" Cave near to Zabardo Village, West Rhodopi Mts, 1250 m, 25.XI.1993, VL. BESHKOV observed 1 specimen.

The species has never been reported for the fauna of the caves and galleries in Bulgaria.

Family Saturniidae

Saturnia spini ([DENIS & SCHIFFERMÜLLER], 1775)

Trogloxen (GUÉORGUIEV & BERON, 1962; BERON, 1994).

Reported from:

"Doupkite" Cave near to Tchepelare Town, 1150 m, Smolyan Region, West Rhodopi Mts, (RADEV, 1928, GUÉORGUIEV & BERON, 1962).

In RADEV (1928: 129) the species is mentioned only with the Bulgarian name "Malkoto Pavnovo Oko" without any scientific name. Following this report, GUÉORGUIEV & BERON (1962: 334) without any explanation reported the species as *Saturnia spini*. We consider that this species has to be *Saturnia pavonia* (LINNAEUS, 1758) for the reason that the Bulgarian name in RADEV (1928) corresponds to this species and the day of the collecting (30.VI.1924) and altitude (1150 m) are more suitable for *Saturnia pavonia* L. But it is more possible the specimen to belong to *Inachis io* (L.) as well as.

Family Geometridae

Xanthorhoe fluctuata (LINNAEUS, 1758)

Trogloxen.

Gallery above Gorna Byala Rechka Village, Vrachanska Stara Planina Mts, 800 m, 05.VI. 1994, B. PETROV and P. STOEV leg. 1 male specimen (BESHKOV, 1995).

Nebula nebulata (TREITSCHKE, 1828)

Trogloxen.

"Gininata Peshtera" Cave near to Sadovetz Village, Pleven Region, 09.VII.1990, 1 male specimen (Gen. prep. Beschkov, 2./23.IV.1993) – on a dusk wall at approximately 10–12 m depth.

New species for the cave fauna of Bulgaria.

Triphosa sabaudiata (DUPONCHEL, 1830)

Trogloxen (GUÉORGUIEV & BERON, 1962). According to (BERON, 1972; BERON, 1975; BERON, 1994) this species is a subtroglophil. We also consider this species as a subtroglophil.

"Haidushkata Peshtera" Cave near to Devintzi Village, Pleven Region, 08.VII.1990;

Cave "14" near to "Prohodna" Cave, Karloukovo district, 23.X.1993, B. PETROV leg.

"Morovitza" Cave near to Glozhene Village, Teteven Region, 900–1000 m, between 50–100 m from entrance, 01.XI.1993, one male specimen, B. PETROV leg.

"Souhata Peshtera" Cave near to Velingrad Town, West Rhodopi Mts, 25.XI.1993, one specimen, B. PETROV and P. STOEV observed.

"Gorna Karanska Douпка" Cave near to Yagodina Village, West Rhodopi Mts, 26.XI.1993, 3 specimens, VL. BESHKOV observed.

"Karna Douпка" Cave near to Yagodina Village, West Rhodopi Mts, 26.XI.1993, 4–5 specimens, VL. BESHKOV observed.

"Mechata Douпка" Cave near to Bov Railway Station in the Iskar Gorge, 30.I.1994, B. PETROV & P. STOEV collected 1 male specimen.

"Kolibata" Cave near to Beledie Han Village, Kostinbrod Region, 02.III.1994, B. PETROV leg. one male specimen; 20.XI.1994, B. PETROV leg. one male specimen;

"Dinevata Pesht" Cave, near to Gintzi Village, West Stara Planina Mts, 05.XI.1994, about 30 specimens observed, VL. BESHKOV; 25.XI.1994 the same quantity, VL. BESHKOV observed.

The Cave near to Philipovtzi Village, Tran Region, 12.XI.1994, approximately 30 specimens, VL. BESHKOV observed;

"Vodnata" gallery by Siristna Reka River in the region between Iskretzki Sanatorium and Mecha Polyana 800 m, Svoge Region, 02.I.1995, VL. BESHKOV and P. BERON observed 15–20 specimens at a depth 20 to 50 m

"Svinskata Douпка" Cave near to Lakatnik Railway Station, 27.XI.1994, 2 specimens, B. PETROV leg.

Gallery near to Dolna Byala Rechka Village, Barshetz Region, West Stara Planina Mts, 21.I. 1995, VL. BESHKOV & I. PANDURSKI observed 12–15 specimens; Idem, 24.XI.1995, VL. BESHKOV leg. 10 specimens.

Gallery by Siristna Reka River in the region between Iskretzki Sanatorium and Mecha Polyana 700 m, Svoge Region, 25.XI.1995, VL. BESHKOV leg. 10 specimens.

Reported from:

- "Kuminceto" ("Propastite") Cave near to Ganchevtzi Village, Trjavna District (BURESCH, 1924; BURESCH & TULESCHKOW, 1936; GUÉORGUIEV & BERON, 1962).
- "Venetzo 1–Gornjata" Cave near to Tcheliustnitsa Village, Michailovgrad Region (BERON, 1972; BERON, 1975).
- "Stanishina Douпка" Cave near to Repljana Village, Vidin Region (BERON, 1972; BERON, 1975).
- "Goljamata Douпка" Cave near to Repljana Village, Vidin Region (BERON, 1972; BERON, 1975).
- "Doupkata v Presecheno" Cave near to Repljana Village (BERON, 1972; BERON, 1975).
- The Caves near to Beledie Han Village, West of Sofia, Kostinbrod Region (BURESCH & TULESCHKOW, 1936).
- "Temnata Douпка" Cave near to Lakatnik Railway Station in the Iskar Gorge (BURESCH, 1926; BURESCH, 1934; BURESCH & TULESCHKOW, 1936; GUÉORGUIEV & BERON, 1962; SKALSKI, 1972; BERON, 1975).
- "Zadanenska" Cave near to Karlukovo Village, Iskar Gorge (BURESCH & TULESCHKOW, 1936), (GUÉORGUIEV & BERON, 1962; BERON, 1975).
- "Marina Douпка" Cave near to Breze Village, Svoge District, West Stara Planina Mts, (BURESCH & TULESCHKOW, 1936; GUÉORGUIEV & BERON, 1962; BERON, 1975).
- "Razhishkata" ("Souhata") Douпка" Cave, near to Lakatnik Railway Station in the Iskar Gorge (BURESCH & TULESCHKOW, 1936; GUÉORGUIEV & BERON, 1962; BERON, 1975).
- "Vodnata Douпка" Cave near to Tzerovo Village, Iskar Gorge (BURESCH & TULESCHKOW, 1936; GUÉORGUIEV & BERON, 1962; BERON, 1975).
- "Vodni Pech" ("Pechova Douпка") Cave near to Oreshetz Railway Station, Vidin Region (BURESCH & TULESCHKOW, 1936; GUÉORGUIEV & BERON, 1962; BERON, 1975).
- "Doulhata" Cave near to Bosnek Village, Pernik Region (GUÉORGUIEV & BERON, 1962).
- The Caves near to Dryanovo Town, Gabrovo Region (BURESCH & TULESCHKOW, 1936).

Triphosa dubitata (LINNAEUS, 1758)

- Trogloxen (GUÉORGUIEV & BERON, 1962); Subtroglophil (BERON, 1972; BERON, 1975; BERON, 1994). We consider this species as a subtroglophil.
- Cave near to Bosnek Village, Vitosha Mts, 18.VII.1989, E. NANEVA leg.
- "Haidoushkata Peshtera" Cave near to Devintzi Village, Pleven Region, 08.VII.1990.
- "Han Maara" Cave, Central Stara Planina Mts, near to "Ray" chalet, in altitude 1500 m, 08.XII.1992, B. PETROV leg.;
- Gallery "Ourvich" near to Pancharevo Village, Iskar Valley, Sofia Region, 17.X.1993, B. PETROV leg.;
- "Morovitza" Cave near to Glozhene Village, Teteven Region, 900–1000m, between 50–100 m from entrance, 01.XI.1993, one female specimen, B. PETROV leg.;
- "Doupcheto" Cave near to "Lepenitza" Pit, 16 km from Velingrad Town, West Rhodopi Mts, 25.XI.1993, one specimen, B. PETROV and P. STOEV observed.
- "Mechata Douпка" Cave near to Bov Railway Station in the Iskar Gorge, 30.I.1994, B. PETROV & P. STOEV collected 2 female specimens.
- "Dinevata Pesht" Cave near to Gintzi Village, West Stara Planina Mts, 05.XI.1995, 4 specimens, VL. BESHKOV observed; Idem, 25.XI.1994 the same quantity, VL. BESHKOV observed.
- Gallery near to Rila Town, 600 m alt., 11.II.1995, VL. BESHKOV observed three specimens.
- "Toplya" Cave near to Golyama Zhelyazna Village, 11.III.1995, B. PETROV leg.

Gallery above Gorna Byala Rechka Village, Vrachanska Stara Planina Mts, 520 m, 24.XI.1995, VL. BESHKOV leg. 2 specimens.

Gallery by Siristna Reka River in the region between Iskretzki Sanatorium and Mecha Polyana 700 m, Svoge Region, 25.XI.1995, VL. BESHKOV leg. 3 specimens.

Gininata Pestera Cave near to Sadovetz Village, Pleven Region, 17.XII.1995, B. PETROV leg. 1 female specimen.

Cave No. 3218, Dodalitza 2, Thairdere, Trigrad Region in Rhodopi Mts, 30.XI.1995, B. PETROV leg. 1 female specimen.

Reported from:

"Razhishkata ("Souhata") Doupka" Cave, near to Lakatnik Railway Station in the Iskar Gorge, 21.XI.1924 two specimens (leg. and det. BURESCH) (GUÉORGUIEV & BERON, 1962).

"Temnata Doupka" Cave near to Lakatnik Railway Station in the Iskar Gorge (Slivov, 1968; BERON, 1972; BERON, 1975).

"Dryanovskata Peshtera" Cave near to Kotel Town (BURESCH & TULESCHKOW, 1936; GUÉORGUIEV & BERON, 1962).

"Dalbokata Peshtera" Cave near to Kotel Town (BURESCH & TULESCHKOW, 1936; GUÉORGUIEV & BERON, 1962).

"Ledenika" Cave near to Vratza Town (BURESCH & TULESCHKOW, 1936; GUÉORGUIEV & BERON, 1962).

Eupithecia undata (FREYER, 1840)

Trogloxen ? (GUÉORGUIEV & BERON, 1962).

Reported from:

Cave in the Karlovsky Balkan (Karlovska Stara Planina Mts) in altitude 1500–1600 m as *Tephroclystia undata* FR. (= *scriptaria* HERRICH-SCHÄFFER) (DRENOWSKI, 1930; GUÉORGUIEV & BERON, 1962).

Family Sphingidae

Macroglossum stelatarum (LINNAEUS, 1758)

Trogloxen.

"Kolibata" Cave near to Beledie Han Village, Kostinbrod Region, 20.XI.1994, B. PETROV leg. one male specimen.

New species for the cave fauna of Bulgaria.

Family Noctuidae

Hypena rostralis (LINNAEUS, 1758)

Trogloxen according to GUÉORGUIEV & BERON (1962) and BERON (1995).

Gallery near to Melnik Town, Sandanski Region, Sw Bulgaria, 02.-03.II.1990, many specimens; Idem, 13.IX.1992, 7 specimens; Idem, 21.X.1995, S. BESHKOV & V. GASHTAROV leg. 20 specimens; In the gallery of the Kordopulovata Kashta Museum in Melnik Town, 14.IX.1995, 4 specimens, S. BESHKOV & B. GOATER leg.

"Starshelitzha" Cave above Goleshovo Village, 1000–1100 m, South Pirin Mts, SW Bulgaria, 29.XI.1992, B. PETROV leg.; Idem, 20.III.1993, one specimen.

Gallery by Stara Kresna Railway Station, Kresna Gorge, Sw Bulgaria, 05.III.1994; Idem, 13.IX.1995, S. BESHKOV & B. GOATER leg. about 10 specimens.

Gallery near to Banichan Village, Gotze Delchev Region, 01.XI.1994, B. PETROV leg. 1 male and 1 female specimens in 8 m depth;

"Salievata Peshtera" Cave near to Gospodintzi Village, Gotze Delchev Region, Sw Bulgaria, 02.XI.1994, B. PETROV leg. one male specimen.

"Svinskata Doupka" Cave near to Lakatnik Railway Station, 27.XI.1994, 3 specimens, B. PETROV leg.

"Prilepnata Peshtera" Cave, Sredna Arda Railway Station, Kardzhali Region, East Rhodopi Mts, 31.III.1992.

"Maarata" Cave by Madretz Village, Perperek Region, East Rhodopi Mt, 10.X.1995, B. PETROV and P. STOEV leg. 2 male specimens.

"Aramiiska Doupka" Cave near to Levunovo Village, Petrich Region, SW Bulgaria, I.1996, V. GASHTAROV observed 2 males specimens.

Gininata Pestera Cave near to Sadovetz Village, Pleven Region, 17.XII.1995, B. PETROV leg. 1 female specimen.

Reported from:

"Klugerova Doupka" Cave near to Tarnovo Town (BURESCH & TULESCHKOW, 1935; GUÉORGUEV & BERON, 1962).

Hypena obesalis TREITSCHKE, 1829

Troglofen.

"Imamkaya" Cave, the Region of Modar Top, 1200 m, West Rhodopi Mts, 26.IX.1994, B. PETROV observed (BESHKOV, 1995).

"Modarska Peshtera" Cave, West Rhodopi Mts, the Region of Modar Top, 1300 m, West Rhodopi Mts, 26.IX.1994, B. PETROV leg. 3 males and 2 females specimens (BESHKOV, 1995).

Hypena palpalis (HÜBNER, 1796)

Troglofen or subtroglöphil.

Gallery between Madzharovo Town and Borislavtzi Village, East Rhodopi Mts, 07.VII.1992, 3 male and one female specimens at between 20–60 m depth (Gen. prep. BESHKOV, 1./23.IV.1993, male); Idem, 02.IX.1992, collected 2 female specimens in deep 20–100 m (BESHKOV, 1995); Idem, 23.VII.1993, in depth between 20 to 100 m – collected 11 female and 3 male specimens (BESHKOV, 1995).

"Zandana" Cave near to Ploski Village, Sandanski Region, SW Bulgaria, 02.IV.1994, B. PETROV leg. 2 females specimens;

Reported from:

"Starata" Cave near to Peshtera Town, West Rhodopi Mts (KOLEV, 1993).

Reported in KUCINIC (1990) for three caves in Croatia (in Velebit Mts and Dalmatia).

Scoliopteryx libatrix (LINNAEUS, 1758)

Troglofen according to GUÉORGUEV & BERON (1962); BERON & GUÉORGUEV, (1967); Subtroglöphil according to BERON (1972, 1975; BERON, 1994). In our opinion the species is subtroglöphil.

"Stoykovitza" Cave above Goleshovo Village, 1000 m, Slavyanka (= Alibotush) Mts, SW Bulgaria, 11.III.1990, one specimen, G. STOYANOV leg.

"Starshelitz" Cave above Goleshovo Village, 1000–1100 m, South Pirin Mts, SW Bulgaria, 20.III.1993, one specimen;

Gallery in Melnik Town, Sw Bulgaria, 02.II.1990; Idem, 21.X.1995, S. BESHKOV & V. GASHTAROV leg. one female specimen.

"Haidoushkata Peshtera" Cave near to Devintzi Village, Pleven Region, 08.VII.1990;

"Souhata Pesht" Cave near to Gintzi Village, Petrochan Region, 29.XII.1985;

Gallery "Ourvich", 17.X.1993, B. PETROV leg.;

"Morovitza" Cave near to Glozhene Village, Teteven Region, 900–1000 m, between 50–100 m from entrance, 01.XI.1993, B. PETROV leg.

"Doupcheto" Cave near to "Lepenitza" Pit, 16 km from Velingrad Town, West Rhodopi Mts, 25.XI. 1993, 2 specimens, B. PETROV and P. STOEV observed.

"Lepenitza" Cave near to Velingrad Town, West Rhodopi Mts, 25.XI.1993, about 50 specimens to 50 m depth from the entrance, B. PETROV and P. STOEV observed.

"Souhata Peshtera" Cave near to Velingrad Town, West Rhodopi Mts, 25.XI.1993, 2 specimens, B. PETROV and P. STOEV observed;

"Golyamata Kauna" Cave, near to Zabardo Village, 1250 m, West Rhodopi Mts, 25.XI.1993, VL. BESHKOV observed 11 specimens.

"Tyovnata Doupka" Cave, near to Zabardo Village, West Rhodopi Mts, 25.XI.1993, VL. BESHKOV observed 10 specimens.

"Gorna Karanska Doupka" Cave near to Yagodina Village, West Rhodopi Mts, 26.XI.1993, 15–20 specimens, VL. BESHKOV observed.

"Karna Doupka" Cave near to Yagodina Village, West Rhodopi Mts, 26.XI.1993, 3 specimens, VL. BESHKOV observed.

"Dolina Karanska Doupka" Cave near to Yagodina Village, West Rhodopi Mts, 26.XI.1993, 4 specimens, VL. BESHKOV observed.

"Zhilisteto" in "Yagodinskata Peshtera" Cave near to Yagodina Village, West Rhodopi Mts, 26.XI. 1993, 3 specimens, VL. BESHKOV observed.

"Mashiva Doupka" Cave near to Yagodina Village, West Rhodopi Mts, 26.XI.1993, 15–20 specimens, VL. BESHKOV observed.

"Sanchova Doupka" Cave near to Yagodina Village, West Rhodopi Mts, 26.XI.1993, 5 specimens, VL. BESHKOV observed.

"Mechata Doupka" Cave near to Bov Railway Station in the Iskar Gorge, 30.I.1994, B. PETROV & P. STOEV observed.

Gallery above Vada Chalet, 1450 m, Rila Mt., 05.II.1994, 17 specimens between 30–65 m, collected 12 specimens, VL. BESHKOV leg.

Gallery above Gorna Byala Rechka Village, Vrachanska Stara Planina Mts, 800 m, 05.VI. 1994, B. PETROV and P. STOEV leg.;

"Imamkaya" Cave, the Region of Modar Top, 1200 m, West Rhodopi Mts, 26.IX.1994, B. PETROV observed many specimens;

"Modarska Peshtera" Cave, the Region of Modar Top, 1300 m, West Rhodopi Mts, 26.IX. 1994, B. PETROV observed many specimens;

"Dinevata Pesht" Cave near to Gintzi Village, West Stara Planina Mts, 05.XI.1994, 3 specimens, VL. BESHKOV observed; 25.XI.1994, 25–30 specimens, VL. BESHKOV observed at a

depth between 20–40 m. It seems that during XI, (05.–25.) they came for overwintering into the cave.

Gallery near to Banichan Village, Gotze Delchev Region, 01.XI.1994, B. PETROV leg. 1 male and 1 female specimens at 8 m depth.

Galleries by Siristna Reka River in the region between Iskretzki Sanatorium and Mecha Polyana 800 m, Svoje Region, West Stara Planina Mts, 02.I.1995, VL. BESHKOV and P. BERON observed 4–5 specimens at a depth of 24 to 40 m

Gallery by Stara Kresna Railway Station, Kresna Gorge, SW Bulgaria, at the winter of 1992, single specimen, V. GASHTAROV observed.

Gallery near to Batulia Village, Iskar Gorge, 12.I.1992, at a depth of 30 m 35–40 specimens on 1 m², observed by VL. BESHKOV.

Galleries between Passarel Village and "Ourvich", Iskar Valley, 18.I.1991, VL. BESHKOV observed a single specimen.

Galleries under Izdremetz Top, 1430 m alt., 10.XI.1991 and 03.XII.1991, VL. BESHKOV and P. BERON observed many specimens.

"Razklonenata Peshtera" Cave (Gugini) between Koulich and Oreshari Villages, Arda valley, East Rhodopi Mts. 03.IV.1992.

Gallery near to Rila Town, 600 m alt., 11.II.1995, VL. BESHKOV observed single specimen.

Gallery near to Eleshnitsa, Rila Mts, 900 m alt., 11.II.1995, VL. BESHKOV observed a single specimen.

The gallery above Kirilova (Partizanska) Polyana in Rila Mts, 1600 m alt., 11.II.1995, VL. BESHKOV observed six specimens.

"Toplya" Cave near to Golyama Zhelyazna Village, 11.III.1995, B. PETROV leg.

Small cave on Tchaidere River, Trigrad Region in West Rhodopi Mt, 960 m alt., 19.VIII.1995, S. BESHKOV leg. single specimen.

"Maarata" cave by Madretz Village, Perperek Region, East Rhodopi Mt, 10.X.1995, B. PETROV and P. STOEVE leg. 2 specimens.

"Samara" Cave near to Ribino Village, East Rhodopi Mt, 11.X.1995, B. PETROV and P. STOEVE leg. 20 specimens.

Gallery above Gorna Byala Rechka Village, Vrachanska Stara Planina Mts, 520 m alt., 24.XI.1995, VL. BESHKOV leg. 1 specimen.

"Izdremetz" Pit near to Lakatnik Village, 14.I.1996, D. KOZHUHAROV leg. 1 male specimen 100–150 m from the entrance.

Gininata Peshtera Cave near to Sadovetz Village, Pleven Region, 17.XII.1995, B. PETROV leg. 2 specimens.

Cave No. 3218, Dodalitza 2, Thairdere, Trigrad Region in Rhodopi Mts, 30.XI.1995, B. PETROV leg. 5 specimens.

Reported from:

"Samuilitsa" Cave near to Kunino, Iskar Gorge (BURESCH, 1924; BERON, 1975; GUÉORGUIEV & BERON, 1962).

"Haidoushkata Peshtera" Cave near to Karlukovo, Iskar Gorge (BURESCH, 1934; BERON, 1975; GUÉORGUIEV & BERON, 1962).

"Zadanenska" Cave near to Karlukovo, Iskar Gorge (BURESCH, 1939; BERON, 1975; GUÉORGUIEV & BERON, 1962).

"Mechata Douпка" Cave near to Zhelen Village, Iskar Gorge, one specimen (leg. PETKOVA, det. SLIVOV) (BERON & GUÉORGUIEV, 1967; BERON, 1975).

"*Temnata Douпка*" Cave near to Lakatnik Railway Station, Iskar Gorge (SLIVOV, 1968; BERON, 1972; BERON, 1975).

"*Vodnata Douпка*" Cave near to Dolno Ozirovo Village, Michailovgrad Region (BERON, 1972; BERON, 1975).

"*Stanishina Douпка*" Cave near to Replyana Village, Vidin Region (BERON, 1972; BERON, 1975).

"*Doupkite*" Cave near to Byalo Pole Village, Vidin Region (BERON, 1972; BERON, 1975).

"*Zmeyovi Douпки*" Cave near to Hitrevci Village, Tryavna District (BURESCH, 1924; GUÉORGUIEV & BERON, 1962).

"*Chavkite*" Chasm near to Milanovo Village and Sokoletz Top, Iskar Gorge Region (BURESCH, 1934; GUÉORGUIEV & BERON, 1962).

"*Ezeroto*" Cave near to Mladezhko Village in Strandja Mts, Burgas Region, 07.V.1963, (BERON, 1972).

Calocala elocata (ESPER, [1787])

Trogloxen (GUÉORGUIEV & BERON, 1962; BERON, 1994).

Reported from:

"*Troshana*" Cave near to Tarnovo Town (TULESCHKOW, 1930; GUÉORGUIEV & BERON, 1962).

Cave above Preobrazhenski Manastir Monastery near to Tarnovo Town (TULESCHKOW, 1930; GUÉORGUIEV & BERON, 1962).

Apopestes spectrum (ESPER, [1787])

Trogloxen (GUÉORGUIEV & BERON, 1962; BERON, 1994). We consider this species as a subtroglophil.

Gallery near to Melnik Town, Sandanski Region, SW Bulgaria, 02.-03.II.1990, three specimens two of them copulated.

"*Starshelitzha*" Cave above Goleshovo Village, 1000–1100 m, South Pirin Mts, SW Bulgaria, 29.XI.1992, B. PETROV leg.; Idem, 20.III.1993, one specimen, BESHKOV leg., in coll. V. GASHTAROV (BESHKOV, 1995).

"*Aramiiska Douпка*" Cave near to Levunovo Village, Petrich Region, SW Bulgaria, I.1996, V. GASHTAROV leg. 2 males and observed a wings from a third specimen.

Reported from:

"*Troshana*" Cave near to Tarnovo Town (TULESCHKOW, 1930; BURESCH & TULESCHKOW, 1935; GUÉORGUIEV & BERON, 1962).

"*Kalugerova Douпка*" Cave near to Arbanassi Village, Tarnovo Region (BURESCH & TULESCHKOW, 1935; GUÉORGUIEV & BERON, 1962).

"*Golemata Peshtera*" Cave near to Tarnovo Town (BURESCH & TULESCHKOW, 1935; GUÉORGUIEV & BERON, 1962).

Autophila dilucida (HÜBNER, [1808])

Trogloxen (GUÉORGUIEV & BERON, 1962; BERON, 1994); Subtroglophil (BERON, 1975). We also consider this species as a subtroglophil.

"*Gininata Peshtera*" Cave near to Sadovetz Village, Pleven Region, 09.VII.1990 1 male (Gen. prep. Beschkov, 3./22.IV.1993); Idem, 17.XII.1995, B. PETROV leg. 1 male specimen, Gen. det. BESHKOV.

Cave "in Zadanen Dol", Karlukovo Region, Iskar Gorge, 24.X.1993, B. PETROV leg., Gen. prep. 1./15.XI.1994, BESHKOV.

"Uske" Cave near to Chetirtzi Village, Kyustendil Region, W. Bulgaria, 03.III.1994, B. PETROV leg. one male specimen, Gen. prep. 1./26.III.1994, BESHKOV.

"Salievata Peshtera" Cave near to Gospodintzi Village, Gotze Delchev Region, SW Bulgaria, 02.XI.1994, B. PETROV leg. 2 females specimens, Gen. preps. 1./16.XI.1994; 3./16.XI.1994 BESHKOV.

"Aramiiska Douпка" Cave near to Levunovo Village, Petrich Region, SW Bulgaria, 05.XII. 1994 and 09.XII. 1994, V. GASHTAROV collected more than 60 specimens, determining them by taking into account their genitalia; Idem, I. 1996, V. GASHTAROV observed many specimens, almost all of them in copula, and collected 9 males and 7 females.

Reported from:

Caves near to Lakatnik Railway Station in the Iskar Gorge (BURESCH & TULESCHKOW, 1935).

"Temnata Douпка" Cave near to Lakatnik Railway Station, Iskar Gorge (BURESCH & TULESCHKOW, 1935; GUÉORGUEV & BERON, 1962; BERON, 1975).

Autophila limbata (STAUDINGER, 1871)

According to BERON (1972, 1975, 1995) this species is troglöxen. We consider this species as a subtroglöphil.

Gallery between Madjarovo Town and Borislavtzi Village, East Rhodopi Mts, 17.X.1991, one female specimen (Gen. prep. BESHKOV, 4./22.IV.1993).

"Zandana" Cave near to Ploski Village, Sandanski Region, SW Bulgaria, 02.IV.1994, B. PETROV leg. one male (Gen. prep. 3./23.XI.1994, BESHKOV) and one female (Gen. prep. 2./23.XI. 1994, BESHKOV) specimens.

"Samara" Cave near to Ribino Village, East Rhodopi Mt, 11.X.1995, B. PETROV and P. STOEV leg. 1 male specimen, (Gen. det. BESHKOV).

Reported from:

The Cave near to Stanke Lisichkovo, Blagoevgrad Region, leg. P. BERON (GANEV, 1985).

"Temnata Douпка" Cave near to Lakatnik Railway Station, Iskar Gorge (SKALSKI, 1972; BERON, 1972; BERON, 1975).

"Razhishkata ("Souhata) Douпка" Cave near to Lakatnik Railway Station, Iskar Gorge (SKALSKI, 1972; BERON, 1972; BERON, 1975).

Autophila ligaminosa (EVERSMANN, 1851)

Troglöxen (BERON, 1994). We consider the species as subtroglöphil.

"Aramiiska Douпка" Cave near to Levunovo Village, Petrich Region, SW Bulgaria, 05.XII. 1994, V. GASHTAROV leg. single specimen.

Gallery near to Melnik Town, Sandanski Region, SW Bulgaria, 09.IX.1988; Idem, 17.XII. 1988, 3 female specimens; Idem, 12.II.1989, 1 male and 1 female specimens; Idem, 02.–03.II.1990, 6 specimens; Idem, 13.IX.1992, 7 specimens; Idem, 21.X.1995, S. BESHKOV & V. GASHTAROV leg. 8 specimens; In the gallery of the Kordopulovata Kashta Museum in Melnik Town, 14.IX. 1995, 3 specimens, S. BESHKOV & B. GOATER leg.

SW Bulgaria, Kresna Gorge, Stara Kresna Railway Station, in the gallery under the Railway Station, 25.VIII.1995, I. STOYCHEV leg. single specimen.

Reported from:

Gallery near to Melnik Town, Sandanski Region, Sw Bulgaria (BESHKOW, 1992).

"Starshelitz" Cave above Goleshovo Village, 1000–1100 m, South Pirin Mts, SW Bulgaria, 29.XI.1992, B. PETROV leg. Idem, 20.III.1993 (BESHKOV, 1995).

"Salievata Peshtera" Cave near to Gospodintzi Village, Gotze Delchev Region, SW Bulgaria, 02.XI.1994, B. PETROV leg. one female specimen, Gen. prep. 1./16.XI.1994, BESHKOV (BESHKOV, 1995).

Gallery by Stara Kresna Railway Station in Kresna Gorge, SW Bulgaria – IX–X (BESHKOV, 1992), 1 female specimen.

"Peshterata" Cave near to Belovo Railway Station, Pazardzhik Region under the name "*Apopestes cataphanes* Hb." (BURESCH & TULESCHKOW, 1935). GUÉORGUIEV & BERON (1962) following this data reported the same name from the same locality as trogloden. According to HACKER (1990), *Autophila cataphanes* (HÜBNER, [1809–1813]) is "An Atlanto-Mediterranean species neither inhabiting the Balkans nor the Near East. This name is often given to other species of this group in older literature" We have also never seen this species in Bulgaria, and believe that under this name the authors, mentioned above, had recognised two other species: *Autophila anaphanes* BOURSIN, 1940 or *Autophila ligaminosa* Ev. As we have never seen *Autophila anaphanes* BRSN. in Bulgaria, we doubt that it is present in Bulgaria. *Autophila ligaminosa* Ev. is one very local, but is not a very rare species. For this reason, we think that all previous reports regarding "*Apopestes cataphanes* Hb." should be recognized as *Autophila ligaminosa* Ev.

Pyrois effusa (BOISDUVAL, [1828])

Trogloden.

Gallery between Madzharovo Town and Borislavtzi Village, East Rhodopi Mts, 150 m, 02.IX.1992, 8–10 specimens in deep between 20–100 m, collected 3 female and 4 male specimens (BESHKOV, 1995); Idem, 20.VI.1993, one female on a deep 40–60 m (BESHKOV, 1995); 23.VII.1993, 5 specimens.

Reported from the three caves in Croatia (Dalmatia) (KUCINIC, 1990).

Mormo maura (LINNAEUS, 1758)

Trogloden (GUÉORGUIEV & BERON, 1962; BERON, 1994).

Reported from:

"Golema Podlisca" Cave near to Tarnovo Town (BURESCH & TULESCHKOW, 1932; GUÉORGUIEV & BERON, 1962).

Dasypolia templi (THUNBERG, 1792)

Trogloden.

"Morovitza" Cave near to Glozhene Village, Teteven Region, 900–1000 m, between 50–100 m from entrance, 01.XI.1993, B. PETROV observed one alive specimen. Not collected, but the description corresponds well to the species, and according PETROV it is the same species as the collected forewing (one forewing of *Dasypolia templi*, probably eaten by bat) he had found in the Cave and it is kept in the collection of BESHKOV.

New species for the caves of Bulgaria.

Rhyacia simulans (HUFNAGEL, 1766)

Trogloden.

"Gininata Peshtera" Cave near to Sadovetz Village, Pleven Region, 09.VII.1990 one male specimen in 20–30 m deep, Gen. prep. 3./25.X.1994, BESHKOV (BESHKOV, 1995).
"Katakombite" Gallery near to Aladja Manastir, Black-Sea Coast, 17.VIII.1992., P. MITOV leg. one female specimen.

Acknowledgments

We would like to express our sincere gratitude to Dr. VL. BESHKOV and Mr. P. STOEV, both from Sofia as well as to Mr. VICTOR GASHTAROV (Novo Konomladi Village) for the present material and invaluable collected data.

References:

- ARBEITSGEMEINSCHAFT NORDBAYERISCHER ENTOMOLOGEN (1988): Prodrum der Lepidopterenfauna Nordbayerns. – *Neue Entomologische Nachrichten* **23**: 1–159.
- BERON, P. (1972): Essai sur la faune Cavernicole de Bulgarie. III. Résultats des recherches biospéologiques de 1966 à 1970. – *Int. J. Speleol.* **4**: 285–349.
- BERON, P. (1975): Studies under the structure, origin and zoogeographical character of the Caves fauna of North-West Bulgaria. – Thesis for Ph.D. scientific title. Sofia, Bulg. Ac. of Sciences, Inst. of Zoology.
- BERON, P. (1994): Résultats des recherches biospéologiques en Bulgarie de 1971 à 1994 et liste des animaux cavernicoles Bulgares. – *Editions de la Fédération bulgare de Spéléologie Série Tranteeva* **1**, Sofia, 137 pp.
- BERON, P. & V. GUÉORGUEV (1967): Essai sur la Faune Cavernicole de Bulgarie. II. Résultats des recherches Biospéologiques de 1961 à 1965. – *Bulletin de l'Institut de Zoologie et Musée* **24**: 151–212.
- BESHKOV, S. (1995): A contribution to the fauna of Bulgarian Lepidoptera (Lepidoptera: Macrolepidoptera). – *Phegea* **23** (4): 201–218.
- BESHKOW, S. (1992): Faunistic Advances on Bulgarian Lepidoptera. – *Boll. Ass. Romana Entomol.* **46**: 37–56.
- BURESCH, I. (1924): In: *Rapports et communications*. – *Bull. Soc. Ent. Bulg.* **1**: 17, 19.
- BURESCH, I. (1926): Untersuchungen über die Höhlenfauna Bulgariens II. – *Trav. Soc. Bulg. Sci. Nat.* **12**: 17, 65.
- BURESCH, I. (1934): In: *Rapports et communications*. – *Bull. Soc. Ent. Bulg.* **8**: 208–215.
- BURESCH, I. (1939): In: *Rapports et communications*. – *Bull. Soc. Ent. Bulg.* **10**: 146, 151, 153–154.
- BURESCH, I. (1936): Übersicht der bisherigen Kenntnisse und Erforschungen der rezenten Höhlen-Fauna Bulgariens. – *Bull. Soc. Spél. Bulg.* **1**: 13–43.
- BURESCH, I. & K. TULESCHKOW (1932): Die horizontale Verbreitung der Schmetterlinge in Bulgarien. III (1). Teil: Noctuides. – *Mitt. Kgl. Naturwiss. Inst. Sofia* **5**: 67–144.
- BURESCH, I. & K. TULESCHKOW (1935): Die horizontale Verbreitung der Schmetterlinge in Bulgarien. III (2). Teil: Noctuides (Fortsetzung). – *Mitt. Kgl. Naturwiss. Inst. Sofia* **8**: 113–171.
- BURESCH, I. & K. TULESCHKOW (1936): Die horizontale Verbreitung der Schmetterlinge in Bulgarien. IV (1). Teil: Geometrides. – *Mitt. Kgl. Naturwiss. Inst. Sofia* **9**: 167–240.

- DRENOWSKI, A. (1930): Neue Lepidopterenarten aus Bulgarien. – Bull. Soc. Ent. Bulg. **5**: 175–186.
- FIBIGER, M. & H. HACKER (1990): Systematic List of the Noctuidae of Europe. – *Esperiana* **2**: 1–109.
- FIBIGER, M. & H. HACKER (1992): Systematic List of the Noctuidae of Europe. Corrigenda et Addenda I. – *Esperiana* **3**: 507–511.
- GUÉORGUIEV, V. & P. BERON (1962): Essai sur la Faune Cavernicole de Bulgarie. – *Annales de Spéléologie* **17** (2): 285–441.
- GANEV, J. (1985): Studies on Heterocera from Bulgaria – II (Lepidoptera). – *Phegea* **13** (3): 85–91.
- HACKER, H. (1990): Die Noctuidae Vorderasiens (Lepidoptera). Systematische Liste mit einer Übersicht über die Verbreitung unter besonderer Berücksichtigung der Fauna der Türkei (Einschließlich der Nachbargebiete Balkan, Südrussland, Westturkestan, Arabische Halbinsel, Ägypten). – *Neue Ent. Nachr.* **27**: 706 + XVI pp.
- KOLEV, Z. (1993): Records of New and Rare Noctuidae (Lepidoptera) from Rhodopi and Rila Mountains in South Bulgaria. – In: Second National Scientific Conference of Entomology, Sofia, pp. 43–46.
- KUCINIC, M. (1990): The Fauna of the Lepidoptera in Caves and Pits in Croatia. – *Spelaeologia Croatica* **1**: 35–38.
- LELAUT, P. (1980): Liste systématique et synonymique des Lépidoptères de France, Belgique et Corse. – Supplément à Alexanor et au Bulletin de la Société entomologique de France, Paris, 334 pp.
- LELAUT, P. (1983): Quelques changements dans la nomenclature des Lépidoptères de France (Lep., Tineidae, Gracillariidae). – *Entomologica gallica* **1**: 35–36.
- RADEV, N. (1928): Materialien zur Erforschung der Höhlen Bulgariens II. – *Trav. Soc. Bulg. Sci. Nat.* **13**: 115–130.
- REBEL, H. (1941): Über einige Microlepidopteren von der Balkanhalbinsel und besonders aus der Gegend des Ochrida-Sees in Mazedonien. – *Bull. Inst. Royales d'Hist. Nat. Sofia* **14**: 1–8.
- ROBINSON, G. (1980): Cave-Dwelling Tineid Moths: A Taxonomic Review of the World Species (Lepidoptera: Tineidae). – *Trans. British Cave Research Assoc.* **7** (2): 83–120.
- SKALSKI, A. (1972): Note on Lepidoptera from Bulgarian Caves. – *Int. J. Speleol.* **4**: 87–95.
- SLIVOV, A. (1968): Schmetterlinge (Lepidoptera) vom Iskardurchbruch. I. Macrolepidoptera. – *Bull. Inst. Zool. et Musée* **28**: 141–186.
- TULESCHKOW, K. (1930): Erster Beitrag zur Lepidopterenfauna der Stadt Tirnowo und Ihre Umgebung. – *Mitt. bulg. ent. Ges.* **5**: 125–162.

Addresses of the authors

S. BESHKOV
13 Mart Street 17
1142 Sofia
Bulgaria

B. PETROV
Stefan Milenkov Street 60
1619 Sofia
Bulgaria

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Atalanta](#)

Jahr/Year: 1996

Band/Volume: [27](#)

Autor(en)/Author(s): Beshkov Stoyan V., Petrov Boyan P.

Artikel/Article: [A catalogue of the Bulgarian Lepidoptera species reported and collected from the caves and galleries in Bulgaria \(Insecta, Lepidoptera\) 433-448](#)