

## Terrestrial gastropods (Mollusca: Gastropoda) of the Western Rhodopes (Bulgaria)

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**Abstract.** For the first time a synopsis is made of the terrestrial malacofauna of the Western Rhodopes in Bulgaria. There are 106 species and 19 subspecies (111 taxa) of terrestrial snails announced as valid for the fauna of the Bulgarian part of the Western Rhodopes Mountain. For the first time 5 new taxa are reported for the fauna of the Rhodopes and 4 new taxa for the Bulgarian fauna. As a result of a critical evaluation 24 taxa are considered invalid for the fauna of the Western Rhodopes Mountain. The full contemporary distribution of the terrestrial snails in the Western Rhodopes is shown with taxonomical, ecological, zoogeographical notes and data concerning the endemism.

**Key words:** terrestrial snails and slugs, Mollusca, Gastropoda, Bulgaria, Western Rhodopes

### Introduction

The physico-geographical region of the Western Rhodopes Mountain is one of the best studied regarding malacofauna – fig. 1 (see comments on the figure in section “Material and methods”).

The first data are recorded by KOBELT (1906), JURINIČ (1906), HESSE (1911, 1912, 1913), WOHLBEREDT (1911) and WAGNER A. (1927). After the research of URBAŇSKI (1960b,c, 1964) intensive studies started, which resulted in the publication of diverse data mostly by foreign scientists.

In more recent time new data were presented in the papers of IRIKOV (1999, 2001, 2002, 2003), IRIKOV & IRIKOVA (2000), IRIKOV (2006-in press).

Till now the greater part of all studies on the terrestrial snails in the region of the Western Rhodopes Mountain have had faunal character, e.g. emphasizing on species composition, distribution and taxonomy, some of the articles presenting anatomical research, ecological data and zoogeographical analysis.

Even though the studies of particular orographically defined areas are occasional (except the article of IRIKOV, 2002), they also have more incident character determined by fragmentary collection from different mountain regions.

Most of the investigations are based on work *in situ* in one and the same calcareous regions such as the valley of the Chepelarska River, Chudni Mostove Rock Bridges, Trigradski Karst Gorge, the areas of Dospat, Velingrad and others, and also the collecting of material has been done partially and locally. Despite this and because of the increased amount of information by many authors it is safe to say that these calcareous regions are among the best studied regions in the Western Rhodopes.

A complete characteristic of this orographically defined region is presented by IRIKOV (2002), where the author presents generalized species composition of the terrestrial snails and their frequency in the Dobrostan Ridge. The paper also includes ecological and zoogeographical analysis.

The aim of this paper is to generalize and to present all available literary and recent data concerning terrestrial snails in the region of the Western Rhodopes Mountain and to make ecological and zoogeographical analysis of the malacofauna.

### Material and methods

To generalize the actual species composition and distribution of the terrestrial snails of the Western Rhodopes in a synopsis all literature data and many new records have been presented as a result of long-term studies in the past several years. The material was collected from different areas, habitats, altitudes and substrates with the aim of conducting a more complete and accurate study of the region. In the described way specimens from so far unexplored areas were collected, as well as specimens from many localities, which had already been cited in the literature so as to confirm or deny many disputable species. Due to this method and critical approach, it was established that many taxa are invalid for the fauna of the Western Rhodopes.

In the synopsis of the results for every established species the following information is given: a valid Latin name, according to the requirements of the contemporary zoological nomenclature, a list of synonyms, applied to the Western Rhodopes (including the name of the species and the author who first reported it for the Western Rhodopes, year of publication and number of the pages, where the name is included; the author, who was last to report the species for the Western Rhodopes with its valid name); a list of the authors who reported the species for the Western Rhodopes and additional new data; UTM coordinates and separate localities in the UTM grid; vertical distribution, ecological and taxonomical data for some of the species, the type of endemism (if any) and zoogeographic characteristics.

Fig. 1 presents a map of the studied region with its physical-geographical boundaries in a UTM grid (10x10 km), according to the Global Positioning System. Every quadrant has its UTM code.

For a more visual presentation of the territorial exploration of the Western Rhodopes a different coloration of the UTM quadrants was used: for the UTM quadrants with black background and white UTM code there are literary data or new records for at least one or many species; for the UTM quadrants with white background and black UTM code there are no data at all on the present malacofauna.

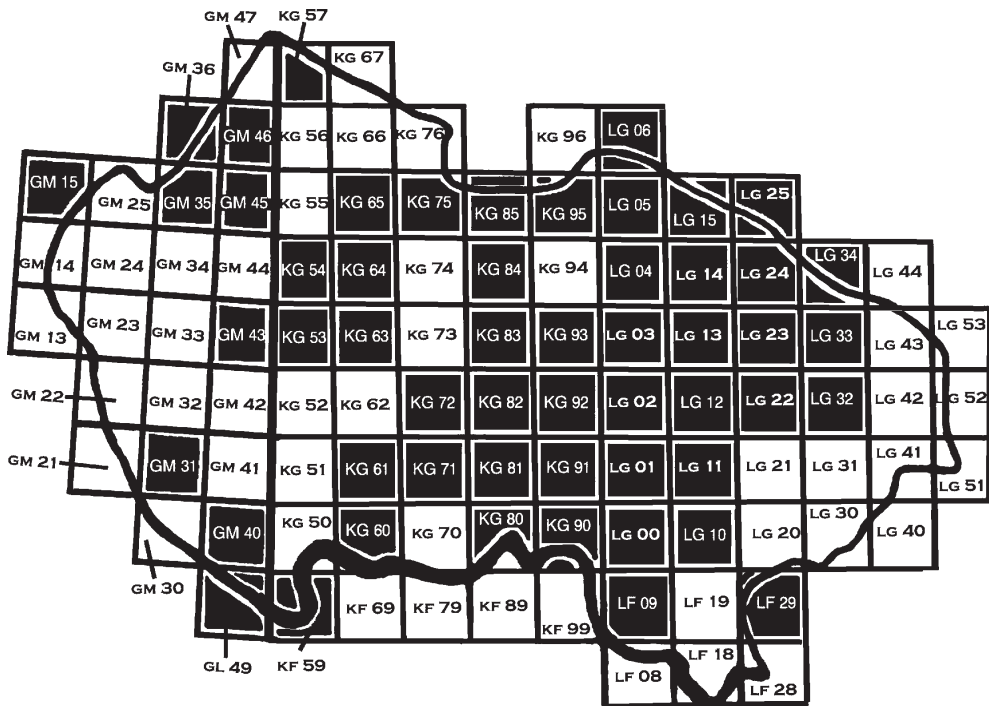


Fig. 1. Schematic map of the Western Rhodopes with UTM grid (10x10 km).

Tables 1 and 2 present all localities of terrestrial snails in the Western Rhodopes from literature sources or new records with a UTM code. With Arabic numbers are shown the serial number of each locality within the UTM quadrant.

All taxa, which are invalid for the fauna of the Western Rhodopes, are marked with the following symbol - #.

All taxa, which are new for the fauna of the Western Rhodopes or bigger geographical regions, are marked with the following symbols:

- a new taxon for the Rhodopes Mountain.
- a new taxon for the Bulgarian fauna.

All endemic taxa with different degree of endemism are marked with the following symbols:

- endemic taxon for the Balkan Peninsula.
- endemic taxon for Bulgaria.
- endemic taxon for Bulgaria, which has been registered only in the Western Rhodopes.

For the species' ecological characteristics their ecological preferences (mainly concerning humidity and temperature) are registered, as well as their ecological valency and adaptive behavior against the environmental factors, the habitat and vertical distribution and the contemporary areal of the taxa as a reflection of its ecological requirements. Ecological characteristics of the terrestrial snails from the Dobrostan Ridge in the Western Rhodopes given by IRIKOV (2002) are also used.

Table 1.

**Codes of the treated localities of the terrestrial gastropods in Western Rhodopes Mountains**

UTM code	Locality	Notes
GM15	Yakoruda Village	
GM31	Ognyanovo Village	
GM35	Yundola area (1)	
GM36	Yundola area (2)	
GM40	Bistritsa Reka River Valley	5 km from Mesta River
GM43	Ludi Dol Mountain Brook	South from Velingrad
GM45(1)	Velingrad	
GM45(2)	Kleptuza Lake	
GM45(3)	Chepino Village	
GM45(4)	Chepino Village district	
GM46	Summit Eleni Vrah	
KG53	Beglika Hut area (1)	
KG54	Cave Lepenitsa	
KG57	Belovo Village	
KG60	Barutin Village	
KG61(1)	Dospat town	
KG61(2)	Sarnena Reka River Valley	Between Barutin Village and Zmeitsa Village
KG63	Beglika Hut area (2)	
KG64	Batak	
KG65	Tsigov Chark Village area	
KG71(1)	Teshel Village	
KG71(2)	Cave Yagodinska	
KG71(3)	Buynovska Reka River Gorge	
KG75(1)	Peshtera	
KG75(2)	Stara Reka River Valley	Peshtera district
KG80(1)	Trigrad Village	
KG80(2)	Chairski Ezera Lakes	
KG81(1)	Trigradska River Gorge	
KG81(2)	Cave Dyavolskoto Garlo	
KG81(3)	Summit Dur-Daa	North from Trigrad Village
KG82(1)	Devin	
KG82(2)	Bedenski Mineralni Bani Mountain-Resort	
KG82(3)	Tsarkvata area	Devin district
KG82(4)	between Devin - Grohotno Village	
KG83	Mihalkovo Village	
KG84	Ravnogor Village	
KG90	Summit Goljam Perelik	
KG91	Shiroka Laka Village	
KG92	Zabardo Village	
KG93(1)	Chudnite Mostove Rock Bridges	
KG93(2)	Skalni Mostove Hut	
KG93(3)	Summit Persenk	
KG95(1)	Krichim	
KG95(2)	Krichim Valley	

UTM code	Locality	Notes
LG00(1)	Smolyan	
LG00(2)	Smolyan	Eastern of the town
LG00(3)	Smolyan, quarter Sredorek	5 km western from the town
LG01(1)	Cave Mechata Dupka	Pamporovo district
LG01(2)	Summit Snejanka	Pamporovo district
LG01(3)	Pamporovo district	
LG01(4)	Studenec Hut	road to the hut
LG01(5)	Smolyanski Ezera Lakes	
LG01(6)	Stoikite Village	
LG01(7)	between Pamporovo Mountain-Resort and Stoikite Village	
LG02(1)	Bogutevo Village	Chepelarska Reka River Valley
LG02(2)	Valchi Dol Ravine	Zorniza Village district
LG02(3)	Chepelare	
LG02(4)	Chepelare	Chepelarska Reka River Valley, 2-3 km from the town
LG02(5)	Izgrez Hut	Western from Chepelare
LG02(6)	“Grueva bichkiya” area	Near Zabardo Village
LG03(1)	Hvoyna Village	
LG03(2)	Orehovo Village	
LG03(3)	Oreshitsa Reka River Valley	Between Hvoyna Village and Oreho Village - Summit Persenk
LG03(4)	Pavelsko Village district	
LG03(5)	Vaklite Dupki rocky phenomenon	
LG03(6)	Malevo Village	
LG03(7)	Summit Kamaka	Zabardo Village district
LG04(1)	Byala Cherkva Mountain-Resort	
LG04(2)	between Hvoyna Village and Byala Cherkva Mountain Resort	
LG04(3)	Kosovo Village	
LG04(4)	“Katargi” area	Northeastern from Oreho Village
LG05(1)	Dedovo Village	
LG05(2)	between Dedovo Village and Hrabrino Village	
LG05(3)	Zdravetz Hut	
LG05(4)	Hrabrino Village	
LG06	Parvenets Village	
LG10	Ustovo Village	a quarter of Smolyan
LG11	Rozen Ridge	
LG12	Bogutevo Village	
LG13(1)	Summit Dragitsa	Radyuva Planina range
LG13(2)	Yugovo Village	
LG14(1)	Narechenski Bani Mountain-Resort	
LG14(2)	Narechen Village	
LG15(1)	Galabovo Village	
LG15(2)	Kuklen Village	
LG15(3)	Ruen Village	

UTM code	Locality	Notes
LG22	Krushovska Reka River Valley	“Kormisosh” Hunting Reserve
LG23(1)	Mostovska Sushitsa River Valley	
LG23(2)	Mostovska Sushitsa River Valley	2 km south-eastern of Martciganitsa Hut
LG23(3)	Belitsa Village	
LG23(4)	Mostovo Village	
LG23(6)	Manastirska Reka River Valley	South from Laki Village
LG24(1)	Bachkovo Village	
LG24(2)	Bachkovski monastery	
LG24(3)	Slivov Dol area	
LG24(4)	Chepelarska Reka River Valley	1 km from Bachkovski monastery
LG25(1)	Asenovgrad	
LG25(2)	Asenova Krepost Fortress	Asenovgrad district
LG25(3)	left feeder of the Chepelarska Reka River	between Asenovgrad and Bachkovo Village
LG25(4)	Lukovitska Reka River	
LG33(1)	Mostovska Sushitsa River Valley	between Mostovo Village - Sini Vrah Village
LG33(2)	Sini Vrah Village	
LG33(3)	between Sini Vrah Village and Summit Karadzhov Kamak	
LG34	between Dolnoslav Village and Gornoslav Village	
LF09	Mogilitsa Village	
LF29	Rudozem	

Table 2.

### Codes of the areas of distribution of the terrestrial gastropods in Western Rhodopes Mountains

UTM code	Areas
GL49-KF59	between Beslen Village and Slashten Village
GM45-KG54	Lepenitsa River Valley
KG71, KG72	Chakin Dol Reka River Valley, “Kastrakli” Reserve
KG80-KG81-KG82	between Devin Town and Trigrad Village
KG84-KG85	Krichim Dam
LG01-LG11	Between Pamporovo Mountain-Resort and Smolyan on the road to Levochevo Village
LG02-KG92	Zabardo Village
LG01-LG02-LG03-LG04-LG14-LG24-LG25	Chepelarska Reka River Valley
LG02-LG03-LG14-LG24-LG25	Chepelarska Reka River Valley between Asenovgrad and Chepelare
LG03-LG04-LG14	Chepelarska Reka River Valley between Narechenski Bani Mountain-Resort and Hvoyna Village
LG03-LG14-LG24	Chepelarska Reka River Valley from Bachkovo Village to Hvoyna Village
LG03-LG14-LG24-LG25	Chepelarska Reka River Valley from Asenovgrad town to Hvoyna Village

UTM code	Areas
LG13-LG03	A Radyuva Mountain slope near "Sinite hancheta" area
LG13-LG14	Yugovska Reka River Valley
LG14-LG24-LG25(1)	Chepelarska Reka River Valley from Asenovgrad to Narechen Village
LG14-LG24-LG25(2)	Chepelarska Reka River Valley from Asenovgrad to Narechenski Bani Mountain-Resort
LG22-LG23	The valley of "Kormisosh" Hunting Reserve
LG22-LG23-LG32	"Kormisosh" Hunting Reserve
LG23-LG24-LG25-LG34	Dobrostan Ridge
LG24-LG14-LG03	Chepelarska Reka River Valley from Bachkovo Village and Hvoyna Village
LG24-LG25(1)	Chepelarska Reka River Valley between Asenovgrad and Bachkovo Village
LG24-LG25(2)	between Asenovgrad and Bezovo Hut

The Arabic numbers used for the species' ecological characteristics in "Discussion" section conform to the serial number of each species in the "Results" section.

For the zoogeographical characteristics of the species the contemporary areal of each species is noted and also its ecological requirements and adaptations as a reflection of its historical development, geological and tectonical history of the land, as well as some published paleontological data.

For the zoogeographic characteristics mainly the works of the following authors were used: GRUEV (1995), GRUEV (In: GRUEV & KUZMANOV, 1999), GRUEV (2000), GRUEV & BECHEV (2000), GRUEV (2002a,b), DAMJANOV & LIKHAREV (1975), as well as the zoogeographic characteristics made for terrestrial snails from the Dobrostan Ridge in the Western Rhodopes by IRIKOV (2002).

The names of the zoogeographic categories (complexes, elements, subelements) are by GRUEV & BECHEV (2000).

The snails were identified in laboratory conditions by their conchiological indices and anatomical and morphological peculiarities of the genital system. For identifying the taxa, we used mainly the works of DAMJANOV & LIKHAREV (1975), NORDSIECK (1973, 1974), URBANŃSKI (1960b,c, 1964, 1969), WIKTOR (1983) and others.

### List of the taxa of terrestrial snails, inhabiting the Western Rhodopes:

#### Pomatiasidae

##### 1. *Pomatias rivulare* (Eichwald, 1829)

*Pomatias rivulare rivulare*: URBANŃSKI, 1960b: 80.

*Pomatias rivulare*: PINTER L., 1968: 218.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBANŃSKI (1960b,c) LG24(1,2), LG25(2), URBANŃSKI (1964) LG24(2), LG25(2), RIEDEL & URBANŃSKI (1964) LG24(1), LG25(2), URBANŃSKI & WIKTOR (1968) LG24(2), PINTER L. (1968) LG24(2), LG14-

LG24-LG25(2), DAMJANOV & L. PINTER (1969) LG24(2), LG25(3), PINTER I. & L. PINTER (1970) KG75(1), HUDEC & VAŠATKO (1971) LG24(2), DAMJANOV & LIKHAREV (1975 - "Rhodopes Mountain"), CLAUSS (1977) LG24(2), KÖRNIG (1983) LG24(1), HUBENOV (In: DELCHEV et al., 1993 - "Rhodopes Mountain"), IRIKOV & IRIKOVA (2000) LG24(3), IRIKOV (2002) LG23-LG24-LG25-LG34.

New localities (tabl. 1, 2; fig. 1):

· Krichim Dam area, KG84-KG85, 28.VIII.2004, leg. D. Georgiev.

Vertical distribution: In the Western Rhodopes the species is registered between 300 m a.s.l. at Asenovgrad and 1400 m a.s.l. at the area of Chervenata Skala Summit in the Dobrostan Ridge.

Ecological data: It inhabits calcareous terrains, mostly in the leaf cover in deciduous forests at medium and high humidity, thermophilic, but during dry periods extremely drought-resistant. It is also rarely recorded in pine-tree forests.

Mesophilic and thermophilic species with relatively high drought-resistance (IRIKOV A., 2002).

Zoogeography: According to IRIKOV (2002) this species is an Eastsubmediterranean subelement of the European faunistic complex. After the new interpretation of the Submediterranean faunistic element (GRUEV, 2000) we think that this species should be defined as a Euxinian subelement, Submediterranean element, European faunistic complex.

#### # *Pomatias elegans* (Müller, 1774)

This species was reported for the Rhodopes Mountain in general by DAMJANOV & LIKHAREV (1975), and later it was cited by HUBENOV (In: DELCHEV et al., 1993). Unfortunately, so far there are no documented data for the actual presence of this species in the Western Rhodopes, so we assume that this is an invalid taxon for this part of the mountain.

### Aciculidae

#### 2. *Hyalacme similis* (Reinhardt, 1880)

*Acicula (Hyalacme) similis bulgarica*: URBAŃSKI, 1960b: 81; 1960c: 127; RIEDEL & URBAŃSKI, 1964: 77.

*Acme similis bulgarica*: URBAŃSKI, 1964: 27;

*Acicula (Hyalacme) similis*: PINTER L., 1968: 211; DAMJANOV & LIKHAREV, 1975: 90.

*Acicula similis bulgarica*: URBAŃSKI, 1969: 227, 238; URBAŃSKI, 1971: 255.

*Acicula similis*: DAMJANOV & L. PINTER, 1969: 3; PINTER I. & L. PINTER, 1970: 87; IRIKOV & IRIKOVA, 2000: 422; IRIKOV, 2002: 93.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI (1960 b, c, 1964) LG25(2), RIEDEL & URBAŃSKI (1964) LG25(2), PINTER L. (1968) LG24(2), URBAŃSKI (1969) KG80(2), DAMJANOV & L. PINTER (1969) LG24(2), PINTER I. & L. PINTER (1970) KG75(1), KG93(1), URBAŃSKI (1971) KG81(1), DAMJANOV & LIKHAREV (1975 - "Rhodopes Mountain"), IRIKOV & IRIKOVA (2000) LG24(3), IRIKOV (2002) LG23-LG24-LG25-LG34.

Vertical distribution: In the Western Rhodopes the species is registered from 300 m a.s.l. at the Dobrostan Ridge up to 1550 m a.s.l. at Chairski Lakes.

Ecological data: It inhabits limestones within the leaf cover of deciduous forests with high humidity and moderate or low temperature.



Mesohygrophilic, cool-loving species (IRIKOV, 2002).

Zoogeography: According to IRIKOV (2002) this species is a Mideuropean element of the European faunistic element, but after additional analysis of the contemporary areal and the ecological requirements of the species, we think that it should be defined as Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

## Ellobiidae

### 3. *Carychium tridentatum* (Risso, 1826)

*Carychium tridentatum*: PINTER L., 1968: 218.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): PINTER L. (1968) LG24(2), URBAŃSKI (1969) KG80(2), DAMJANOV & L. PINTER (1969) LG24(2), CLAUSS (1977) LG02(2), IRIKOV & IRIKOVA (2000) LG24(3), IRIKOV (2002) LG23-LG24-LG25-LG34.

Vertical distribution: In the Western Rhodopes the species is registered from 400 m a.s.l. at the Dobrostan Ridge up to 1550 m a.s.l. at Chairiski Lakes.

Ecological data: It inhabits limestones within the leaf cover of deciduous forests with medium and high humidity and moderate temperature.

Mesophile, cool-loving and relatively cold-resistant species (IRIKOV, 2002).

Zoogeography: Mid European element, European faunistic complex.

## Pleurodiscidae

### 4. *Pyramidula rupestris* (Draparnaud, 1801)

*Pyramidula rupestris*: PINTER L., 1968: 218.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): PINTER L. (1968) LG25(2), URBAŃSKI (1969) KG93(1), DAMJANOV & L. PINTER (1969) LG25(3), PINTER I. & L. PINTER (1970) KG93(1), HUDEC & VASATKO (1971) LG24(2), URBAŃSKI (1971) KG81(1), DAMJANOV & LIKHAREV (1975 - "Rhodopes"), CLAUSS (1977) KG93(1), KÖRNIG (1983) LG23(4), DEDOV (1998) (material from the Rhodopes Mountain), IRIKOV (2002) LG23-LG24-LG25-LG34.

New localities (tabl. 1, 2; fig. 1):

- Hvoyna Village LG03(1), Malevo Village LG03(6), Orehovo Village LG03(2), Narechenski bani Mountain Resort LG14(1), Narechen Village LG14(2), Chepelarska River Valley (from Bachkovo Village to Hvoyna Village) LG24-LG14-LG03, Kosovo Village LG04(3), 17-21.VI.2000, leg. A. Irikov.
- Teshel Village KG71(1), Buynovska River Gorge KG71(3), Kastrakli Reserve, Chakin Dol River Valley KG71, KG72, 25.05.2001, leg. A. Irikov.

Vertical distribution: In the Western Rhodopes the species is registered from 500 m a.s.l. at the Dobrostan Ridge up to 1600 m a.s.l. at the area of Chudni Mostove Rock Bridges.

Ecological data: It inhabits exclusively limestones (extremely stenopetrophilic species, calcereous). Xeromesophilic, thermophile, drought-resistant species, which can survive considerable temperature fluctuations (IRIKOV, 2002).

Taxonomical data: The results from our conchiological and anatomical research of the whole material from the the Rhodopes showed that the species belongs to the nominant subspecies *P. rupestris rupestris*.

Zoogeography: Mid European element, European faunistic complex.

**Vertiginidae****5. *Vertigo (Vertigo) pusilla* Müller, 1774**

*Vertigo pusilla*: URBAŃSKI, 1969: 238.

*Vertigo (Vertigo) pusilla*: DAMJANOV & LIKHAREV, 1975: 120.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI (1969) KG80(2), LG00(2), DAMJANOV & LIKHAREV (1975 - "Rilo-Rhodopes region"), CLAUSS (1977) LG02(2).

New localities (tabl. 1, 2; fig. 1):

- 1 km south-west of Bachkovo Village in the Chepelarska River Valley LG24(4), 18.07.2001, leg. A. Irikov.

Vertical distribution: In the Western Rhodopes the species is registered from 400 m a.s.l. at Bachkovo Village up to 1550 m a.s.l. at Chairski Lakes.

Ecological data: Insufficient.

Zoogeography: Mid European element, European faunistic complex.

**6. *Vertigo (Vertigo) antivertigo* (Draparnaud, 1801)**

*Vertigo antivertigo*: URBAŃSKI, 1960b: 87.

*Vertigo (Vertigo) antivertigo*: DAMJANOV & LIKHAREV, 1975: 121.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI (1960b) LG00(1), DAMJANOV & LIKHAREV (1975 - "Rilo-Rhodopes region").

Vertical distribution: In the Western Rhodopes the species is registered only from Smolyan at about 1000 m a.s.l.

Ecological data: Insufficient.

Zoogeography: Eurosiberian subelement, Euroasiatic Palaeartic element, Siberian faunistic complex.

**7. *Vertigo (Vertigo) alpestris* (Alder, 1830)**

*Vertigo alpestris*: URBAŃSKI, 1969: 227, 238; PINTER I. & L. PINTER, 1970: 87; URBAŃSKI, 1971: 255.

*Vertigo (Vertigo) alpestris*: DAMJANOV & LIKHAREV, 1975: 124.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI (1969) KG80(1), KG93(1), PINTER I., L. PINTER (1970) KG93(1), URBAŃSKI (1971) KG81(1), DAMJANOV & LIKHAREV (1975) KG80(1), KG81(1), KG82(1), HUBENOV (In: DELCHEV et al., 1993) KG80(1), KG82(1).

New localities (tabl. 1, 2; fig. 1):

- Ravnogor Village, near a cave hole, KG84, 27.III.2004, leg. D. Georgiev, S. Stoicheva.

Vertical distribution: In the Western Rhodopes the species is registered between 1000 m a.s.l. near Smolyan and 1550 m a.s.l. at Chairski Lakes.

Ecological data: Insufficient.

Zoogeography: Transpalearctic element, Siberian faunistic complex.

**8. *Truncatellina claustralis* (Gredler, 1856)**

*Truncatellina claustralis claustralis*: URBAŃSKI, 1960b: 86.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI (1960b-see comments below), PINTER L. (1968) LG24(2), DAMJANOV & L. PINTER (1969)

LG24(2), PINTER I. & L. PINTER (1970) KG75(1), URBAŃSKI (1971) KG81(1), DAMJANOV & LIKHAREV (1975 - "Rilo-Rhodopes region").

The species was first reported for Bulgaria by HESSE (1916) as *Isthmia opisthodon* and *Isthmia salurnensis* from the bank of Maritsa River near Plovdiv. According to URBAŃSKI (1960b) these were shells from the Rhodopes Mountain, which had been brought along with the river south tributaries coming from the mountain.

New localities (tabl. 1, 2; fig. 1):

- Smolyan LG00(1), 22.VIII.2000, leg. D. Georgiev.
- Chudni Mostove Rock Bridges area KG93(1), 02.VIII.2004, leg. A. Irikov.

Vertical distribution: In the Western Rhodopes the species is registered from 400 m a.s.l. at Bachkovo Village up to 1600 m a.s.l. at the area of Chudni Mostove Rock Bridges.

Ecological data: It inhabits limestones (calcerous) in the mountains with medium and low humidity (xeromesophile), thermophile, in dry periods considerably drought-resistant.

Zoogeography: Mid European mountainous subelement, European mountainous element, European faunistic complex.

### 9. *Truncatellina cylindrica* (J. Ferussac, 1807)

*Truncatellina cylindrica*: PINTER L., 1968: 218.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): PINTER L. (1968) LG24(2), URBAŃSKI (1969) KG80(2), KG93(1), LG00(2), DAMJANOV & L. PINTER (1969) LG24(4), URBAŃSKI (1971) KG81(1), KÖRNIG (1983) LG00(1), LG13-LG14, LG23(4), IRIKOV (2002) LG23-LG24-LG25-LG34.

New localities (tabl. 1, 2; fig. 1):

- West and north of Smolyan LG00(1), 22.VIII.2000, leg. D. Georgiev.
- Chepelarska River Valley (from Asenovgrad to Hvoyna Village) LG03-LG14-LG24-LG25, 2000-2004, leg. A. Irikov.
- Orehovska River Valley (from Hvoyna Village to Orehovo Village) LG03(3), 2000-2004, leg. A. Irikov.

Vertical distribution: In the Western Rhodopes the species is registered from 400 m a.s.l. at Bachkovski monastery up to 1550 m a.s.l. at the area of Chairski Lakes.

Ecological data: It inhabits limestones at medium and low humidity. Xerophilic, thermophile, drought-resistant, found mostly in heterozonal rocky sites (IRIKOV, 2002).

Zoogeography: Mid European element, European faunistic complex.

### # *Truncatellina callicratis* (Scacchi, 1833)

This species was reported for the northern part of the Rhodopes by DAMJANOV & LIKHAREV (1975), and later it was cited by HUBENOV (In: DELCHEV et al., 1993). So far there is no documented data for the presence of this species in the Western Rhodopes, so we suppose that this is an invalid taxon for the fauna of this part of the mountain.

### 10. (•) *Columella edentula* (G. Martens, 1830)

Published for the Rhodopes in the present study.

Localities (tabl. 1, 2; fig. 1):

- Chairski Lakes KG80(2), 29.IV.2003, leg. A. Irikov.

Vertical distribution: The species is recorded at 1550 m a.s.l. at Chairski Lakes, which is the highest locality known in Bulgaria so far.

Ecological data: It inhabits the leaf cover and detritus in deciduous and mixed forests and the banks of streams and near lakes at high humidity and relatively low temperature.

Mesohygrophilic, cool-loving, cold-resistant.

Zoogeography: Holarctic element, Siberian faunistic complex.

## Pupillidae

### 11. *Pupilla sterri* (Voith, 1838)

*Pupilla sterri*: URBAŃSKI, 1969: 227.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI (1969) KG80(2), KG93(1), URBAŃSKI (1971) KG81(1).

This species was reported by URBAŃSKI (1969) for Trigrad Village and Chudni Mostove Rock Bridges. The presence of the species in these areas needs confirmation, because there are no other documented data on its occurrence in these localities, even though they are very well studied.

Vertical distribution: In the Western Rhodopes this species is recorded only in the region of Trigradsko Gorge near Trigrad Village, at about 1300 m a.s.l., which is one of the species highest known localities in Bulgaria.

Ecological data: Insufficient.

Zoogeography: South European mountainous subelement, European mountainous element, European faunistic complex.

### 12. *Argna (Agardhiella) macrodonta* (Hesse, 1916)

*Argna (Agardhiella) macrodonta*: IRIKOV, 1999: 30.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): IRIKOV (1999, 2002) LG24(3), IRIKOV & IRIKOVA (2000) LG24(3).

Vertical distribution: In the Western Rhodopes this species is registered only in the area of Slivov Dol Ravine in Dobrostan Ridge at 500-800 m a.s.l.

Ecological data: It inhabits the leaf cover in beech forests and rocks with soil alluvium, dry leaves, moss, *Haberlea rhodopaensis* Friv. and other vegetation (IRIKOV, 1999).

Hygro- to mesohygrophilic, cool-loving and cold-resistant species, calcereous.

According to URBAŃSKI (1964) and DAMJANOV & LIKHAREV (1975) the species inhabits moist places in limestone terrains at 1200 m, in rock cracks or at the base of stone blocks, usually in the root system of the vegetation. Rarely found alive, because of its subterranean way of life and shells are most often found in alluvium. According to URBAŃSKI (1964) this species can be characterized as troglophile, because its shells are found in caves, too.

We assume that this species is not a troglophile, because there are few live specimens found in caves as well as shells, which most likely make their way in there with subterranean waters.

The data concerning the species habitat preferences are insufficient.

Taxonomical data: The great variability in the shell structure is the reason why in the literature *A. rumelica* and *A. buresi* are mentioned as different species or -rumelica as subspecies. According to HESSE (1926), URBAŃSKI (1960d, 1964), DEDOV (1998)

all of these are most likely variations of *A. macrodonta*. As URBAŃSKI (1960d) and IRIKOV (1999) suggested more anatomical reaserch is needed to clarify the systematic status of the different -macrodonta forms.

Endemism: Endemic taxon for the Balkan Peninsula.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

## Orculidae

### 13. *Sphyradium doliolum* (Bruguière, 1792)

*Orcula* (*Sphyradium*) *doliolum*: URBAŃSKI, 1960c: 127-130; RIEDEL & URBAŃSKI, 1964: 77; URBAŃSKI & WIKTOR, 1968: 56; HUDEC & VAŠATKO, 1971: 8.

*Orcula doliolum*: URBAŃSKI, 1964: 26-27; PINTER L., 1968: 218; URBAŃSKI, 1969: 227, 238; DAMJANOV & L. PINTER, 1969: 35; PINTER I. & L. PINTER, 1970: 87; URBAŃSKI, 1971: 255; CLAUSS, 1977: 308; KÖRNIG, 1983: 32; IRIKOV & IRIKOVA, 2000: 421-424; IRIKOV, 2002: 94.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI (1960c, 1964) LG24(2), LG25(2), RIEDEL & URBAŃSKI (1964) LG24(1), LG25(2), URBAŃSKI & WIKTOR (1968) LG24(2), PINTER L. (1968) LG24(2), URBAŃSKI (1969) KG80(2), LG00(2), DAMJANOV & L. PINTER (1969) LG24(4), PINTER I. & L. PINTER (1970) KG93(1), URBAŃSKI (1971) KG81(1), HUDEC & VAŠATKO (1971) LG24(2), CLAUSS (1977) KG93(1), KÖRNIG (1983) LG24(1), IRIKOV A. & T. IRIKOVA (2000) LG24(3), IRIKOV (2002) LG23-LG24-LG25-LG34.

New localities (tabl. 1, 2; fig. 1):

- Hvoyna Village LG03(1), 27.VIII.2002, leg. A. Irikov.
- Orehovska River Valley (from Hvoyna Village to Orehovo Village) LG03(3), 15-16.IV.2001, leg. A. Irikov.
- Chepelarska River Valley (from Asenovgrad town to Hvoyna Village) LG03-LG14-LG24-LG25, 1999-2003, leg. A. Irikov.
- Kamaka Summit, 2 km northeast of Zabardo Village LG03(7), 22.VIII.2004, leg. A. Irikov.
- Lepenitsa River Valley GM45, KG54, 22.VIII.2004, leg. D.Georgiev.
- Kastrakli Reserve, Chakin Dol River Valley KG71, KG72, 30.IV.2003, leg. I. Dedov, A. Irikov, I. Molloy, K. Kirov.

Vertical distribution: In the Western Rhodopes the species is registered from 300 m a.s.l. at Asenova Fortress up to 1600 m a.s.l. at Kamaka Summit, near Zabardo Village. Ecological data: It inhabits limestones at moderate humidity, in the leaf cover of broad-leaved and rarely pine forests. Because of its thermophilic preferences the species has considerable drought-resistance and can be found in xerothermic sites.

Mesophilic, thermophilic species with relatively high drought-resistance (IRIKOV A., 2002). Euryhygro- and eurythermibiontic.

Zoogeography: According to IRIKOV (2002) this species is an Irano-Turanian subelement, Subiranian element, Southwestern Asiatic complex. After additional analysis of the contemporary areal and the ecological requirements of the species and considering the geological history of the Eurasian land we think that it is more correct to define this species as Mid European element, European complex.

14. *Pagodulina subdola brabenei* Hudec & Vasatko, 1971

*Pagodulina* sp.: URBAŃSKI, 1960c: 127.

*Pagodulina pagodula*: RIEDEL & URBAŃSKI, 1964: 77; PINTER L., 1968: 218; URBAŃSKI, 1969: 227, 238; DAMJANOV & L.PINTER, 1969: 35, 38; PINTER I. & L. PINTER, 1970: 87; DAMJANOV & LIKHAREV, 1975: 117-118, fig. 51-52; IRIKOV A. & T. IRIKOVA, 2000: 422-424;

*Pagodulina subdola brabenei*: HUDEC & VAŠATKO, 1971: 11-14; KÖRNIG, 1983: 32; HUBENOV (In: DELCHEV et al., 1993): 181; DEDOV, 1998: 748; IRIKOV, 2002: 94.

*Pagodulina subdola*: CLAUSS, 1977: 308-309.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI (1960c, 1964) and RIEDEL & URBAŃSKI (1964) LG25(2), PINTER L. (1968) LG14-LG24-LG25(2), LG24(2), URBAŃSKI (1969) LG00(2), KG80(2), DAMJANOV & L. PINTER (1969) LG25(3), LG24(4), PINTER I. & L. PINTER (1970) KG93(1), HUDEC & VASATKO (1971) LG24(2), DAMJANOV & LIKHAREV (1975) LG00(2), LG14(1), CLAUSS (1977) LG01(3), LG02(2), KÖRNIG (1983) LG00(1), LG23(4), HUBENOV (In: DELCHEV et al., 1993) LG00(1), LG14(2), LG23(4), LG24(1), DEDOV (1998 - described from the Rhodopes Mountain), IRIKOV & IRIKOVA (2000) LG24(3), IRIKOV (2002) LG23-LG24-LG25-LG34.

New localities (tabl. 1, 2; fig. 1):

- Kastrakli Reserve, Chakin Dol River Valley KG71, KG72, Teshel Village, near Orpheus hotel-restaurant KG71(1), 30.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov and I. Mollov.
- between Mostovo Village and Sini Vrah Village LG33(1), 01.V.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.

Vertical distribution: In the Western Rhodopes the species is registered from 300 m a.s.l. at Asenova krepost Fortress up to 1600 m a.s.l. at the area of Pamporovo Mountain Resort.

Ecological data: It inhabits limestones at high humidity, in the leaf cover of broad-leaved forests, rarely in pine forests, under stones and logs, in scarce vegetation on rocks. In Dobrostan Ridge the species is numerous in the leaf cover of beech forests in deep ravines with northern lay-out at high humidity.

Forest mesohygrophile, cool-loving and cold-resistant species.

Taxonomical data: RIEDEL & URBAŃSKI (1964), announced the species *Pagodulina pagodula* (Desmoulins, 1830) from Asenova Krepost and later many other authors reported it for other areas of the Western Rhodopes. HUDEC, VAŠATKO (1971), after a precise conchological and anatomical study of specimens from the locality at Bachkovo Village, described a new subspecies *Pagodulina subdola brabenei*. According to the same authors *Pagodulina pagodula* (Desmoulins, 1830) does not occur in Bulgaria, but all the mentioned material under that name is actually *Pagodulina subdola brabenei*.

Endemism: Bulgarian endemic taxon, recorded only in the Rhodopes Mountain.

Zoogeography: Easternsubmediterranean faunistic subelement, Submediterranean faunistic element, European faunistic complex.

**Chondrinidae**15. *Chondrina avenacea* (Bruguère, 1792)

*Modicella avenaceae*: HESSE, 1913: 69.

*Chondrina avenaceae*: PINTER L., 1968: 218.



Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): HESSE (1913) KG93(1), LG22-LG23-LG32, PINTER L. (1968) LG14-LG24-LG25(2), LG24(2), DAMJANOV & L. PINTER (1969) LG25(3), PINTER I. & L. PINTER (1970) KG75(1), KG93(1), DAMJANOV & LIKHAREV (1975 - "Rhodopes"), CLAUSS (1977) LG24(2), LG03(3, 4), KG93(1), LG01-LG11, KÖRNIG (1983) LG13-LG14, LG23(4), IRIKOV & IRIKOVA (2000) LG24(3), IRIKOV (2002) LG23-LG24-LG25-LG34.

New localities (tabl. 1, 2; fig. 1):

- Trigrad Village KG80(1), Teshel Village KG71(1), Buynovska River Gorge KG71(3), Kastrakli Reserve, Chakin Dol River Valley KG71, KG72, 2001, 2002, leg. A. Irikov; Teshel Village, near Orpheus restaurant KG71(1), 30.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov; Kastrakli Reserve, Chakin Dol River Valley KG71, KG72, 30.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Kamaka Summit, 2 km northeast of Zabardo Village LG03(7), 12,28.VIII.2004, leg. A. Irikov, T. Irikova.
- Shiroka Laka Village KG91(1), 28.04.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Chairski Lakes KG80(2), 29.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- between Mostovo Village and Sini Vrah Village LG33(1), 01.V.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Galabovo Village, LG15(1), 18.V.2004, leg. D. Bechev.
- South of Laki, Manastirska River Valley, LG23(6), 25.08.2005, leg. A. Irikov.
- Krushovska River Valley LG22, 25.08.2005, leg. A. Irikov.
- Trigrad Village, Trigradsko Zhdrelo Gorge, near Dyavolsko Garlo Cave, open terrain, on rocks KG81(2), 28.IV.2003, leg. I. Dedov, A. Irikov, I. Mollov, K. Kirov.

Vertical distribution: In the Western Rhodopes the species is registered from 300 m a.s.l. near Asenovgrad up to 1600-1700 m a.s.l. at the area of Pamporovo Mountain Resort.

Ecological data: According to DAMJANOV & LIKHAREV (1975) this species is rare in the Rhodopes Mountain, but the result of our study showed that this is a very common species in almost all limestones in the Western Rhodopes, yet still unregistered in the Eastern part of the mountain.

It inhabits exclusively limestones, in xerothermic conditions as well as in high humidity. In the Dobrostan Ridge the species is found in very humid and shady places, in heterozonal rocky microsites, placed in beech formations in deep ravines with northern layout.

Xerophilic, thermophilic, drought-resistant (IRIKOV, 2002), eurythermichyrobiontic, calcereous.

Zoogeography: IRIKOV A. (2002) characterized this species as Mid European faunistic element, but it is more correct to define it as South European mountainous subelement, European mountainous subelement, European faunistic complex.

#### 16. *Chondrina clienta* (Westerlund, 1883)

*Chondrina clienta*: URBAŃSKI, 1969: 227, 238; 1971: 255.

*Chondrina clienta bulgarica*: NORDSIECK, 1970: 259.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI (1969, 1971) LG00(2), KG93(1), NORDSIECK (1970) LG00(1), LG02(3), URBAŃSKI (1971) KG81(1), HUDEC & VAŠATKO (1971) LG24(2), DAMJANOV & LIKHAREV (1975 - "Rhodopes Mountain"), IRIKOV (2002) LG23-LG24-LG25- LG34.

Vertical distribution: In the Western Rhodopes the species is registered from 400 m a.s.l. at Bachkovski monastery up to 1500 m a.s.l. at the area of Chudni Mostove Rock Bridges. Our study showed that this species is rarer in comparison with the previous species. *Ch. clienta* (West.) is a very rare and scanty taxon in the Western Rhodopes.

Ecological data: It inhabits exclusively heterozonal limestone habitats with xerothermic conditions, as well as places of high humidity especially in co-existence with *Chondrina avenaceae* Brug.

Xerophilic, thermophilic, calcereous (IRIKOV A., 2002), drought-resistant, eurythermichygrobiontic, stenopetrophilic species - calcereous.

Zoogeography: IRIKOV (2002) characterized this species as Mid European faunistic element, but it is more correct to define it as South European mountainous subelement, European mountainous subelement, European faunistic complex.

### Valloniidae

#### 17. *Vallonia costata* (Müller, 1774)

*Vallonia costata*: URBAŃSKI, 1971: 255.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI (1971) KG81(1), KÖRNIG (1983) LG13-LG14, IRIKOV (2002) LG23-LG24-LG25- LG34.

New localities (tabl. 1, 2; fig. 1):

- Hvoyna Village LG03(1), 14.VII.2000, leg. A. Irikov.

Vertical distribution: In the Western Rhodopes the species is registered from 300-400 m a.s.l. at Dobrostan Ridge up to 1200 m a.s.l. at Trigradsko Zhdrelo Ridge.

Ecological data: it prefers open herbaceous habitats and it can rarely be found in microhabitats in forests or on rocks.

Mesohygrophilic, cool-loving, cold-resistant species (IRIKOV, 2002), eurythermic, standing considerable temperature fluctuations and continuous dry periods.

Zoogeography: Holarctic element, Siberian faunistic complex.

#### 18. *Vallonia pulchella* (Müller, 1774)

*Vallonia pulchella*: URBAŃSKI, 1971: 255.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI (1971) KG81(1), IRIKOV (2002) LG23-LG24-LG25- LG34.

New localities (tabl. 1, 2; fig. 1):

- Hvoyna Village LG03(1), 14.VII.2000, leg. A. Irikov.
- Belitsa Village, Belitsa River Valley LG23(3), 28.VIII.2004, leg. A. Irikov, T. Irikova.
- Ravnogor Village KG84, 27.II.2004, leg. D. Georgiev, S. Stoicheva.
- between Beslen Village and Slashten Village, near Mesta River GL49-KF59, 26.VIII.2004, leg. D. Georgiev.
- Barutin Village, near Dospatska River KG60, 27.VIII.2004, leg. D. Georgiev.

Vertical distribution: In the Western Rhodopes the species is registered from 300-400 m a.s.l. at Dobrostan Ridge up to 1200 m a.s.l. at Trigradsko Zhdrelo Ridge.

Ecological data: It prefers open herbaceous habitats and it can rarely be found in microhabitats in forests or on rocks.

Mesohygrophilic, cool-loving, cold-resistant species (IRIKOV A., 2002), eurythermic, standing considerable temperature fluctuations and continuous dry periods.

Zoogeography: Holarctic element, Siberian faunistic complex.



### 19. *Acanthinula aculeata* (Müller, 1774)

*Acanthinula aculeata*: URBAŃSKI, 1960c: 127.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI (1960 c, 1964) LG25(2), RIEDEL & URBAŃSKI (1964) LG25(2), PINTER L. (1968) LG24(2), URBAŃSKI (1969) LG00(2), KG80(2), DAMJANOV & L. PINTER (1969) LG24(4), PINTER I. & L. PINTER (1970) KG75(1), CLAUSS (1977) LG02(2), IRIKOV (2002) LG23-LG24-LG25- LG34.

New localities (tabl. 1, 2; fig. 1):

- Hvoyna Village LG03(1), VII.2000, leg. A. Irikov.
- Chudni Mostove Rock Bridges area KG93(1), VIII.2004, leg. A. Irikov.
- Trigrad Village KG80(1), Buynovska River Gorge KG71(3), Kastrakli Reserve, Chakin Dol River Valley KG71, KG72, 2000 - 2002, leg. A. Irikov.

Vertical distribution: In the Western Rhodopes the species is registered from 300 m a.s.l. at Asenova Fortress up to 1550 m a.s.l. at Chairski Lakes, which is one of the highest species localities.

Ecological data: It inhabits diverse microsites in forest habitats and prefers humid beech forests.

Mesophilic, cool-loving and relatively cold-resistant (IRIKOV A., 2002).

Zoogeography: Mid European element, European faunistic complex.

## Enidae

### 20. *Merdigera obscura* (Müller, 1774)

*Ena obscura*: WAGNER A., 1927: 316; URBAŃSKI, 1960c: 127; 1964: 27; PINTER L., 1968: 219; URBAŃSKI, 1969: 227, 238; DAMJANOV & L. PINTER, 1969: 35, 38; PINTER I. & L. PINTER, 1970: 88; HUDEC & VAŠATKO, 1971: 8; CLAUSS, 1977: 308; KÖRNIG, 1983: 32; IRIKOV A. & T. IRIKOVA, 2000: 422; IRIKOV, 2002: 94

*Ena (Ena) obscura*: RIEDEL & URBAŃSKI, 1964: 77.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): WAGNER A. (1927) KG57, URBAŃSKI (1960c, 1964) LG25(2), RIEDEL & URBAŃSKI (1964) LG25(2), PINTER L. (1968) LG14-LG24-LG25(2), LG24(2), URBAŃSKI (1969) KG80(2), LG00(2), DAMJANOV & L. PINTER (1969) LG24(4), LG25(3), PINTER I. & L. PINTER (1970) KG75(1), HUDEC & VAŠATKO (1971) LG24(2), CLAUSS (1977) LG01(3), LG01-LG11, LG02(1), LG24(1), KÖRNIG (1983) LG03(1), LG23(4), IRIKOV A. & T. IRIKOVA (2000) LG24(3), IRIKOV (2002) LG23-LG24-LG25- LG34.

New localities (tabl. 1, 2; fig. 1):

- Orehovska River Valley (from Hvoyna Village to Orehovo Village) LG03(3), 2000-2004, leg. A. Irikov.
- Chepelarska River Valley (from Bachkovo Village to Hvoyna Village) LG24-LG14-LG03, 2000-2004, leg. A. Irikov.
- Zabardo Village LG02-KG92, 24.V.2004, leg. A. Irikov.
- Belitsa Village, Belitsa River Valley LG23(3), 28.VIII.2004, leg. A. Irikov, T. Irikova.
- Trigrad Village, near Dyavolsko Garlo Cave KG81(2), 28.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Teshel Village, Orpheus near hotel-restaurant KG71(1), 30.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.

- Kastrakli Reserve, Chakin Dol River Valley KG71, KG72, 30.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Ravnogor Village, near a cave hole KG84, 27.III.2003, leg. D. Georgiev, S. Stoicheva.
- Lepenitsa River Valley GM45-KG54, 22.VIII.2004, leg. D. Georgiev.
- Chudni Mostove Rock Bridges area, open terrain, on rocks, under moss KG93(1), 28.IV.2003, leg. I. Dedov, A. Irikov, I. Mollov, K. Kirov.

Vertical distribution: In the Western Rhodopes the species is registered from 300 m a.s.l. at Asenova Fortress up to 1600 m a.s.l. at the area of Pamporovo Mountain Resort. Ecological data: Mostly forest species - inhabits diverse microsites in broad-leaved and mixed forests and bushy habitats. Drought-resistant, capable of standing tough conditions and continuous dry periods.

Mesophilic, thermophilic, drought-resistant (IRIKOV A., 2002), eurythermic and euryhygrophilic species.

Zoogeography: Mid European element, European faunistic complex.

### 21. *Ena montana* (Draparnaud, 1801)

*Ena montana*: DAMJANOV & LIKHAREV, 1975: 140-141.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): DAMJANOV & LIKHAREV (1975 - "Rhodopes"), IRIKOV A. & I. IRIKOVA (2000) LG24(3), IRIKOV A. (2002) LG23-LG24-LG25- LG34.

Vertical distribution: Despite DAMJANOV & LIKHAREV (1975) who announced the species for the Rhodopes Mountain, there are only few documented localities at Dobrostan Ridge in the Western Rhodopes. The species is rare for the Dobrostan Ridge also, where only few empty shells in two localities at 1200-1400 m a.s.l. have been registered.

Ecological data: Insufficient. Mesophilic, mesothermic (IRIKOV A., 2002).

Taxonomical data: More material needs to be collected (shells and alive animals) to perform detailed anatomical study for the certain definition of this taxon.

Zoogeography: Mid European element, European faunistic complex.

### 22. *Zebrina detrita* (Müller, 1774)

*Zebrina (Detrita) detrita detrita*: URBAŃSKI, 1960a: 76.

*Zebrina detrita*: PINTER L., 1968: 219; *Zebrina detrita*: PINTER I. & L. PINTER, 1970: 88; IRIKOV, 2002: 94.

*Zebrina detrita inflata*: HUDEC & VAŠATKO, 1971: 8; DAMJANOV & LIKHAREV, 1975: 143; KÖRNIG, 1983: 32; HUBENOV (In: DELCHEV et al., 1993): 182.

*Zebrina detrita detrita*: CLAUSS, 1977: 308; KÖRNIG, 1983: 32.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI (1960a) LG24(1), PINTER L. (1968) LG14-LG24-LG25(2), LG24(2), PINTER I. & L. PINTER (1970) KG75(1), HUDEC & VAŠATKO (1971) LG24(2), DAMJANOV & I. LIKHAREV (1975) KG61(1), CLAUSS (1977) LG24(2), LG03(3, 4), LG02(4), LG01(3, 4), LG11, LG01-LG11, KÖRNIG (1983) LG23(3), GM45(1), LG03(1), LG24(1), HUBENOV (In: DELCHEV et al., 1993) - "Rhodopes Mountain", IRIKOV A. (2002) LG23-LG24-LG25- LG34.

New localities (tabl. 1, 2; fig. 1):

- Chepelarska River Valley (between Narechenski Bani Mountain Resort and Hvoyna Village), LG03-LG14-LG24, 2000-2004, leg. A. Irikov.

- Kuklen Village, LG15(2), 2000-2004, leg. A. Irikov.
- Chudni Mostove Rock Bridges area, KG93(1), 2001, 2002, leg. A. Irikov.
- Mogilitsa Village, LG09, V.2000, leg. A. Irikov.
- Teshel Village, KG71(1), Kastrakli Reserve, Chakin Dol River Valley KG71, KG72, Buynovska River Gorge, KG71(3), 2000-2004, leg. A. Irikov.
- Zabardo Village, LG02-KG92, 24.V.2004, leg. A. Irikov.
- Golyam Perelik Summit, KG90, 12.VI.2004, leg. A. Irikov.
- Belitsa Village, Belitsa River Valley, LG23(3), 23.VIII.2004, leg. A. Irikov, T. Irikova.
- between Hvoyna Village and Chepelare, Radyuva Planina Ridge, below Dragiitsa Summit, east of Chepelarska River Valley, LG13(1), on rocks, 10.VIII.2004, leg. A. Irikov, T. Irikova.
- slopes of Radyuva Planina Ridge, near Sinite Hancheta place, LG13-LG03, 10.VIII.2004, leg. A. Irikov, T. Irikova.
- between Hrabrino Village and Dedovo Village, LG05(2), 06.XI.2004, leg. A. Irikov, T. Irikova.
- Rudozem, LF29, 05.V.2004, leg. D. Georgiev.
- Bistritsa River Valley, 5 km off the flow of Mesta River, GM40, 24.VIII.2004, leg. D. Georgiev.
- between Beslen Village and Slashten Village, near Mesta River, GL49-KF59, 26.VIII.2004, leg. D. Georgiev.
- Ruen Village, LG15(3), leg. D. Betchev.
- Tsarkvata area, KG82(3), 2004, leg. N. Vutova.
- Velingrad, Kleptuza Lake, GM45(2), 08.IX.2003, leg. K. Kirov.
- Chairski Lakes, a road to the lakes from Trigrad Village, KG80(2), near a bridge, on rocks, 29.IV.2003, leg. I. Dedov, A. Irikov, I. Mollov, K. Kirov.

Vertical distribution: In the Western Rhodopes the species is registered from 200-300 m a.s.l. at Asenovgrad and Kuklen Village up to the highest altitude in the Rhodopes - Golyam Perelik Summit at 2191 m a.s.l. This locality is the highest place where this species is found in Bulgaria.

Ecological data: It inhabits limestones and prefers open herbarous habitats, but often it can be found in bushes and rarely in oak and pine forests. Drought-resistant, capable of surviving big and continuous dry periods.

Xerophilic, thermophilic, drought-resistant (IRIKOV A. 2002), eurythermic and euryhygrobionic species.

Taxonomical data: HUDEC & VAŠATKO (1971), as well as KÖRNIG (1983) reported *Zebrina detrita inflata* (Kobelt) from the area of Bachkovo Village and the Chepelarska River Valley.

All anatomically studied by us specimens from this region undoubtedly belong to the nominant taxa. They are characterized by great variability in the form, size and the color of the shell and some minor variations in the structure of the genital system.

*Zebrina detrita inflata* is more likely a high mountain ecological form of the species rather than a different taxon.

Zoogeography: Holosubmediterranean subelement, Submediterranean element, European faunistic complex.

**23. *Chondrus zebra tantalus* (Pfeiffer, 1868)**

*Brephulus olympicus tantalus*: WAGNER A., 1927: 310.

*Chondrus zebra tantalus*: PINTER L., 1968: 212; URBAŃSKI, 1971: 255.

*Chondrus (Chondrus) zebra tantalus*: PINTER I. & L. PINTER 1970: 92.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): WAGNER A. (1927) LG23(3), PINTER L. (1968) KG93(1), LG14-LG24-LG25(2), LG24(2), URBAŃSKI (1969) KG93(1), PINTER I. & L. PINTER (1970) KG93(1), URBAŃSKI (1971) KG81(1), HUDEC VAŠATKO (1971) LG24(2), DAMJANOV & LIKHAREV (1975) LG25(1), KG82(1), KG93(3), CLAUSS (1977) LG24(1), LG03(3,4), KG93(1), KÖRNIG (1983) LG03(1), LG13(2), LG23(4), HUBENOV (In: DELCHEV et al., 1993) LG25(1), KG82(1), KG93(3), IRIKOV (2002) LG23-LG24-LG25- LG34.

New localities (tabl. 1, 2; fig. 1):

- Chepelarska River Valley (between Narechenski Bani Mountain Resort and Hvoyna Village), LG03-LG04-LG14, 2001, 2002, leg. A. Irikov.
- Trigrad Village, KG80(1), between Devin and Grohotno Village, KG82(4), Buynovska River Gorge, KG71(3), 2001, 2002, leg. A. Irikov.
- Radyuva Planina Ridge, Dragiitsa Summit, LG13(1), 10.VIII.2004, leg. A. Irikov, T. Irikova.
- Chepelarska River Valley (from Hvoyna Village to Sinite Hancheta area, slopes of Radyuva Planina Ridge), LG13-LG03, 2001, 2002, leg. A. Irikov, T. Irikova.
- Devin, Tsarkvata area, KG82(3), 2004, leg. N. Vutova.

Vertical distribution: In the Western Rhodopes the species is registered from 200-300 m a.s.l. at Asenovgrad up to 2000 m a.s.l. at Persenk Summit. This locality is the highest place where this species is found in Bulgaria.

Ecological data: It inhabits exclusively limestones, but prefers open herbaceous habitats with bush vegetation. Drought-resistant, capable of surviving big and continuous dry periods. Xerophilic, thermophilic, drought-resistant, distributed in heterozonal mountain sites (IRIKOV A., 2002), eurythermic and euryhygrobiontic species.

Zoogeography: Euxinian subelement, Submediterranean element, European faunistic complex.

**Chondrulinae****24. *Chondrula (Chondrula) tridens* (Müller, 1774)**

*Chondrula tridens* PINTER I. & L. PINTER, 1970: 88.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): PINTER I. & L. PINTER (1970) KG75(1), KÖRNIG (1983) GM45(1), IRIKOV (2002) LG23-LG24-LG25-LG34 (only in the area of Chervenata Skala Summit - LG24).

Vertical distribution: In the Western Rhodopes the species is registered at 500 m a.s.l. at Peshtera, 800 m a.s.l. at Velingrad and up to about 1000 m a.s.l. at Chervenata Skala Summit at Dobrostan Ridge.

Ecological data: In the Dobrostan Ridge few specimens are found in herbaceous habitats with scarce scrub vegetation under xerothermic conditions. Xerophilic, thermophilic, drought-resistant, distributed in heterozonal mountain sites (IRIKOV, 2002).

Zoogeography: Mid European element, European faunistic complex.

25. *Chondrula (Chondrula) microtragus microtragus* (Rossmässler, 1839)

*Chondrula microtraga*: PINTER, 1968: 218; CLAUSS, 1977: 308.

*Chondrula microtraga microtraga*: KÖRNIG, 1983: 32; IRIKOV, 2002: 94.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): PINTER L. (1968) LG24-LG25(1), LG24(2), CLAUSS (1977) LG03(3,4), KÖRNIG (1983) LG03(1), LG24(1), IRIKOV (2002) LG23-LG24-LG25-LG34.

New localities (tabl. 1, 2; fig. 1):

- Chepelarska River Valley (from Bachkovo Village to Hvoyna Village), LG24-LG14-LG03, 2000-2004, leg. A. Irikov.
- Trigrad Village, KG80(1), 2001, 2002, leg. A. Irikov.
- Chudnite Mostove Rock Bridges area, KG93(1), VIII.2004, leg. A. Irikov.
- Radyuva Planina Ridge, Dragiitsa Summit, LG13(1), 10.VIII.2004, leg. A. Irikov, T. Irikova.
- Chepelarska River Valley (from Hvoyna Village to Sinite Hancheta area, slopes of Radyuva Planina Ridge), LG13-LG03, 10.VIII.2004, leg. A. Irikov, T. Irikova.
- Bistritsa River Valley, 5 km off the flow of Mesta River, GM40, 24.VIII.2004, leg. D. Georgiev.
- Tsarkvata area, KG82(3), 2004, leg. N. Vutova.

Vertical distribution: In the Western Rhodopes the species is registered at 500 m a.s.l. at Peshtera, 800 m a.s.l. at Velingrad and up to about 1000 m a.s.l. at Chervenata Skala Summit at Dobrostan Ridge. Ecological data: In the Dobrostan Ridge few specimens are found in herbaceous habitats with scarce scrub vegetation under xerothermic conditions. Xerophilic, thermophilic, drought-resistant, distributed in heterozonal mountain sites (IRIKOV, 2002).

Zoogeography: Mid European element, European faunistic complex.

26. *Chondrula (Eubrephulus) bicallosa* (L. Pfeiffer, 1847)

*Eubrephulus bicallosus*: Irikov, 1999:30; 2002: 94.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): IRIKOV (1999) LG24(1), IRIKOV (2002) LG24(1).

Vertical distribution: In the Western Rhodopes the species is registered only in one locality - Bachkovo Village, an area at about 700 m a.s.l.

Ecological data: The species is found "within a hornbeam formation in soil furrows dug up by the rain on a steep slope of south-western layout with xerothermic conditions" (IRIKOV, 1999). Xerophilic, thermophilic (IRIKOV, 2002), drought-resistant.

Zoogeography: Asia Minor subelement, Subiranian element, Southwestern Asiatic faunistic complex.

27. *Mastus pupa* (Linnaeus, 1758)

*Chondrula (Mastus) pupa*: PINTER L., 1968: 213.

*Mastus pupa*: KÖRNIG, 1983: 33.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): PINTER L. (1968) LG24(2), LG14-LG24-LG25(2), CLAUSS (1977) LG01(3,4), LG03(3), LG02(4), LG11, LG12, KÖRNIG (1983) LG00(1), LG24(1).

New localities (tabl. 1, 2; fig. 1):

- Dobrostan Ridge, Slivov Dol Ravine, LG24(3), 2001-2003, leg. A. Irikov.
- Belitsa Village, Belitsa River Valley, KG23(3), 28.VIII.2004, leg. A. Irikov, T. Irikova.
- between Mostovo Village and Sini Vrah Village LG33(1), 01.V.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Bistritsa River Valley, 5 km off the flow of Mesta River GM40, 24.VIII.2004, leg. D. Georgiev.

Vertical distribution: In the Western Rhodopes the species is registered at 400 m a.s.l. in the area of Bachkovo Village up to about 1600 m a.s.l. near Pamporovo Mountain Resort. Ecological data: It inhabits diverse forest and pen habitats with mesophilic conditions. Taxonomical data: At present this species is defined as *M. pupa* although the morphology of the shells differs from the typical form. PINTER L. (1968) and CLAUSS (1977) found *M. pupa* in the Rhodopes Mountain and they registered it with reservations as a form of *M. pupa* ssp. KÖRNIG (1983) found empty shells of *Mastus* species, which differs from *Mastus rossmaessleri* (L. PFEIFFER, 1846), at Smolyan and Bachkovo Village. The size is smaller - h=10,5-12,7 mm, b=4,5-5,1 mm. The one angular hump is undeveloped. The shell is olive-brown colored. The upper surface as a rule is with much clearer fine ribs with visible spiral lines. More anatomical studies on this species are needed in the future.

Zoogeography: Eastmediterranean element, Mediterranean faunistic complex.

Cochlicopidae Pilsbry, 1900

28. (•) *Cochlicopa lubrica* (Müller, 1774)

Published for the Western Rhodopes in the present study.

New localities (tabl. 1, 2; fig. 1):

- Lepenitsa River Valley, GM45-KG54, 22.VIII.2004, leg. D.Georgiev.

Vertical distribution: The locality, where the species was found in the Western Rhodopes is at 1041 m a.s.l.

Ecological data: Insufficient.

Zoogeography: Holarctic element, Siberian faunistic complex.

29. *Cochlicopa lubricella* (Porro, 1838)

*Cochlicopa lubricella*: PINTER L., 1968: 218.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): PINTER L. (1968) LG14-LG24-LG25(2), URBAŃSKI (1969) LG00(2), DAMJANOV & L. PINTER (1969) LG25(3), KÖRNIG (1983) LG00(1), IRIKOV (1999) LG23(1), LG24(3), IRIKOV A. & T. IRIKOVA (2000) LG24(3), IRIKOV (2002) LG23-LG24-LG25- LG34.

New localities (tabl. 1, 2; fig. 1):

- Belitsa Village, Belitsa River Valley, LG23(3), 28.VIII.2004, leg. A. Irikov, T. Irikova.
- Kastraki Reserve, Chakin Dol River Valley KG71, KG72, 30.IV.2003, leg. I. Dedov, A. Irikov, I. Mollov, K. Kirov.

Vertical distribution: In the Western Rhodopes the species is registered from 300 m a.s.l. at Asenovgrad up to about 1000 m a.s.l. at the area of Smolyan.

Ecological data: In Dobrostan Ridge the species is registered in diverse hygro- and mesohygrothermic sites, but also in xerothermic biotopes with microsites of mesohygrothermic microclimatic conditions. The species prefers high humidity and it



is most numerous in the leaf cover of beech formations as well as in shady rocks overgrown with moss and *Haberlea rhodopaensis* FRIV. (IRIKOV, 1999).  
 Mesohygrophilic, cool-loving and cold-resistant species (IRIKOV, 2002).  
 Zoogeography: Holarctic element, Siberian faunistic complex.

## Clausiliidae Serrulininae

### # *Serrulina serrulata* (Pfeiffer, 1847)

The species was first reported for Bulgaria by HESSE (1913) from the surroundings of Plovdiv. URBAŃSKI (1960c) suggested that the species was most likely to be found in the middle parts of the Rhodopes Mountain and on the map of Bulgaria he pointed at the locality of Chepelarska River near Bachkovo Village. Later studies of the same and many other authors showed that this species does not occur in the Rhodopes Mountain.

## Alopiinae

### 30. (••) (▪) *Carinigera (Carinigera) buresi buresi* (A.J. Wagner, 1927)

New taxon for the Bulgarian fauna.

Locality (tabl. 1, 2; fig. 1):

- The valley of Bistritsa River 5 km off its flow into Mesta River, GM40, within rocks at about 500 m a.s.l., 24.08.2004, leg. D. Georgiev.

Vertical distribution: In the Western Rhodopes it is registered at about 500 m a.s.l. in the limestone valley of Bistritsa River. This is the most northern locality of the species distribution.

Ecological data: The data concerning the ecological characteristics of the species is insufficient. It is known that this species is extremely calcareous and probably very drought-resistant.

Endemism: Endemic taxon for the Balkan Peninsula, which is found in Northeastern Greece and in Bulgaria.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

### 31. (••) (▪) *Carinigera (Carinigera) buresi dramaensis* Nordsieck, 1977

New taxon for the Bulgarian fauna.

Locality (tabl. 1, 2; fig. 1): Due to a damaged label of the collected sample, the exact locality of this species cannot be named, so it is written as a wider region, namely Trigradski Karst.

- Trigradski Karst area, 25.05.1998, leg. À. Irikov.

Endemism: Endemic taxon for the Balkan Peninsula, distributed in Northeastern Greece and in Bulgaria, where it was found for the first time only in the area of Trigradski Karst in the Western Rhodopes.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

**32. *Cochlodina laminata laminata* (Montagu, 1803)**

*Cochlodina laminata*: CLAUSS, 1977: 309.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): CLAUSS Å. (1977) LG01(3), IRIKOV (2002, 2003) LG23-LG24-LG25- LG34, LG23(1), IRIKOV (2006-in press) LG02-LG03-LG14-LG24-LG25.

New localities (tabl. 1, 2; fig. 1):

- Trigrad Village, KG80(1), Teshel Village KG71(1), Kastrakli Reserve, Chakin Dol River Valley KG71, KG72, Buynovska River Valley, KG71(3), 2001, 2002, leg. A. Irikov; Teshel Village, near Orpheus hotel-restaurant, KG71(1), 30.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Hvoyna Village, LG03(1), VIII.2004, leg. A. Irikov.
- Chudnite Mostove Rock Bridges area, KG93(1), VIII.2004, leg. A. Irikov.
- Chairski Lakes, valley of the lakes, KG80(2), leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Dedovo Village, east of the village, Tamrashka River Valley, LG05(1),
- Trigrad Village, Prestoi Summit (=Dur-Daa) KG81(3), slope of the hill, coniferous forest, under stones and moss, 29.IV.2003, leg. I. Dedov, A. Irikov, I. Mollov, K. Kirov.

Vertical distribution: In the Western Rhodopes the species is registered from 600 m a.s.l. at Mostovska Sushitsa River up to about 1600 m a.s.l. in the area of Pamporovo Mountain Resort.

Ecological data: In Dobrostan Ridge the species is established on rocks and in the leaf cover of different hygro- and mesohygrothermic sites, but rarely it can be found in xerothermic biotopes and microsites, under mesohygrothermic microclimatic conditions. It prefers high humidity and it is most numerous on shady rocks covered with moss and *Haberlea rhodopaensis* FRIV. Mesophilic, mesothermic species (IRIKOV, 2002), calcereous.

Zoogeography: Mid European element, European faunistic complex.

***Marginata* – genus group****33. *Macedonica marginata* (Rossmässler, 1835)**

*Clausilia* (*Clausiliastra*) *marginata* var. *auriformis*: WOLBEREDT, 1911:204-205.

*Macedonica* (*Serbica*) *marginata major*: URBAŃSKI, 1960b: 81; 1960c: 127; HUDEC & VAŠATKO, 1971: 8.

*Macedonica marginata major*: URBAŃSKI, 1964: 27; RIEDEL & URBAŃSKI, 1964: 77; PINTER L., 1968: 219; SAJO, 1968: 453; DAMJANOV & PINTER L., 1969: 36, 38; CLAUSS, 1977: 308.

*Serbica marginata frivaldskyana*: URBAŃSKI, 1969: 227.

*Serbica marginata* subsp.: URBAŃSKI, 1969: 228.

*Serbica marginata*: URBAŃSKI, 1969: 228; 1971: 255.

*Macedonica marginata*: NORDSIECK, 1974: 140; CLAUSS, 1977: 308; KÖRNIG, 1983: 33; IRIKOV A. & T. IRIKOVA, 2000: 422; IRIKOV, 2002: 94; 2003: 144.

*Macedonica* sp.: IRIKOV, 2002: 94.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): WOHLBEREDT (1911) LG25(2), URBAŃSKI (1960b,c, 1964) LG25(2), RIEDEL & URBAŃSKI (1964) LG25(2),



PINTER L. (1968) LG14-LG24-LG25(2), LG24(2) KG93(1), SAJO (1968) LG14-LG24-LG25(1), KG93(1), URBANŠKI (1969) KG80(2), LG00(2), KG93(1), DAMJANOV & L. PINTER (1969) LG24(4), LG25(3), HUDEC & VAŠATKO (1971) LG24(2), URBANŠKI (1971) KG81(1), NORDSIECK (1974) KG95(2), CLAUSS (1977) LG24(1), LG03(4), KG93(1), LG01(3,4), LG01-LG11, LG11, KÖRNIG (1983) LG13(2), LG23(4), LG24(1), IRIKOV A. & T. IRIKOVA (2000) LG24(3), IRIKOV (2002, 2003) LG23-LG24-LG25-LG34, IRIKOV (2003) LG23(1), IRIKOV (2006-in press) LG02-LG03-LG14-LG24-LG25. New localities (tabl. 1, 2; fig. 1):

- Chepelarska River Valley (from Narechenski Bani Mountain Resort to Hvoyna Village), LG03-LG04-LG14, 2000-2004, leg. A. Irikov.
- Oreshitsa River Valley (from Hvoyna Village to Orehovo Village), LG03(3), 2000-2004, leg. A. Irikov.
- from Hvoyna Village to Bjala Cherkva Hut, LG03(1), LG04(1), 2000-2004, leg. A. Irikov.
- Trigrad Village, KG80(1), Teshel Village, KG71(1), Kastrakli Reserve, Chakin Dol River Valley KG71, KG72, Buynovska Reka River Gorge, KG71(3), 2001, 2002, leg. A. Irikov.
- Grueva Bichkiya area, southeast of Zabardo Village, LG02(6), under logs, 24.V.2004, leg. A. Irikov.
- Belitsa Village, Belitsa River Valley, LG23(3), 23.VIII.2003, leg. A. Irikov, T. Irikova.
- below Dragiitsa Summit, Chepelarska River Valley, (between Hvoyna Village and Chepelare), LG13(1), 10.VIII.2004, leg. A. Irikov, T. Irikova.
- Smolyan, 5-km west of the town, LG00(3), leg. A. Irikov, T. Irikova.
- Teshel Village, near Orpheus hotel-restaurant, KG71(1), 30.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Широка Laka Village, KG91(1), 28.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Kastrakli Reserve, Chakin Dol River Valley, KG71, KG72, 30.IV.2003, leg. I. Dedov, A. Irikov, I. Mollov, K. Kirov.
- between Mostovo Village and Sini Vrah Village, LG33(1), 01.V.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Ravnogor Village, near a cave hole, KG84, 27.III.2004, leg. D. Georgiev, S. Stoicheva.
- Galabovo Village, LG15(1), 18.V.2004, leg. D. Betchev.
- between Dolnoslav Village and Gornoslav Village, LG34, small waterfall, open terrain, on rocks, under moss, 01.V.2003, leg. I. Dedov, A. Irikov, I. Mollov, K. Kirov.

Vertical distribution: In the Western Rhodopes the species is registered from 300 m a.s.l. at Asenovgrad up to about 1600 m a.s.l. in the area of Chudni Mostove Rock Bridges.

Ecological data: In Dobrostan Ridge the species is recorded mostly in various rock habitats and microsites, but it can also be found in the leaf cover of beech and rarely oak forests. Mesophilic, mesothermic (IRIKOV, 2002), calcereous species.

Taxonomical data: For the Western Rhodopes two subspecies were recorded - *M. marginata major* (Rossmässler, 1835) and *M. marginata frivaldskyana* (Rossmässler, 1835), which are considered as different ecological forms by DAMYANOV & LIKHAREV (1975). According to DEDOV (1998) *M. marginata major* is of unclear systematic status and probably it is only a form of *M. marginata* and *M. marginata frivaldskyana* is a subspecies, which is clearly different from the other forms by its ribbed shell.

After additional conchological and anatomical studies of large number of material from various areas in the Western Rhodopes, we think that the *major* form doesn't have enough significant differences from the nominant form so it can't be categorized as a separate taxon. We support the opinion of DAMYANOV & LIKHAREV (1975) that this is only an ecological form of the species. As for *frivaldskyana*, which is reported for the Chudnite Mostove Rock Bridges area by URBANŠKI (1969) and for the Rhodopes Mountain by NORDSIECK (1972), we have a large number of material from various areas of the Western Rhodopes with ribed shell in different stages, which are similar to *frivaldskyana*. All of them are not identical with *frivaldskiana* from Vihren Summit in Pirin Mountain. They don't have any geographical isolation with the nominant form and it is our opinion that they belong to only one specific ecological form. However, there are more future studies needed, including DNA tests for the complete clarifying of the great polymorphicity of *M. marginata* in this part of its areal. According to IRIKOV (2006-in press) *Macedonica teodorae* n. sp. from Kamaka Summit near Zabardo Village is very similar to *frivaldskyana* in its exterior and we assume that it is very possible that in the past there had been specimens with ribs wrongfully identified only by their shell and with no additional anatomical study. According to the same author the Western Rhodopes can be considered as one region rich in *Macedonica* taxa and also as a significant center for formation of *Macedonica* forms.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

#### 34. (■■■) *Macedonica brabeneci* Nordsieck, 1977

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): NORDSIECK (1977), LG00(1), KÖRNIG (1983) LG00(1), HUBENOV (In: DELCHEV et al., 1993) LG00(1), DEDOV (1998) LG00(1).

Vertical distribution: In the Western Rhodopes the species is registered at 1000 m a.s.l. in the area of Smolyan where it was first found and it is the only known locality so far. Ecological data: Insufficient.

Taxonomical data: Due to the great conchological similarity of *Macedonica brabeneci* and *Macedonica marginata* we think that there are more future DNA studies needed for the certain differentiation of *M. brabeneci* and proving its taxonomical independence.

Endemism: Bulgarian endemic taxon, which is registered only in the Western Rhodopes in the area of Smolyn.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

#### 35. (■■■) *Macedonica hartmuti* Irikov, 2003

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): IRIKOV (2003) LG23(2).

Vertical distribution: In the Western Rhodopes *M. hartmuti* is registered at 1300 m a.s.l. at the Dobrostan Ridge. This is the only known locality so far, where the species was first described.

Ecological data: It inhabits limestones with south exposition. According to IRIKOV A. (2003): "The animals inhabit smooth vertical cliffs with scarce herbaceous vegetation and small cracks in the rocks together with *Laciniaria macilenta* (Rossmässler) and *Bulgarica bulgariensis*

(L. Pfeiffer). The limestones are with south exposition and are characterized by xerothermix conditions. The cliffs are smooth and vertical and they don't hold any snow during the winter and that is why sometimes the animals are active during this season".

Xeromesophilic, thermophilic, drought-resistant, petrophilic, calcareous species.

Endemism: Bulgarian endemic taxon, which so far has been registered only in the Western Rhodopes, in a small area in the Dobrostan Ridge.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

### 36. (■■■) *Macedonica teodora* Irikov (2006-in press)

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): IRIKOV (2006-in press) LG03(7).

Vertical distribution: *M. teodora* is described from the Western Rhodopes from the area of Kamaka Summit near Zabardo Village.

Ecological data: According to IRIKOV (2006-in press): "The species is met at 1600 m a.s.l. on limestones with south exposition. The animals inhabit more humid and shady parts of the rocks within *Geranium* sp., moss and deep cracks in the rocks. Within the other accompanying species clausilids it is a distinct dominant. This rock "island" is isolated from the near limestone massives by pinetree forests (*Picea abies*, *Pinus sylvestris*, *P. nigra*, *P. excelsa*) and mowed meadows and lawns. Unlike *M. teodora* the whole accompanying clausiliid fauna can be found in other near limestones like the near rock massive "Chudni Mostove" Rock Bridges for example."

Endemism: Bulgarian endemic taxon, which is registered only in the Western Rhodopes in a small region near Zabardo Village.

Mesophilic, mesothermic, drought-resistant.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

### *Macedonica* - genus group

#### 37. (■■■) *Macedonica zilchi* URBAŃSKI, 1971

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI (1971) KG80(1), NORDSIECK (1973) KG80(1), KG80-KG81-KG82, KG95(2), HUBENOV (In: DELCHEV et al., 1993) KG80(1), DEDOV (1998) KG80(1).

Vertical distribution: In the Western Rhodopes the species is registered at 1200 m at Trigrad Village. NORDSIECK (1973) reported it for the valley of Krichim Village, but this report is false. This species has very limited distribution only in a small region in Trigradski Karst area, which may be the result of very specific food specialization with few species of lichen and fungus with local distribution. Ecological data: Petrophilic and calcareous species, prefers humid and shady rocks. Mesophilic, cool-loving, relatively cold-resistant.

Endemism: Bulgarian endemic taxon, which so far was registered only in the Western Rhodopes in the area of Trigrad Village.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

# *Euxina pontica borisi* (Hesse, 1912)

This species was described by HESSE (1912) from the surroundings of Plovdiv with the name *Clausilia (Wagneria) borisi*. The mentioned species, however, has never been found in that locality again. URBAŃSKI (1960c) suggested that it was possible for the species occur in the north parts of the Central Rhodopes as he wrote "For the distribution of this species is know even less than the one of *E. paulhessei*. So far I know only one locality from Southeast Bulgaria". This taxon is known from Strandja Mountain and we suppose that HESSE wrongfully mentioned this locality due to a confusion.

# *Euxina persica paulhessei* (Lindholm, 1925)

This species was reported by HESSE (1912) from the surroundings of Plovdiv, but URBAŃSKI (1960c) suggested that it occurred in the northern parts of the Northern Rhodopes. Like with the previous species we think that there has been a mistake concerning the locality of this taxon, because it occurs only in Strandja Mountain.

38. (■■■) *Micridyla pinteri* (Nordsieck, 1973)

*Idyla* sp.: PINTER L., 1968: 219.

*Idyla* sp. nov.: SAJO, 1968: 453.

*Idyla (Micridyla) pinteri*: NORDSIECK, 1973: 181; URBAŃSKI, 1977: 246.

*Idyla pinteri*: CLAUSS, 1977: 309; HUBENOV, 1993: 179.

*Micridyla pinteri*: DEDOV, 1998: 752.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): PINTER L. (1968) KG93(1), SAJO (1968) KG93(1), NORDSIECK (1973) KG93(1), URBAŃSKI (1977) KG82(1), KG61 (1), CLAUSS (1977) LG01(4), LG11, HUBENOV (In: DELCHEV et al., 1993) KG61, KG93(2), DEDOV (1998) KG61, KG93(2), IRIKOV (2006-in press) LG03(7), KG93(1).

New localities (tabl. 1, 2; fig. 1):

· Ravnogor, KG84, near a cave hole, 27.III.2004, leg. D. Georgiev, S. Stoicheva.

Vertical distribution: In the Western Rhodopes the species is registered between 600 m at Devin and 1700 m a.s.l. in the aea of Studenets Hut.

Ecological data: Petrophilic and calcereous species. Prefers humid and shady limestones. Mesophilic, cool-loving, relatively cold-resistant.

Endemism: Bulgarian endemic taxon, known only from the Western Rhodopes.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

39. *Laciniaria plicata plicata* (Draparnaud, 1801)

*Alinda plicata* var. *pupila*: WOHLBEREDT, 1911: 206.

*Alinda plicata* forma *implicata*: WOHLBEREDT, 1911: 207.

*Laciniaria plicata*: PINTER L., 1968: 219; DAMJANOV & L. PINTER, 1969: 36.

*Laciniaria (Laciniaria) plicata*: SAJO, 1968: 453.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): WOHLBEREDT (1911) LG25(1), PINTER L. (1968) LG24(2), SAJO (1968) LG24(2), DAMJANOV & L. PINTER (1969) LG24(4), URBAŃSKI (1971) KG81(1), KÖRNIG (1983) LG24(1), IRIKOV A. & T. IRIKOVA (2000) LG24(3), IRIKOV (2002, 2003) LG23-LG24-LG25-LG34, IRIKOV (2006-in press) LG02-LG03-LG14-LG24-LG25.

New localities (tabl. 1, 2; fig. 1):

- Trigrad Village, KG80(1), Teshel Village, KG71(1), Kastrakli Reserve, Chakin Dol River Valley, KG71, KG72, Buynovska River Gorge, KG71(3), 2001, 2002, leg. A. Irikov; Prestoi Summit (Dur-Daa), north of Trigrad Village, KG81(3), 17.VIII.2004, leg. A. Irikov, T. Irikova; Trigrad Village, near Dyavolskoto Garlo Cave, KG81(2), 28.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Belitsa Village, Belitsa River Valley, LG23(3), 23.VIII.2003, leg. A. Irikov, T. Irikova.
- Smolyan, Sredorek quarter, Cherna River Valley, 5 km west of the town LG00(3), leg. A. Irikov, T. Irikova.
- Широка Лакa Village, KG91(1), in open terrain, on rocks, 28.IV.2003, leg. I. Dedov, A. Irikov, I. Mollov, K. Kirov.
- Kastrakli Reserve, Chakin Dol River Valley, KG71, KG72, 30.IV.2003, leg. I. Dedov, A. Irikov, I. Mollov, K. Kirov.
- Chairski Lakes, KG80(2), 29.IV.2003, leg. I. Dedov, A. Irikov, I. Mollov, K. Kirov.
- between Mostovo Village and Sini Vrah Village, LG33(1), 01.V.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Chepelare, bank of Chepelarska River near a bus station, LG02(3), under stones, 01.V.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Lepenitsa River Valley, GM45-KG54, 22.VIII.2004, leg. D. Georgiev.
- Ravnogor, KG84, near a cave hole, 27.III.2004, leg. D. Georgiev, S. Stoicheva.
- Dedovo Village, LG05(1), east of the village, Tamrashka River Valley, in beech and oak forest, 02.V.2003, leg. I. Mollov.
- Velingrad, Kleptuza Lake, GM45(2), 08.IX.2003, leg. Kirov.
- between Dolnoslav Village and Gornoslav Village, LG34, near a small waterfall, in open terrain, on rocks, under moss, 484m a.s.l., 01.V.2003, leg. I. Dedov, A. Irikov, I. Mollov, K. Kirov.

Vertical distribution: In the Western Rhodopes the species is registered between 300 m a.s.l. at Asenovgrad and 1700 m a.s.l. in the area of Dur-Daa Summit, north of Trigrad Village.

Ecological data: Due to its polyvalence this is one of the widest spread species of the Clausiliidae family. It can be found within rocks as well as in the leaf cover of forest habitats. Mesophilic, mesothermic, eurythermic and euryhygrobiontic species.

Taxonomical data: Conchologically this species is very variable and in the whole country as well as the Western Rhodopes there are a lot of forms different in size, ecology and vertical distribution, which however don't have any taxonomical significance, except for *Laciniaria plicata kueprijae* Nordsieck, 1973.

Zoogeography: Mid European element, European faunistic complex.

#### 40. (■■■) *Laciniaria plicata kueprijae* Nordsieck, 1973

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): NORDSIECK (1973) KG93(1), CLAUSS (1977) LG00(1), LG01(3,4), KG93(1), LG01-LG11, LG11, KÖRNIG (1983) LG23(4).

Vertical distribution: In the Western Rhodopes the species is registered between 900 m at Mostovo Village and 1700 m a.s.l. at Studenets Hut in Pamporovo Mountain Resort.

Ecological data: Petrophilic and calcareous species, which prefers humid and shady rocks with lower temperatures high in the mountain.

Mesohygrophilic, cool-loving, cold-resistant.

Taxonomic data: This species is clearly discernable from the nominant species because of its ribbed shell with relatively big, less in number, and wider placed ribs and its specific color. Endemism: Bulgarian endemic taxon, known from only few localities in the Western Rhodopes. Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

41. (■■■) *Laciniaria (Rhodopiela) macilenta* (Rossmässler, 1842)

*Clausilia (Micropontica) despotina*: HESSE, 1912: 61.

*Alinda (Alinda) despotina*: WAGNER, 1927: 354.

*Laciniaria (Laciniaria) macilenta*: URBAŃSKI, 1960b: 81, 1960c: 125; RIEDEL & URBAŃSKI, 1964: 77; SAJO, 1968: 453; HUDEC & VAŠATKO, 1971: 8; DAMJANOV & LIKHAREV, 1975: 202.

*Laciniaria macilenta*: URBAŃSKI, 1964: 27; PINTER, 1968: 219; DAMJANOV & L. PINTER, 1969: 36, 38; CLAUSS, 1977: 309.

*Laciniaria (Rhodopiela) macilenta*: NORDSIECK, 1973: 188.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): HESSE (1912) LG22-LG23, WAGNER (1927) LG22-LG23, URBAŃSKI (1960b, 1964) LG25(2), URBAŃSKI (1960c) LG14-LG24-LG25(2), LG22-LG23-LG32, KG61(1), RIEDEL & URBAŃSKI (1964) LG25(2), PINTER L. (1968) LG14-LG24-LG25(2), LG24(2), SAJO (1968) LG14-LG24-LG25(2), LG24(2), DAMJANOV & L. PINTER (1969) LG24(4), LG25(3), HUDEC & VAŠATKO (1971) LG24(2), NORDSIECK (1973) (Rhodopes Mountain), DAMJANOV & LIKHAREV (1975) LG14-LG24-LG25(2), CLAUSS (1977) LG24(1), KÖRNIG (1983) LG24(1), LG23(4), HUBENOV (In: DELCHEV et al., 1993) LG14-LG24-LG25(2), IRIKOV A. & T. IRIKOVA (2000) LG24(3), IRIKOV (2002, 2003) LG23-LG24-LG25-LG34, IRIKOV (2003) LG23(1), IRIKOV (2006-in press) LG02-LG03-LG14-LG24-LG25.

New localities (tabl. 1, 2; fig. 1):

- Hvoyna Village, LG03(1), V.2004, leg. A. Irikov.
- Chudnite Mostove Rock Bridges area, KG93(1), 29.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- between Mostovo Village and Sini Vrah Village, LG33(1), 01.V.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- between Dolnoslav Village and Gornoslav Village, LG(34), small waterfall, in open terrain, on rocks, under moss, 01.V.2003, leg. I. Dedov, A. Irikov, I. Mollov, K. Kirov.

Vertical distribution: In the Western Rhodopes the species is registered between 300 m at Asenovgrad and 1600 m a.s.l. in the Chudnite Mostove Rock Bridges area.

Ecological data: Petrophilic and calcareous species, which inhabits rock habitats with xerothermic conditions as well as places with high humidity and shade.

Endemism: Bulgarian endemic taxon, which is known from only few localities in the Western Rhodopes.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

42. (■■■) *Laciniaria bajula bajula* (A. Schmidt, 1968)

*Pseudalinda (Pseudalinda) rhodoparum*: URBAŃSKI, 1960b: 100; 1960c: 128; RIEDEL & URBAŃSKI, 1964: 77.



*Pseudalinda rhodoparum*: URBAŃSKI, 1964: 26; DAMJANOV & LIKHAREV, 1975: 214; HUBENOV (In: DELCHEV et al., 1993): 180.

*Laciniaria bajula*: URBAŃSKI & WIKTOR, 1968: 56; KÖRNIG, 1983: 33.

*Pseudalinda bajula*: NORDSIECK, 1973: 189; DAMJANOV & LIKHAREV, 1975: 216; HUBENOV (In: DELCHEV et al., 1993): 180.

*Bulgarica bajula*: HUBENOV (In: DELCHEV et al., 1993): 179.

*Laciniaria bajula bajula*: IRIKOV A., T. IRIKOVA: 422.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI (1960b,c, 1964) LG24(2), URBAŃSKI (1960c) LG24(1), RIEDEL & URBAŃSKI (1964) LG24(1), URBAŃSKI & WIKTOR (1968) LG24(2), NORDSIECK (1973) LG24(1), DAMJANOV & LIKHAREV (1975) LG24(2) and “northeastern slopes of the Central Rhodopes”; KÖRNIG (1983) LG24(1), HUBENOV (In: DELCHEV et al., 1993) LG24(1,2), IRIKOV A. & T. IRIKOVA (2000) LG24(3), IRIKOV (2002, 2003) LG23-LG24-LG25-LG34), IRIKOV (2006-in press) LG02-LG03-LG14-LG24-LG25.

New localities (tabl. 1, 2; fig. 1):

- Dragiitsa Summit, LG13(1), below the peak, between Hvoyna Village and Chepelare, on limestones, 10.VIII.2004, leg. A. Irikov, T. Irikova.
  - Hvoyna Village, LG03(1), Chepelarska River Valley, on rocks, IX.2002, leg. E. Tilova.
- Vertical distribution: In the Western Rhodopes the species is registered between 400 m at Bachkovo and 1300 m a.s.l. at Dragiitsa Summit, between Chepelare and Radyuva Mountain.

Ecological data: According to IRIKOV (2002) this species is mesophilic and mesothermic, but it also could be characterized as mesohygrophilic. Despite the other species from the Clausiliidae family, this species is not a petrophile and it can be found more often in the leaf cover of humid broad-leaved forests than on limestones.

Taxonomical data: The nominant species differs from the other two subspecies known from the Western Rhodopes.

Endemism: Bulgarian endemic taxon, which can be found only in limited regions in the Western Rhodopes.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

#### 43. (■■■) *Laciniaria bajula lunella* Nordsieck, 1973

*Pseudalinda bajula lunella*: NORDSIECK, 1973: 189.

*Laciniaria bajula lunella*: DEDOV, 1998: 752.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): NORDSIECK (1973) KG93(1), DEDOV (1998) KG93(1), IRIKOV (2006-in press) LG03(7), KG93(1).

New localities (tabl. 1, 2; fig. 1):

- Trigrad Village, KG80(1), Teshel Village, KG71(1), Kastrakli Reserve, Chakin Dol River Valley, KG71, KG72, 2001, 2002, leg. A. Irikov, 29-30.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Trigrad Village, near Dyavolskoto Garlo Cave, KG81(2), 28.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Smolyan, Sredorek quarter,, Cherna River Valley, 5 km west of the town, LG00(3), 03.VII.2004, leg. A. Irikov, T. Irikova.

- Kamaka Summit, LG03(7), 2 km northeast of Zabardo Village, 22.VIII.2004, leg. A. Irikov, T. Irikova.
- Chairski Lakes, KG80(2), 29.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Chepelare, LG02(3), bank of Chepelarska River, near a bus station, under stones, 01.V.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Ravnogor Village, KG84, near a cave hole, 27.III.2004, leg. D. Georgiev, S. Stoicheva.

Vertical distribution: In the Western Rhodopes the species is registered between 750 m at Teshel Village and 1600 m a.s.l. in the Chudni Mostove Rock Bridges area.

Ecological data: Petrophilic, calcareous, which is distributed higher than the nominant subspecies. Inhabits humid and shady limestones.

Mesohygrophilic, cool-loving, cold-resistant.

Endemism: Bulgarian endemic taxon, which can be found only in limited regions in the Western Rhodopes.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

#### 44. (■■■) *Laciniaria bajula mursalicae* (URBAŃSKI, 1969)

*Pseudalinda* (*Pseudalinda*) *falax mursalicae*: URBAŃSKI, 1969: 253.

*Pseudalinda mursalicae*: URBAŃSKI, 1977: 247

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI (1969) KG90, URBAŃSKI (1977) LG02(5), HUBENOV (In: DELCHEV et al., 1993) KG90, LG02(5).

New localities (tabl. 1, 2; fig. 1):

- Ludi Dol Mountain Brook, GM43, right tributary of Chepinska River, south of Velingrad, 23.VIII.2004. leg. D. Georgiev.

This subspecies is reported by URBAŃSKI (1969) from Golyam Perelik Summit, northwest of Smolyan in the Mursalishki Dyal portion (the taxon is named after the geographical region). There was, however, a mistake made by the author, namely that Golyam Perelik Summit is not located in the Mursalishki Dyal portion, but in the Perelishki Dyal portion of the Rhodopes Mountain. Despite our hard work we couldn't locate *L. bjula mursalicae* in locus typicus. Having in mind that in the mentioned locality there aren't any suitable habitats (the whole area is with highmountain meadows on silicate base with small patches of pinetree forests), we think that it's not likely that this species can be found here and there has been a mistake with the locality report.

Vertical distribution: This subspecies inhabits relatively high altitudes in the Western Rhodopes - 1600 m a.s.l. in the area of Ludi Dol Mountain Brook, south of Velingrad up to 1850 m a.s.l. at Izgrev Hut, west of Chepelare.

Ecological data: Insufficient.

Taxonomical data: It is very possible that this taxon is actually only a high mountain form and to prove its taxonomical identity more future conchological and anatomical studies are needed from more localities, as well as to determine the whole areal of the species.

Endemism: Bulgarian endemic taxon, known only from two certain localities in the Western Rhodopes.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.



45. *Balea (Alinda) biplicata* (Montagu, 1803)

*Alinda biplicata* v. *maxima*: WOHLBEREDT, 1911: 206.

*Alinda biplicata* v. *mihaudiana*: WOHLBEREDT, 1911: 206; URBAŃSKI, 1960c: 122.

*Alinda distincta*: WOHLBEREDT, 1911: 206.

*Alinda (Alinda) biplicata eupleuris*: WAGNER A., 1927: 348.

*Laciniaria (Alinda) biplicata*: URBAŃSKI, 1960a: 78; 1960b: 81, 100.

*Laciniaria (Alinda) biplicata* subsp.?: URBAŃSKI, 1960c: 127, 130; 1969: 227.

*Laciniaria (Alinda) biplicata distincta*: URBAŃSKI, 1964: 25.

*Laciniaria (Alinda) biplicata atanasovi*: URBAŃSKI, 1964: 25-26.

*Laciniaria biplicata eupleuris*: URBAŃSKI, 1964: 27.

*Laciniaria (Alinda) biplicata atanasovi*: RIEDEL & URBAŃSKI, 1964: 77; URBAŃSKI & WIKTOR, 1968: 56.

*Laciniaria biplicata*: PINTER L., 1968: 219; DAMJANOV & L. PINTER, 1969: 36, 38; CLAUSS, 1977: 309.

*Laciniaria (Laciniaria) biplicata*: SAJO, 1968: 453.

*Laciniaria biplicata tenuispira*: URBAŃSKI, 1969: 227, 269.

*Laciniaria biplicata atanasovi*: HUDEC & VAŠATKO, 1971: 8.

*Laciniaria (Laciniaria) biplicata*: DAMJANOV & LIKHAREV, 1975: 196.

*Laciniaria (Laciniaria) biplicata atanasovi*: DAMJANOV & LIKHAREV, 1975: 198.

*Laciniaria (Laciniaria) biplicata eupleuris*: DAMJANOV & LIKHAREV, 1975: 199.

*Alinda biplicata tenuispira*: KÖRNIG, 1983: 33.

*Alinda biplicata atanasovi*: KÖRNIG, 1983: 33.

*Balea (Alinda) biplicata*: IRIKOV, 2002: 95.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): WOHLBEREDT (1911) LG25(1), WAGNER A. (1927) ("Dli-dere" in the Rhodopes Mountain), URBAŃSKI (1960a - "Rhodopes Mountain") URBAŃSKI (1960b,c) LG24(2), LG25(2), URBAŃSKI (1964) LG24(2), LG25(1,2), LG14-LG24-LG25(1), RIEDEL & URBAŃSKI (1964) LG24(2), LG25(2), URBAŃSKI & WIKTOR (1968) LG24(2), PINTER L. (1968) LG14-LG24-LG25(2), LG24(2), SAJO (1968) LG14-LG24-LG25(1), DAMJANOV & L. PINTER (1969) LG24(4), LG25(3), URBAŃSKI (1969) LG00(2), KG80(2), KG93(1), HUDEC & VAŠATKO (1971) LG24(2), DAMJANOV & LIKHAREV (1975) LG14-LG24-LG25(2) (Rhodopes Mountain), CLAUSS (1977) LG24(1), KÖRNIG (1983) LG24(1), LG00(1), IRIKOV (2002, 2003) LG23-LG24-LG25-LG34, IRIKOV (2006-in press) LG03(7), KG93(1), LG02-LG03-LG14-LG24-LG25.

New localities (tabl. 1, 2; fig. 1):

- Trigrad Village, KG80(1), Teshel Village, KG71(1), Kastrakli Reserve, Chakin Dol River Valley KG71, KG72, Buynovska River Gorge, KG71(3), 2001, 2002, leg. A. Irikov; Prestoi Summit (Dur-Daa), north of Trigrad Village, KG80(3), 17.VIII.2004, leg. A. Irikov, T. Irikova (*B. b. tenuispira*); Trigrad Village, KG80(1), coniferous forest, 30.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov (*B. b. tenuispira*); Trigrad Village, Dyavolskoto Garlo Cave, KG81(2), 28.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov; Teshel Village, near Orpheus hotel-restaurant KG71(1), 30.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov; Kastrakli Reserve, Chakin Dol River Valley KG71, KG72, 30.IV.2003, leg. I. Dedov, A. Irikov, I. Mollov, K. Kirov.
- Zabardo Village, Kamaka Summit, 2 km northeast of the village, LG03(7), 02.VIII.2004, leg. A. Irikov.

- Smoljan, Sredorek quarter, Cherna River Valley, 5 km west of the town, LG00(3), 03.VII.2004, leg. A. Irikov, T. Irikiova (*B. biplicata tenuispira*).
- Hrabrino Village, a river valley to Dedovo Village, LG05(2), 06.XI.2004, leg. A. Irikov, T. Irikiova (*B. b. atanasovi*).
- Hrabrino Village, Pepelashka River Valley up to the village, LG05(4), 27.XI.2004, leg. A. Irikov, T. Irikova.
- Широка Laka Village, KG91(1), 28.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- between Mostovo Village and Sini Vrah Village, LG33(1), 01.V.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Sini Vrah Village, LG33(2), 01.V.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Ravnogor Village, KG(84), Sveta Nedelja area, up to Bratzigovo, 27.III.2004, leg. D. Georgiev.
- Lepenitsa River Valley, GM45-KG54, 22.VIII.2004, leg. D. Georgiev.
- Dedovo Village, LG05(1), east of the village, Tamrashka River Valley, beech and oak forest, 02.V.2003, leg. I. Mollov.

Vertical distribution: In the Western Rhodopes the species is registered between 300 m a.s.l. at Asenovgrad and 1600 m a.s.l. in the Chudnite Mostove Rock Bridges area.

Ecological data: This is one of the most common clausilids in the Western Rhodopes. It inhabits very diverse habitats and it can be found very often on limestones and in the leaf cover of broad-leaved and rarely in pine-tree forests. The species is considerably polyvalent, but it prefers habitats with moderate humidity and temperatures.

Mesophilic and mesothermic species (IRIKOV, 2002).

Taxonomical data: Conchiologically this species is extremely polymorphic and because of this there are several different forms described. The Western Rhodopes are one of the regions in Bulgaria where most variations are recorded. To clarify their systematic status more DNA studies must be done.

Zoogeography: Mid European element, European faunistic complex.

#### # *Balea (Alinda) wagneri* (A. Wagner, 1911)

This taxon was described by A.J. Wagner (In: WOHLBEREDT, 1911) from Asenovgrad, however it has never been found there again. We think that there was a mistake with the species locality, in our opinion this species does not occur in the Western Rhodopes.

#### 46. (•) *Balea (Balea) perversa* (Linnaeus, 1758)

Published for the Western Rhodopes in the present study

Localities (tabl. 1, 2; fig. 1):

- Chudni Mostove Rock Bridges area, KG93(1), V.2002, 12.V.2005, leg. A. Irikov.
- Kamaka Summit, LG03(7), 2 km northeast of Zabardo Village, 12.VIII.2004, leg. A. Irikov, T. Irikova.
- Dedovo Village, east of the village, Tamrashka River Valley, LG05(1), in beech and oak forest, 02.V.2003, leg. I. Mollov.

Vertical distribution: In the Western Rhodopes the species is registered between 900 m a.s.l. at Dedevo Village up to 1600 m a.s.l. in the Chudnite Mostove Rock Bridges area. The Western Rhodopes is one of the southeastern localities from the species areal.

Ecological data: Insufficient.

Zoogeography: Mid European element, European faunistic complex.

47. (■) *Vestia (Brabenecia) ranojevici ranojevici* (Pavlovic, 1912)

*Pirostoma (Pirostoma) riloānsis*: WAGNER A., 1927: 343.

*Pseudalinda (Vestia) riloānsis riloānsis*: URBAŃSKI, 1960c: 135.

*Vestia (Brabenecia) ranojevici ranojevici*: NORDSIECK, 1974: 159-160; URBAŃSKI, 1977: 250.

*Vestia riloensis*: DAMJANOV & LIKHAREV, 1975: 217.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): WAGNER A. (1927) LG24(1), URBAŃSKI (1960c) LG24(1), NORDSIECK (1974) ("The Rhodopes Mountain is an inaccurate locality of this species"), DAMJANOV & LIKHAREV (1975) LG24(1), URBAŃSKI (1977) KG53, KG63, HUBENOV (In: DELCHEV et al., 1993) KG53, KG63. WAGNER (1927) first reported this species for the Rhodopes Mountain – around the Bachkovski Monastery in the Chepelarska River Valley, south of Asenovgrad. URBAŃSKI (1960) stated that in Bachkovo Village and around Bachkovski Monastery this species is either of very local distribution or it is very rare, because the author had collected many clausilid specimens from this place (in 1938, 1956 and 1958) but *V. ranojevici* was not among them. In 1977 the same author found one typical specimen in the area of Beglika Village in the Western Rhodopes. According to NORDSIECK (1974), the Rhodopes Mountain is an inaccurate locality for this species, as Pinter L. and himself had never found it there.

During our long research we also did not find this species in the area of Bachkovski Monastery and in our opinion this species does not occur there.

New localities (tabl. 1, 2; fig. 1):

- Ludi Dol River Valley, GM43, right feed of Chepinska River, south of Velingrad, 23.08.2004. leg. D. Georgiev.

So far this is the only certain locality of the species in the Rhodopes Mountain.

Vertical distribution: In the Western Rhodopes the species is registered at 1600 m a.s.l. in the area of Ludi Dol River Valley, south of Velingrad.

Ecological data: Insufficient.

Zoogeography: South European mountainous subelement, European mountainous element, European faunistic complex.

48. (■■■) *Bulgarica (Bulgarica) fraudigera* (Rossmässler, 1839)

*Idyla fraudigera*: WOHLBEREDT, 1911: 209.

*Idyla rugicolis* var. *rhodopaensis*: WOHLBEREDT, 1911: 210; WAGNER A. (In: WOHLBEREDT, 1911): 210.

*Laciniaria (Bulgarica) fraudigera*: URBAŃSKI, 1960c: 127; RIEDEL & URBAŃSKI, 1964: 77.

*Laciniaria fraudigera*: URBAŃSKI, 1964: 27; PINTER L., 1968: 220; DAMJANOV & L. PINTER, 1969: 36, 38.

*Laciniaria (Idylopsina) fraudigera*: SAJO, 1968: 452; HUDEC & VAŠATKO, 1971: 8.

*Laciniaria (Idylopsina) rugicolis rhodopaensis*: URBAŃSKI, 1969: 242.

*Bulgarica (Bulgarica) fraudigera*: NORDSIECK, 1973: 196; IRIKOV, 2002: 94.

*Laciniaria (Idylopsina) fraudigera*: DAMJANOV & LIKHAREV, 1975: 208.

*Bulgarica fraudigera*: CLAUSS, 1977: 309; KÖRNIG, 1983: 33; HUBENOV, 1993: 179.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): WOHLBEREDT (1911) LG25(1), URBAŃSKI (1960c, 1964) LG24(2), RIEDEL & URBAŃSKI (1964) LG24(1), PINTER L. (1968) LG14-LG24-LG25(2), LG24(2), SAJO (1968) LG14-LG24-LG25(2),

LG24(2), LG14(2), URBAŃSKI (1969) LG24(2), DAMJANOV & L. PINTER (1969) LG24(4), LG25(3), HUDEC & VAŠATKO (1971) LG24(2), NORDSIECK (1973) (“the lower part of the Chepelarska River Valley in the Central Rhodopes”), DAMJANOV & LIKHAREV (1975) (“Northeastern Rhodopes in the Chepelarska River Valley”), CLAUSS (1977) LG03(3,4), KÖRNIG (1983) LG13-LG14, LG24(1), LG23(4), HUBENOV (In: DELCHEV et al., 1993) LG24(1), LG13(2), LG23(4), IRIKOV (2002, 2003) LG23-LG24-LG25-LG34, IRIKOV (2003) LG23(1), LG02-LG03-LG14-LG24-LG25.

New localities (tabl. 1, 2; fig. 1):

- Hvoyna Village, LG03(1), 11.X.2001, leg. A. Irikov.
- Belitsa Village, Belitsa River Valley, LG23(3), 23.VIII.2003, leg. A. Irikov, T. Irikova.
- below Dragiitsa Summit, between Hvoyna Village and Chepelare, east of Chepelarska River Valley, LG03(7), 10.VIII.2004, leg. A. Irikov, T. Irikova.

Vertical distribution: In the Western Rhodopes the species is registered between 300 m a.s.l. at Asenovgrad up to 1300 m a.s.l. in the area of Summit “Dragiitsa” in Radyuva Mountain.

Ecological data: This is an apetrophyllous and calcareous species, which inhabits mostly open rocks, but also shady forest habitats.

According to IRIKOV (2002) this species is “xerophilic, thermophilic, drought-resistant”.

Endemism: Bulgarian endemic taxon, known from a small area from the Western Rhodopes.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

#### 49. (■■■) *Bulgarica fritillaria* (Frivaldsky, 1835)

*Strigillaria cana* var. *curta*: WAGNER A. (In: WOHLBEREDT, 1911): 211.

*Laciniaria (Bulgarica) fritillaria*: URBAŃSKI, 1960c: 130; RIEDEL & URBAŃSKI, 1964: 77; URBAŃSKI & WIKTOR, 1968: 56.

*Laciniaria fritillaria*: URBAŃSKI, 1964: 26.

*Laciniaria (Strigilecula) cana curta*: URBAŃSKI, 1969: 241.

*Bulgarica (Bulgarica) fritillaria*: NORDSIECK, 1973: 196; URBAŃSKI, 1977: 248; IRIKOV, 2002: 95.

*Bulgarica fritillaria*: KÖRNIG, 1983: 33.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): WOHLBEREDT (1911) KG57, URBAŃSKI (1960c, 1964) LG24(2), RIEDEL & URBAŃSKI (1964) LG25(1), URBAŃSKI & WIKTOR (1968) LG24(2), URBAŃSKI (1969) KG57, NORDSIECK (1973) KG57, LG24(1), URBAŃSKI (1977) (Central Rhodopes), KÖRNIG (1983) (“Central Rhodopes near Plovdiv”), IRIKOV (2002, 2003) LG23-LG24-LG25-LG34.

Vertical distribution: In the Western Rhodopes the species is registered between 300 m at Belovo Village and 1400 m a.s.l. in the area of Chervenata Skala Summit in the Dobrostan Ridge.

Ecological data: Insufficient.

Endemism: Bulgarian endemic taxa, known from a few localities in the Rhodopes Mountain.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

50. (■■■) *Bulgarica (Bulgarica) bulgariensis bulgariensis* (Keuster, 1861)

*Bulgarica (Bulgarica) intricata bulgarica*: IRIKOV, 2002: 95.

*Bulgarica bulgariensis*: IRIKOV, 2003:144.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): IRIKOV (2002) LG23-LG24-LG25-LG34, IRIKOV (2003) LG23-LG24-LG25-LG34, LG23(1).

Vertical distribution: So far in the Western Rhodopes this species has been registered only in the area of Mostovska Sushitsa River Valley between 600 m and 1300 m a.s.l. Ecological data: Inhabits limestones with south exposition with xerothermic conditions. During the summer and the winter the animals use the roots of herbaceous vegetation as shelter. According to IRIKOV (2003) sometimes there are active animals during the winter, because these rocks don't hold any snow.

A petrophilic, calcareous, thermophilic and xerophilic, drought-resistant species.

Endemism: Bulgarian endemic taxon with a disjunctive areal, so far known from only few areas in North Bulgaria near Central Stara Planina Mountain and from the above-mentioned locality in the Rhodopes Mountain.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

51. *Bulgarica (Denticularia) denticulata thessalonica* (Olivier, 1801)

*Laciniaria (Denticularia) thessalonica*: URBAŃSKI, 1960b: 81; 1960c: 127, 130.

*Laciniaria thessalonica*: URBAŃSKI, 1964: 26; PINTER L., 1968: 220; DAMJANOV & L. PINTER, 1969: 36, 38.

*Laciniaria (Bulgarica) thessalonica*: RIEDEL & URBAŃSKI, 1964: 77; URBAŃSKI & WIKTOR, 1968: 56; SAJO, 1968: 451; HUDEC & VAŠATKO, 1971: 8; DAMJANOV & LIKHAREV, 1975: 212.

*Bulgarica thessalonica*: CLAUSS, 1977: 309; KÖRNIG, 1983: 35; HUBENOV (In: DELCHEV et al., 1993): 182.

*Bulgarica (Denticularia) thessalonica*: IRIKOV, 2002: 95.

*Bulgarica denticulata thessalonica*: IRIKOV, 2003: 144.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI (1960b,c), LG25(2), URBAŃSKI (1964) LG24(2), LG25(2), RIEDEL & URBAŃSKI (1964) LG24(2), LG25(2), URBAŃSKI & WIKTOR (1968) LG24(2), PINTER L. (1968) LG14-LG24-LG25(2), LG24(2), SAJO (1968) LG14-LG24-LG25(1), DAMJANOV & L. PINTER (1969) LG24(4), LG25(3), HUDEC & VAŠATKO (1971) LG24(4), DAMJANOV & LIKHAREV (1975 - "Rhodopes"), CLAUSS (1977) LG24(2), LG02(1,2,4), LG01(3,4), LG11, KÖRNIG (1983) LG00(1), LG24(1), HUBENOV (In: DELCHEV et al., 1993 - "Rhodopes"), IRIKOV (2002, 2003) LG23-LG24-LG25-LG34, IRIKOV (2003) LG23(1), IRIKOV (2006-in press) KG93(1), LG03(7), LG02-LG03-LG14-LG24-LG25.

New localities (tabl. 1, 2; fig. 1):

- Chepelarska River Valley (from Narechenski Bani Mountain Resort to Hvoyna Village, LG03-LG04-LG14 and Pavelsko Village, LG03(4)), 2000-2004, leg. A. Irikov.
- Oreshitsa River Valley (from Hvoyna Village to Orehovo Village) and road to Persenk Summit, LG03(3), 2000-2004, leg. A. Irikov.
- Chudni Mostove Rock Bridges area, KG93(1), V.2002, leg. A. Irikov.



- Trigrad Village, KG80(1), Teshel Village, KG71(1), Kastrakli reserve, Chakin Dol River Valley KG71, KG72, Buynovska River Gorge, KG71(3), V.2001, V.2002, leg. A. Irikov.
- Kamaka Summit, 2 km northeast of Zabardo Village, 12.VIII.2004, leg. A. Irikov, T. Irikova.; 22.VIII.2004, leg. A. Irikov.
- Belitsa Village, LG23(3), Belitsa River Valley, 28.VIII.2004, leg. A. Irikov, T. Irikova.
- between Hrabrino Village and Dedovo Village, a river valley, 06.XI.2004, leg. A. Irikov, T. Irikova
- between Mostovo Village and Sini Vrah Village, LG33(1), 01.V.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.

Vertical distribution: In the Western Rhodopes the species is registered between 300 m a.s.l. at Asenovgrad and 1600-1700 m a.s.l. in the area of Studenets Hut, but probably this species can be found at a higher altitude.

Ecological data: This is one of the polyvalent species from the Clausiliidae family, which inhabits very diverse types of habitats. A specific ecological peculiarity of the species from this family is that they are all petrophilic and with few exceptions are calcereous. *B. denticulata thessalonica*, however can be found within limestones and silicate rocks. Often this species can be found in habitats without any rocks, in the leaf cover of different types of broadleaved forests and as a precedent in the leaf cover of pinetree forests with pH - 4,5. The wide distribution of this species in the Western Rhodopes is a result of its high tolerancă and big possibilities for adequate adaptive reaction against the environmental conditions. As a result the species can be found in habitats with high and low humidity as well as in low and high temperatures, but its distinguished peculiarity is its high drought-resistance.

Polysubstrate, eurybiontic species.

Taxonomical data: This species has some extraordinary conchiological polymorphism concerning its size, the form and the structure of the shell. One of the most distinguished characteristics of the species is the presence of multiple small plicas, placed on the parietal, the basal and the columellar part of the opening, but they could be missing in some specimens.

Endemism: Endemic taxon for the Balkan Peninsula.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

## Succineidae

### 52. *Succinea oblonga* Draparnaud, 1801

*Succinea oblonga*: IRIKOV, 2002: 95.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): IRIKOV (2002) LG23-LG24-LG25-LG34. This species is reported generally for the Dobrostan Ridge by IRIKOV A. (2002), but actually it was registered only at Bachkovo Village.

Vertical distribution: The only known locality so far of this species in the Western Rhodopes is at 500 m a.s.l. The snails were found in the grass at high humidity near a wooden water trough.

Mesohygrophilic, drought-resistant species (IRIKOV, 2002) cool-loving.

Zoogeography: This species is characterized by IRIKOV (2002) as Mid European element, but we think that it is more accurate to define it as: Transpalearctic subelement, Euroasiatic Palearctic element, Siberian faunistic complex.

**Ferussaciidae****53. *Cecilioides acicula* (Müller, 1774)**

*Cecilioides acicula*: IRIKOV A. & T. IRIKOVA, 2000: 422.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): IRIKOV A. & T. IRIKOVA (2000) LG24(3), IRIKOV (2002) LG23-LG24-LG25-LG34. This species is also reported for the Dobrostan Ridge by IRIKOV (2002), but actually it was registered only in the area of Slivov Dol near Bachkovo Village.

New localities (tabl. 1, 2; fig. 1):

- Kastrakli Reserve, Chakin Dol River Valley KG71, KG72, 30.IV.2003, leg. I. Dedov, A. Irikov, I. Mollov, K. Kirov.

Vertical distribution: In the Western Rhodopes the species is registered between 500 m a.s.l. in the area of Slivov Dol in the Dobrostan Ridge and about 900 m a.s.l. at Kastrakli Reserve. Ecological data: According to IRIKOV (2002) this species is a mesohygrophilic, mesothermic and relatively cool-loving.

Zoogeography: Mid European element, European faunistic complex.

**# *Cecilioides jani* (De Betta & Martinati, 1855)**

This species is reported by Damjanov & Likharev (1975) for the north part of the Rhodopes Mountain. As a result of our study and because of the absence of any other literary sources we think that this is an invalid taxon for the Rhodopes Mountain.

**# *Cecilioides spelaeus* (A. J. Wagner, 1914)**

This species is reported by Damjanov & Likharev (1975) for the Rhodopes Mountain, but like the previous species we think that this is an invalid taxon for the Rhodopes Mountain.

**Arionidae****54. *Arion (Mesarion) subfuscus* (Draparnaud, 1805)**

*Arion (Mesarion) subfuscus*: URBANĀSKI & WIKTOR, 1968: 50; WIKTOR, 1983: 86.

*Arion subfuscus*: DAMJANOV & LIKHAREV, 1975: 243.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBANĀSKI & WIKTOR (1968) GM45-KG54, KG90, HUDEC & VAŠATKO (1971) KG90, LG01(2), DAMJANOV & LIKHAREV (1975 - "The Western and Central Rhodopes"), WIKTOR (1983) LG01(2), LG04(2), LG14(1), KG93(1,3), LG00(1), KG64.

New localities (tabl. 1, 2; fig. 1):

- Orehovo Village, Katargi area, northeast of the village, LG04(4), coniferous forest, 31.VI. 2003, leg. A. Irikov.
- Kastrakli reserve, Chakin Doll River Valley KG71, KG72, 30.IV.2003, leg. I. Dedov, A. Irikov, I. Mollov, K. Kirov; Trigrad Village, KG80 (1), 30.IV.2003, leg. I. Dedov, A. Irikov, I. Mollov, K. Kirov.
- Chairski Lakes, KG80(2), 29.IV.2003, leg. I. Dedov, A. Irikov, I. Mollov, K. Kirov.
- Ludi Dol Mountain Brook area, GM43, Mechkina River Valley, between Velingrad and Dospat, 23.VIII.2004, leg. D. Georgiev.
- Yundola Mountain Resort, GM35, GM36, 24.VI.2004, leg. M. Kechev.

Vertical distribution: In the Western Rhodopes the species is registered between 500 m a.s.l. at Narechenski Bani Mountain Resort and 2191 m a.s.l. in the area of Golyam Perelik Summit.

Eurythermic, euryhygrobiontic species.

Zoogeography: Boreo-mountainous element, Northern Holarctic faunistic complex.

#### 55. *Arion (Carinarion) silvaticus* Lohmander, 1937

*Arion (Carinarion) silvaticus*: WIKTOR, 1983: 90.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): WIKTOR (1983) KG64.

New localities (tabl. 1, 2; fig. 1):

- Lepenitsa River Valley, GM45-KG54, 22.VIII.2004, leg. D.Georgiev.
- Barutin Village, KG60, Dospat River Valley, 27.VIII.2004, leg. D.Georgiev.

Vertical distribution: In the Western Rhodopes the species is registered between 900 m a.s.l. at Lepenitsa River Valley and 1100 m a.s.l. in the area of Batak Dam Lake.

Unlike *Arion subfuscus*, this species is found in urban areas and in anthropogenic habitats (agricultural areas ect.), and it is a typical forest species. The habitats where this species is registered in the Western Rhodopes characterize this species as mesohygrophilic, cool-loving and relatively cold-resistant.

Zoogeography: Mid European element, European faunistic complex.

### Euconulidae

#### 56. *Euconulus fulvus* (Müller, 1774)

*Euconulus fulvus*: PINTER L., 1968: 219.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): PINTER L. (1968) LG14-LG24-LG25(2), LG24(2), URBAŃSKI (1969) KG80(2), LG00(1), DAMJANOV & L. PINTER (1969) LG24(4), LG25(3), PINTER I. & L. PINTER (1970) KG93(1), URBAŃSKI (1971) KG81(1), IRIKOV A. & T. IRIKOVA (2000) LG24(3), IRIKOV (2002) LG23-LG24-LG25-LG34.

New localities (tabl. 1, 2; fig. 1):

- Buynovska River Gorge, KG71(3), V.2001, leg. A. Irikov.
- Ravnogor Village, KG84, near a cave hole, 27.III.2004, leg. D. Georgiev, S. Stoicheva.

Vertical distribution: In the Western Rhodopes the species is registered between 300 m a.s.l. at Asenovgrad and 1600 m a.s.l. in the area of Chudnite Mostove Rock Bridges area. Ecological data: According to IRIKOV (2002) this species is mesohygrophilic and cool-loving.

Zoogeography: Holarctic element, Siberian faunistic complex.

### Vitrinidae

#### 57. *Vitрина pellucida* (Müller, 1774)

*Vitрина rhodopensis*: WAGNER A. (In: WOHLBEREDT, 1911): 177.

*Vitрина pellucida*: OSHANOVA & L. PINTER, 1968: 244; Pinter I. & L. Pinter, 1970: 80.

*Vitрина* sp.: URBAŃSKI, 1969: 227.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): WOHLBEREDT (1911) LG25(1), OSHANOVA & L. PINTER (1968) LG24(2), LG25(1), URBAŃSKI (1969) KG80(2), PINTER I. & L. PINTER (1970) KG75(1), HUDEC & VAŠATKO (1971) LG24(2), DAMJANOV & LIKHAREV (1975 - "Rhodopes"), KÖRNIG (1983) LG00(1), IRIKOV A. & T. IRIKOVA (2000) LG24(3), IRIKOV (2002) LG23-LG24-LG25-LG34.

New localities (tabl. 1, 2; fig. 1):

- Hvoyna Village, LG03(1), V.2003, leg. A. Irikov, T. Irikova.



- Belitsa Village, LG23(3), Belitsa River Valley, 23.VIII.2003, leg. A. Irikov, T. Irikova.
- between Hrabrino Village and Dedovo Village, LG05(2), 27.XI.2004, leg. A. Irikov, T. Irikova.
- Chairski Lakes, KG80(1), 29.IV.2003, leg. I. Dedov, A. Irikov, I. Mollov, K. Kirov.
- Barutin Village, KG60, near Dospat River, 27.VIII.2004, leg. D. Georgiev.
- Ravnogor, KG84, near a cave hole, 27.III.2004, leg. D. Georgiev, S. Stoicheva.

Vertical distribution: In the Western Rhodopes the species is registered between 300 m a.s.l. at Asenovgrad and 1550 m a.s.l. in the area of Chairski Lakes.

Mesophilic, cool-loving, cold-resistant (IRIKOV, 2002).

Zoogeography: Holarctic element, Siberian faunistic complex.

#### 58. *Eucobresia diaphana* (Draparnaud, 1805)

*Eucobresia diaphana*: HUDEC & VAŠATKO, 1971: 8.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): HUDEC & VAŠATKO (1971) LG24(2).

Vertical distribution: The only known locality for this species so far in the Western Rhodopes is at 400 m a.s.l. at Bachkovo Village.

Ecological data: Insufficient.

Zoogeography: Mid European element, European faunistic complex.

#### 59. *Gallandia annularis* (Studer, 1820)

*Phenacolimax annularis*: PINTER I. & L. PINTER, 1970: 87; CLAUSS, 1977: 308; IRIKOV, 2002: 95.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): PINTER I. & L. PINTER (1970) KG93(1), CLAUSS (1977) LG03(4), IRIKOV (2002) LG23-LG24-LG25-LG34.

Vertical distribution: In the Western Rhodopes the species is registered between 400-500 m a.s.l. at the Dobrostan Ridge and 1600 m a.s.l. in the area of Chudnite Mostove Rock Bridges. Xeromesophilic and thermophilic species (IRIKOV, 2002).

Zoogeography: IRIKOV (2002), defines this species as Holosubmediterranean subelement of the Submediterranean element, but we think that it is more accurate to characterize it as South European mountainous subelement, European mountainous element, European faunistic complex.

#### 60. (■■■) *Oligolimax reitteri* (O.Boettger, 1880)

*Balcanovitrina dojtshini*: OSHANOVA & L. PINTER, 1968: 246; PINTER I. & L. PINTER, 1970: 87; CLAUSS, 1977: 308.

*Vitrina reitteri*: URBAŃSKI, 1971: 255.

*Semilimacella reitteri*: DAMJANOV & LIKHAREV, 1975: 254; HUBENOV (In: DELCHEV et al., 1993): 191.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): OSHANOVA & L. PINTER (1968) KG93(1), PINTER I. & L. PINTER (1970) KG93(1), URBAŃSKI (1971) KG81(1), DAMJANOV & LIKHAREV (1975) KG93(1), CLAUSS (1977) LG24(2), HUBENOV (In: DELCHEV et al., 1993) KG93(1).

Vertical distribution: So far the only certain locality for this species in the Western Rhodopes is the area of Chudnite Mostove Rock Bridges at 1600 m a.s.l. The report on its presence at Trigrad Village needs additional confirmation (after examining the genital

system of specimens from that locality) and the report on the species presence at Bachkovo Village is false and it concerns *Vitrina pellucida*.

Ecological data: Mesohygrophilic, cool-loving, cold-resistant species.

Endemism: Bulgarian endemic taxon, known only from one certain locality in the Western Rhodopes.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

## Zonitidae

### # *Vitrea diaphana diaphana* (Studer, 1820)

This species is reported by DAMJANOV & LIKHAREV (1975) for the Rhodopes Mountain in general, but in our opinion this species does not occur in the Western Rhodopes.

### # ? *Vitrea subrimata* (Clessin, 1877)

This species was reported with great doubt for the area of Slivov Dol in the Dobrostan Ridge in the Western Rhodopes by IRIKOV A. & T. IRIKOVA (2000). Additional research however showed that this species does not occur in this region.

## 61. *Vitrea neglecta* Damjanov & Pinter, 1969

*Vitrea neglecta* n. sp.: DAMJANOV & L. PINTER, 1969: 35.

*Vitrea bulgarica* n. sp.: DAMJANOV & L. PINTER, 1969: 36.

*Vitrea bulgarica*: PINTER I. & L. PINTER, 1970: 87, 88; PINTER L., 1972: 237; DAMJANOV & LIKHAREV, 1975: 260; RIEDEL, 1975: 160; CLAUSS, 1977: 308; HUBENOV (In: DELCHEV et al., 1993): 184; IRIKOV A. & T. IRIKOVA: 422.

*Vitrea neglecta*: PINTER L., 1972: 240; DAMJANOV & LIKHAREV, 1975: 261; RIEDEL, 1975: 160; IRIKOV, 2001: 35-38.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): DAMJANOV & L. PINTER (1969) KG57, KG75(1), KG82(1), KG93(1), LG00(1), LG03(1,2), LG14(1,2), LG24(2,4), LG25(1,2,4), LG24-LG25(1), PINTER I. & L. PINTER (1970) KG75(1), KG93(1), PINTER L. (1972) KG57, KG75(1), KG82(1), KG93(1), LG00(1), LG03(1,2), LG14(1,2), LG24(2,4), LG25(1,2,4), LG24-LG25(1), DAMJANOV & LIKHAREV (1975 - "*V. bulgarica* - The Rhodopes Mountain from Yakoruda to Chepelarska River Valley; *V. neglecta* - Rhodopes Mountain, LG01-LG02-LG03-LG04-LG14-LG24-LG25, KG82(1), GM45(1), LG00(1)"), RIEDEL (1975 - "Rhodopes Mountain"), CLAUSS (1977) LG24(2), KÖRNIG (1983) LG00(1), HUBENOV (In: DELCHEV et al., 1993 - "Rhodopes Mountain", "Chepelarska River valley") GM45(1), KG82(1), LG00(1), IRIKOV A. & T. IRIKOVA (2000) LG24(3), IRIKOV A. (2001) LG24(1), LG24-LG25(1), LG23(1), LG24(3) LG24-LG25(2), LG24(4), IRIKOV A. (2002) LG23-LG24-LG25-LG34.

New localities (tabl. 1, 2; fig. 1):

- Kastrakli Reserve, Chakin Dol River Valley KG71, KG72, 30.IV.2003, leg. I. Dedov, A. Irikov, I. Mollov, K. Kirov.
- between Mostovo Village and Sini Vrah Village, LG33(1), 01.V.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- between Beslen Village and Slashten Village, near Mesta River, GL49-KF59, 26.VIII.2004, leg. D. Georgiev.
- Ravnogor Village, KG84, 27.III.2004, leg. D. Georgiev, S. Stoicheva.

- Dedovo Village, east of the village, Tamrashka River Valley, in a beech and oak forest, LG05(1), 02.V.2003, leg. I. Mollov.

Vertical distribution: In the Western Rhodopes the species is registered between 300 m a.s.l. at Asenovgrad and 1600 m a.s.l. in the area of Chudnite Mostove Rock Bridges.

Ecological data: Polyvalent species in terms of temperature and humidity with considerable drought-resistance.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

### 62. *Vitrea contracta* (Westerlund, 1871)

*Vitrea contracta*: URBAŃSKI, 1969: 238.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI (1969) KG80(2), LG00(1), CLAUSS (1977) LG02(2), KÖRNIG (1983) LG23(4), IRIKOV (2002) LG23-LG24-LG25-LG34.

New localities (tabl. 1, 2; fig. 1):

- Chudnite Mostove Rock Bridges area, KG93(1), VIII.2004, leg. A. Irikov.
- Kastrakli Reserve, Chakin Dol River Valley KG71, KG72, 30.IV.2003, leg. I. Dedov, A. Irikov, I. Mollov, K. Kirov.

Vertical distribution: In the Western Rhodopes the species is registered between 300-400 m a.s.l. at Dobrostan Ridge and 1550 m a.s.l. in the area of Chairski Lakes.

Ecological data: Polyvalent species in terms of temperature and humidity, which according to IRIKOV (2002) is mesohygophilic, mesothermic and considerably cool-loving.

Zoogeography: Mid European element, European faunistic complex.

### # *Vitrea riedeli* Damjanov & L. Pinter, 1969

This species is reported by KÖRNIG (1983) for Bachkovo in the Western Rhodopes, where unfortunately it does not occur and in our opinion it was wrongfully identified.

### # *Vitrea sturany* (A. Wagner, 1907)

According to PINTER L. (1972) and RIEDEL (1975) this is an invalid taxon for the territory of Bulgaria, despite the fact that DAMJANOV & LIKHAREV (1975) reported it for the area of Velingrad and Trigrad Village in the Western Rhodopes. In our opinion this species does not occur in the Western Rhodopes localities mentioned by DAMJANOV & LIKHAREV (1975).

### 63. *Vitrea pygmaea* (O. Boettger, 1880)

*Vitrea pygmaea*: DAMJANOV & LIKHAREV, 1975: 265.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): DAMJANOV & LIKHAREV (1975 - "Rhodopes Mountain"), HUBENOV (In: DELCHEV et al., 1993 - "Rhodopes Mountain"), IRIKOV A. & Ò. IRIKOVA (2000) LG24(3), IRIKOV (2002) LG23-LG24-LG25-LG34.

Vertical distribution: In the Western Rhodopes the species is registered between 300-400 m a.s.l. and 1000 m a.s.l. in the Dobrostan Ridge.

Ecological data: It inhabits oak-hornbeam forests as well as thermophilic pinetree forests with pH of the soil - 4.5. It is capable of surviving continuous dry periods and according to IRIKOV (2002) it is a xeromesophilic and themophilic species.

Zoogeography: Irano-Turanian subelement, Subiranian element, Southwestern Asiatic faunistic complex.

**64. *Aegopinella pura* (Alder, 1830)**

*Aegopinella pura*: PINTER L., 1968: 219.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): PINTER L. (1968) LG24(2), DAMJANOV & L. PINTER (1969) LG24(4), PINTER I. & L. PINTER (1970) KG75(1), KG93(1), CLAUSS (1977) LG01(4), LG03(4), LG11, IRIKOV À. & Ò. IRIKOVA (2000) LG24(3), IRIKOV (2002) LG23-LG24-LG25-LG34.

New localities (tabl. 1, 2; fig. 1):

- Lepenitsa River Valley, GM45-KG54, 22.VIII.2004, leg. D.Georgiev.
- Ludi Dol Mountain Brook area, GM43, Mechkina River Valley, between Velingrad and Dospat, 23.VIII.2004, leg. D. Georgiev.
- Ravnogor Village, KG84, 27.III.2004, leg. D. Georgiev, S. Stoicheva.

Vertical distribution: In the Western Rhodopes the species is registered between 400 m a.s.l. at Bachkovo Village and 1600 m a.s.l. in the area of Studenets Hut and Chudnite Mostove Rock Bridges area.

Ecological data: It inhabits the leaf cover of broadleaved forests within limestones at middle and high altitudes.

Mesophilic and mesothermic species (IRIKOV, 2002). Eurosiberian forest species, which differs from the Siberian species, as it is not cold-loving, in other words it is not stenothermic, but it has considerable cold-resistance.

Zoogeography: Eurosiberian (forest) subelement, Euroasiatic Palearctic element, Siberian faunistic complex.

**65. *Aegopinella minor* (Stabile, 1864)**

*Aegopinella minor*. URBAŃSKI, 1960b: 94.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI (1960b,c; 1964) LG24(2), RIEDEL & URBAŃSKI (1964) LG24(2), LG25(2), URBAŃSKI & WIKTOR (1967) LG24(2), PINTER L. (1968) LG14-LG24-LG25(2), LG24(2), URBAŃSKI (1969) KG80(2), LG00(1), DAMJANOV & L. PINTER (1969) LG24(4), LG25(3), PINTER I. & L. PINTER (1970) KG75(1), KG93(1), DAMJANOV & LIKHAREV (1975 - "Rhodopes Mountain"), CLAUSS (1977) LG01(3,4), LG03(4), LG11, LG24(2), KÖRNIG (1983) LG00(1), LG24(1), LG23(4), IRIKOV À. & Ò. IRIKOVA (2000) LG24(3), IRIKOV (2002) LG23-LG24-LG25-LG34.

New localities (tabl. 1, 2; fig. 1):

- between Hrabrino Village and Dedovo Village, LG05(2), a river valley, 27.XI.2004, leg. A. Irikov, T. Irikova.
- Chepelare, LG02(3), a bank of Chepelarska River valley near a bus station, under stones, 01.V.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Trigrad Village, near Dyavolskoto Garlo Cave, KG81(2), 28.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Teshel Village, KG71(1), near Orpheus hotel-restaurant, 30.IV.2003, leg. I. Dedov, A. Irikov, I. Mollov, K. Kirov.
- Kastrakli Reserve, Chakin Dol River Valley KG71, KG72, 30.IV.2003, leg. I. Dedov, A. Irikov, I. Mollov, K. Kirov

- between Mostovo Village and Sini Vrah Village, LG33(1), 01.V.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Velingrad, Kleptuza Lake, GM45(2), 08.IX.2003, leg. K. Kirov.

Vertical distribution: In the Western Rhodopes the species is registered between 300-400 m a.s.l. at Asenova Fortress and 1600 m a.s.l. in the area of Studenets Hut and Chudni Mostove Rock Bridges area, but it probably reaches 2000 m a.s.l.

Ecological data: It inhabits the leaf cover of humid broad-leaved forests, within limestones from low to high altitudes. In Dobrostan Ridge it is very common and can be found in the leaf cover of monodominant beech forests.

IRIKOV (2002) characterized it as mesophilic and thermophilic, but it is more accurate to say that this is a mesophilic and mesothermic, relatively eurythermic and euryhygrobiontic species.

Zoogeography: Mid European element, European faunistic complex.

66. (■) *Balcanodiscus frivaldskyanus* (Rossmässler 1848)

*Oxychilus* (*O.?*) *frivaldskyanus*: URBAŃSKI, 1960c: 127.

*Paraegopis frivaldskyanus*: URBAŃSKI, 1964: 26; PINTER L., 1968: 219; DAMJANOV & L. PINTER, 1969: 36, 38; DAMJANOV & LIKHAREV, 1975: 273; CLAUSS, 1977: 308; KÖRNIG, 1983: 35; HUBENOV (In: DELCHEV et al., 1993): 184; IRIKOV A. & T. IRIKOVA, 2000: 422; IRIKOV, 2002: 95.

*Paraegopis* (*Balcanodiscus*) *frivaldskyanus*: RIEDEL & URBAŃSKI, 1964: 77; URBAŃSKI & WIKTOR, 1967: 56; RIEDEL, 1975: 101.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI (1960c, 1964) LG24(2), LG25(2), RIEDEL & URBAŃSKI (1964) LG04(3), LG23(4) - these localities are incorrect and are wrongfully mentioned by these authors for the North Eastern Rhodopes LG24(2), LG14 (2), LG25(1,2), “Sveti Nikola” Monastery near Asenovgrad”, URBAŃSKI & WIKTOR (1967) LG24(2), PINTER L. (1968) LG14-LG24-LG25(2), LG24(2), DAMJANOV & L. PINTER (1969) LG24(4), LG25(3), DAMJANOV & LIKHAREV (1975) LG01-LG02-LG03-LG04-LG14-LG24-LG25, RIEDEL (1975 - “Central Rhodopes”), CLAUSS (1977) LG24(2), KÖRNIG (1983) LG24(1), HUBENOV (In: DELCHEV et al., 1993) LG01-LG02-LG03-LG04-LG14-LG24-LG25, IRIKOV A. & T. IRIKOVA (2000) LG24(3), IRIKOV (2002) LG23-LG24-LG25-LG34, DEDOV & PETROV (2003).

The last two authors generalized the distribution of this species with all known localities in the Rhodopes Mountain, but they however missed one locality - the area of Slivov Dol in Dobrostan Ridge, announced by IRIKOV A. & T. IRIKOVA (2000). DEDOV & PETROV (2003) characterized this species as a Balkan endemic taxon, met only in the Rhodopes Mountain. RIEDEL & URBAŃSKI (1964) announced this species found as a subfossil on Tsarevets Hill near Veliko Tarnovo.

In a sample collected near the valley of Yantra River, near Tsarevets Hill we examined shells as well as the genital system of the found specimens and we confirmed the recent existence of this species in this locality, which is quite distant from the rest of the species areal in the Bulgarian part of the Rhodopes Mountain. For the time being this species should be defined as a Balkan endemic taxon, however with a disjunctive areal, including some parts of Greece and Bulgaria - the Rhodopes Mountain and the northern species locality at Tsarevets Hill, near Veliko Tarnovo.

Vertical distribution: In the Western Rhodopes the species is registered between 300-400 m a.s.l. at Asenova Fortress and 1000 m a.s.l. at Dobrostan Ridge.

Ecological data: At Dobrostan Ridge in the Western Rhodopes this species is most often met in the leaf cover of monodominant beech forests. Mesohygrophilic, cool-loving, cold-resistant. Endemism: Balkan endemic taxa.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

# *Oxychilus (Mediterranea) hydatinus* (Rossmässler, 1838)

This species was reported by BERON & GUEORGUIEV (1967) from Lepenitsa Cave, south of Velingrad in the Western Rhodopes. Probably based on this report, this species was announced for the Rhodopes Mountain in general by DAMJANOV & LIKHAREV (1975) and HUBENOV (In: DELCHEV et al., 1993). In our opinion there are more additional data needed concerning the species presence in this part of the Western Rhodopes.

# *Oxychilus (Longipballus) delius* (Bourguignat, 1857)

This taxa is mentioned by WOHLBEREDT (1911) "from slopes of the Rhodopes near Plovdiv", RIEDEL (1975) "one isolated locality in the Rhodopes Mountain at Hvoyna Village", KÖRNIG (1983) "Bachkovo Village and the Valley of Yugovo Valley", HUBENOV (In: DELCHEV et al., 1993) "Western Rhodopes". Our numerous research of the above mentioned localities showed that there occurs the very similar *Oxychilus glaber* (Westerlund, 1881) and probably it was wrongfully identified. Unless a certain proof is presented, we will remain of the opinion that this taxon does not occur in the Western Rhodopes.

67. *Oxychilus (Morlina) glaber* (Westerlund, 1881)

*Hyalina glabra* var. *hungarica*: WOHLBEREDT, 1911:177.

*Oxychilus glaber*: URBAŃSKI, 1960b: 81; 1964: 26; 1969: 238; PINTER, 1968: 219; PINTER I. & L. PINTER, 1970: 87, 88; CLAUSS, 1977: 308.

*Oxychilus (Morlina) glaber*: URBAŃSKI, 1960c: 127; HUDEC & VASATKO, 1971: 8.

*Oxychilus (Morlina) glaber striarius*: RIEDEL & URBAŃSKI, 1964: 77; BERON & GUEORGUIEV, 1967: 153; BERON, 1972: 287; 1994: 6.

*Oxychilus (Oxychilus) glaber*: URBAŃSKI & WIKTOR, 1968: 56.

*Oxychilus glaber striarius*: URBAŃSKI, 1969: 227; 1971: 255; DAMJANOV & L. PINTER, 1969: 36, 38; IRIKOV A. & T. IRIKOVA, 2000: 422; IRIKOV, 2002: 95

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): WOHLBEREDT (1911) "Rhodopes Mountain near Plovdiv", URBAŃSKI (1960b) LG25(2), URBAŃSKI (1960c, 1964) LG24(2), RIEDEL & URBAŃSKI (1964) LG24(2), LG25(2), BERON & GUEORGIEV (1967) KG54 and Jivata Voda Cave, URBAŃSKI & WIKTOR (1967) LG24(2), PINTER L. (1968) LG24(2), LG14-LG24-LG25(2), URBAŃSKI (1969) KG80(2), DAMJANOV & L. PINTER (1969) LG24(4), LG25(3), PINTER I. & L. PINTER (1970) KG75(1), KG93(1), URBAŃSKI (1971) KG81(1), HUDEC & VASATKO (1971) LG24(2), BERON (1972) KG93(1), LG01(1), LG03(5), CLAUSS (1977) KG93(1), LG01-LG11, LG01(3,4), LG02(2), LG03(4), LG11, LG24(2), BERON (1994) KG71(2), IRIKOV A. & IRIKOVA (2000) LG24(3), IRIKOV (2002) LG23-LG24-LG25-LG34.

New localities (tabl. 1, 2; fig. 1):



- Trigrad Village, KG80(1), Teshel Village KG71(1), Buynovska River Gorge, KG71(2), Kastrakli Reserve, Chakin Dol River Valley KG71, KG72, V.2001, V.2002, leg. A. Irikov. Teshel Village, KG71(1), near hotel-restaurant "Orfei", 30.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Chepelarska River Valley (from Narechenski Bani Mountain Resort to Hvoyna Village) LG03-LG04-LG14, 2000 - 2004, leg. A. Irikov.
- Oreshitsa River Valley (from Hvoyna Village to Orehovo Village) LG03(3), 2000 - 2004, leg. A. Irikov
- Hvoyna Village, LG03(1), VIII.2003, leg. A. Irikov, T. Irikova.
- Belitsa, LG23(3), Belitsa River Valley, 23.VIII.2003, leg. A. Irikov, T. Irikova.
- between Hrabrino Village and Dedovo Village, LG05(2), 27.XI.2004, leg. A. Irikov, T. Irikova.
- Hrabrino Village, LG05(4), 27.XI.2004, leg. A. Irikov, T. Irikova.
- Smolyan, Srederek quarter, LG00(3), Cherna River Valley, 5 km west of the town, 03.VII.2004, leg. A. Irikov, T. Irikova.
- between Hvoyna Village and Chepelare, Dragiitsa Summit, LG13(1), east of Cepelarska River Valley, on rocks, 10.VIII.2004, leg. A. Irikov, T. Irikova.
- Kastrakli Reserve, Chakin Dol River Valley KG71, KG72, 30.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- between Mostovo Village and Sini Vrah Village, LG33(1), 01.V.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Sini Vrah Village, LG33(2), 01.V.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Lepenitsa River Valley, GM45-KG54, 22.VIII.2004, leg. D. Georgiev.
- Barutin Village, KG60, near Dospat River, 27.VIII.2004, leg. D. Georgiev.
- Krichim Dam area, KG84-KG85, 29.VIII.2004, leg. D. Georgiev.
- Ludi Dol Mountain Brook area, GM43, Mechkina River Valley, between Velingrad and Dospat, 23.VIII.2004, leg. D. Georgiev.
- Ravnogor Village, KG84, 27.III.2004, leg. D. Georgiev, S. Stoicheva.
- Dedovo Village, LG05(1), east of the village, Tamrashka River Valley, in a beech and oak forest, 02.V.2003, leg. I. Mollov.
- Velingrad, Kleptuza Lake area, GM45(2), 08.IX.2003, leg. Kirov.

Vertical distribution: In the Western Rhodopes the species is registered between 400 m a.s.l. at Asenova Fortress and 1600 m a.s.l. at Chudni Mostove Rock Bridges, Lednitsata cave, Ludi Dol Mountain Brook area, but it probably reaches higher altitudes.

Ecological data: This is one of the most common taxa in the Western Rhodopes. It inhabits very diverse habitats within limestones, but prefers forest areas with higher humidity. Despite the fact that this species is most often found in caves all over the country, it shouldn't be specified as a troglobiont or troglophile. The survival of few specimens, which have fallen into caves by chance or otherwise, is due to the specific ecological peculiarities of this snail (one of which is that it feeds on dead organic matter) and also because of the certain similarities of the conditions in the caves and microsites that it inhabits (prefers humid soils saturated with detritus). And last but not least, this is one of the most common snails in the terrestrial ecosystems, which is eurybiontic in contrast to all cave stenobiontic organisms.

Mesohygrophilic, mesothermic and cool-loving.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

# *Oxychilus (Morlina) urbanskii* Riedel, 1963

This species is reported for the Western Rhodopes only by KÖRNIG (1983) from Bachkovo Village and Smolyan. During our numerous and continuous search of these localities we couldn't find this species and because of that we suppose that it was wrongfully identified and it is an invalid taxon for the Western Rhodopes.

68. *Oxychilus (Riedelius) inopinatus* (Ulicny, 1887)

*Oxychilus inopinatus*: PINTER I. & L. PINTER, 1970: 88.

*Oxychilus (Riedelius) inopinatus*: RIEDEL, 1975: 164.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): PINTER I. & L. PINTER (1970) KG75(1), DAMJANOV & LIKHAREV (1975 - "Rhodopes"), RIEDEL (1975 - "Rhodopes"), IRIKOV À. & Ò. IRIKOVA (2000) LG24(3), IRIKOV (2002) LG23-LG24-LG25-LG34.

New localities (tabl. 1, 2; fig. 1):

- Ravnogor Village, KG84, 27.III.2004, leg. D. Georgiev, S. Stoicheva.

Vertical distribution: In the Western Rhodopes the species is registered between 100 m a.s.l. and 400 m a.s.l. in the area of the Dobrostan Ridge.

Ecological data: It inhabits broadleaved forests as well as thermophilic pinetree forests with pH 4,5.

According to IRIKOV (2002) it is a xeromesophilic, thermophilic, drought-resistant species capable of surviving considerable temperature fluctuations.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

69. *Oxychilus (Riedelius) depressus* (Sterki, 1880)

*Oxychilus depressus*: PINTER L., 1968: 219; DAMJANOV & L. PINTER, 1969: 36; PINTER I. & L. PINTER, 1970: 87.

*Oxychilus (Riedelius) depressus*: RIEDEL, 1975: 164.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): PINTER L. (1968) LG24(2), DAMJANOV & L. PINTER (1969) LG24(4), PINTER I. & L. PINTER (1970) KG93(1), DAMJANOV & LIKHAREV (1975 - "Rhodopes"), BERON (1994) KG61(2), LG01(1), IRIKOV À. & Ò. IRIKOVA (2000) LG24(3), IRIKOV (2002) LG23-LG24-LG25-LG34.

New localities (tabl. 1, 2; fig. 1):

- Hvoyna Village, LG03(1), 11.X.2001, leg. A. Irikov.
- Kamaka Summit, LG03(7), 2 km northeast of Zabardo Village, 12.VIII.2004, leg. A. Irikov, T. Irikova.
- between Mostovo Village and Sini Vrah Village, LG33(1), 01.V.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.

Vertical distribution: In the Western Rhodopes the species is registered between 400 m a.s.l. in the area of Bachkovski Monastery and 1600 m a.s.l. in the area of Pamporovo Mountain Resort.

Ecological data: This species has a subterranean way of life and prefers humid soils saturated with detritus and other dead organic matter. It often falls into caves, similar

to *Oxychilus glaber*, but due to the same reasons (see *O. glaber*) it shouldn't be classified as troglobiotic or troglophile.

According to IRIKOV (2002) it is a mesophilic, cool-loving and cold-resistant species. Zoogeography: IRIKOV (2002), characterized this species as Mid European element, but it is more accurate to say that this is Mid European Mountain subelement, European Mountain element, European faunistic complex.

### Dauebardiidae

#### 70. *Dauebardia (Dauebardia) rufa cycladum* Martens, 1889

*Dauebardia rufa*: URBAŃSKI, 1969: 227, 238.

*Dauebardia rufa*: PINTER I. & L. PINTER, 1970: 88.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI (1969) KG80(2), PINTER I. & L. PINTER (1970) KG75(1).

Vertical distribution: In the Western Rhodopes the species is registered between 500 m a.s.l. at Peshtera and 1550 m a.s.l. in the area of Chairski Lakes.

Ecological data: *Dauebardia rufa cycladum* and *Dauebardia brevipes* are often found together, but in the Rhodopes Mountain they are probably competitors with the endemic species *Dauebardia wiktoria* Riedel, 1967 and probably that is the reason why these species do not occur within its areal.

Mesohygrophilic, cool-loving, cold-resistant.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

#### 71. *Dauebardia (Dauebardia) brevipes* (Draparnaud, 1805)

*Dauebardia brevipes*: RIEDEL, 1967: 469.

*Dauebardia brevipes*: PINTER I. & L. PINTER, 1970: 88.

*Dauebardia brevipes*: DAMJANOV & LIKHAREV, 1975: 294.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): RIEDEL (1967) KG82(2), PINTER I. & L. PINTER (1970) KG75(1), DAMJANOV & LIKHAREV (1975 - Western Rhodopes).

New localities (tabl. 1, 2; fig. 1):

- east of Dedovo Village, Tamrashka River Valley, in beech and oak forest, LG05(1), 02.V.2003, leg. I. Mollov.

Vertical distribution: In the Western Rhodopes the species is registered between 500 m a.s.l. at Peshtera and 900 m a.s.l. in the area of Bedenski Mineralni Bani Mountain Resort near Devin.

Ecological data: This species areal is influenced by the distribution of *D. wiktoria* (see the previous species).

Mesohygrophilic, cool-loving, cold-resistant.

#### 72. *Dauebardia (Libania) wiktoria* Riedel, 1967

*Dauebardia wiktoria*: RIEDEL, 1967: 471; 1975: 164; PINTER L., 1968: 215; DAMJANOV & L. PINTER, 1969: 36; BERON, 1972: 288; DAMJANOV & LIKHAREV, 1975: 294; KÖRNIG, 1983: 35; HUBENOV (In: DELCHEV et al., 1993): 184; IRIKOV A. & T. IRIKOVA, 2000: 422; IRIKOV, 2002: 95.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): RIEDEL (1967) LG25(1), PINTER L. (1968) LG24(2), DAMJANOV & L. PINTER (1969) LG24(4), BERON (1972) KG93(1), RIEDEL (1975) KG93(1), LG00(1), LG04(1), LG10, LG23(4), LG24(2), LG25(1), DAMJANOV & LIKHAREV (1975) LG24(2), LG25(1), KÖRNIG (1983) LG00(1), HUBENOV (In: DELCHEV et al., 1993) KG93(1), LG00(1), LG23(3), LG24(1), LG25(1), IRIKOV A. & Ò. IRIKOVA (2000) LG24(3), IRIKOV (2002) LG23-LG24-LG25-LG34.

New localities (tabl. 1, 2; fig. 1):

- between Sini Vrah Village and Karadjov Kamak Summit, LG33(3), 31.X.2004, leg. A. Irikov.
- Kastrakli Reserve, Chakin Dol River Valley KG71, KG72, 30.IV.2003, leg. I. Dedov, A. Irikov, I. Mollov, K. Kirov.
- between Mostovo Village and Sini Vrah Village, LG33(1), 01.V.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov
- Ravnogor Village, KG84, 27.III.2004, leg. D. Georgiev, S. Stoicheva.

Vertical distribution: In the Western Rhodopes the species is registered between 300 m a.s.l. at Asenovgrad and about 1600 m a.s.l. in the area of Chudni Mostove Rock Bridges.

Ecological data: It inhabits mainly forest habitats, but often it can be found in pinetree forests as well. It prefers high humidity and lower temperatures.

Mesohygrophilic, cool-loving, cold-resistant.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

#### # *Carpathica stussineri* (Wagner, 1895)

This species is reported for the Rhodopes Mountain in general only by DAMJANOV & LIKHAREV (1975), but they didn't specify any exact locality for its occurrence. In our opinion this is an invalid taxon for the fauna of the Western Rhodopes.

#### 73. (••) *Carpathica* sp.

On 12.05.2005 in Bachkovo Village, Ayazmoto area, we found 1 shell of a species from the genus *Carpathica* (A. Wagner 1895) which by its conchological characteristics differs from the other two known for Bulgaria species from the same genus *Carpathica stussineri* (Wagner, 1895) and *Carpathica bielawskii* Riedel, 1963. The shell was found within rocks under which there is a small mountain brook. Our initial suggestion is that the animals inhabit the caves and the subterranean galleries in the region and very rarely with the subterranean waters shells from dead animals float to the surface.

Conchologically, the new species bears greatest similarity with *Carpathica wirthi* Forcart 1971, which so far has been established only in Turkey in a cave near Bursa. To clarify the exact taxonomical status however more alive animals are needed for anatomical study on their genital system.

### Gastrodontidae

#### 74. *Zonitoides nitidus* (Müller, 1774)

*Zonitoides nitidus* var. *frondosula*: WOHLBEREDT, 1911: 178.

*Zonitoides nitidus*: URBADNSKI, 1960c: 130.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): WOHLBEREDT (1911 - "a slope of the Rhodopes Mountain near Plovdiv"), URBANŠKI (1960c, 1964) LG24(2), RIEDEL & URBANŠKI (1964) LG24(2), DAMJANOV & LIKHAREV (1975 - "Rhodopes").  
New localities (tabl. 1, 2; fig. 1):

· Barutin Village, near Dospat River, KG60, 27.VIII.2004, leg. D. Georgiev.

Vertical distribution: In the Western Rhodopes the species is registered between 400 m a.s.l. at Bachkovo Village and 1000 m a.s.l. at Barutin Village.

Hygrophilic, cool-loving, cold-resistant species.

Zoogeography: Holarctic element, Siberian faunistic complex.

## Milacidae

### 75. *Tandonia kusceri* (H. Wagner, 1931)

*Amalia marginata*: JURINICH, 1906: 10; WOHLBEREDT, 1911: 184.

*Milax marginatus*: WAGNER Í., 1934: 57.

*Milax kusceri*: URBANŠKI & WIKTOR, 1967: 86.

*Tandonia kusceri*: WIKTOR, 1983: 102.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): JURINICH (1906) LG02(3), WOHLBEREDT (1911) LG02(3), WAGNER H. (1934) LG02(3), URBANŠKI & WIKTOR (1967) KG64 and "? Durken", WIKTOR (1983) GM31, LG00(1), LG24(2).

New localities (tabl. 1, 2; fig. 1):

· between Beslen Village and Slashten Village, near Mesta River GL49-KF59, 26.VIII.2004, leg. D. Georgiev.

Vertical distribution: In the Western Rhodopes it is recorded from 400 m a.s.l. at Bachkovo Village up to 1000 m a.s.l. at Chepelare.

Ecological data: Largely tolerant to most ecological factors. Found in biotopes of various humidity (including xerothermic ones) – forests, bushes and rock rubble with sparse vegetation (WIKTOR, 1983).

Eurythermic, euryhygrobiontic, considerably drought-resistant species.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

### 76. *Tandonia serbica* (H. Wagner, 1931)

*Milax serbicus*: URBANŠKI & WIKTOR, 1967: 82; DAMJANOV & LIKHAREV, 1975: 329.

*Tandonia serbica*: WIKTOR, 1983: 105.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBANŠKI & WIKTOR (1967) LG14(1), LG24(2), LG25(1,2), DAMJANOV & LIKHAREV (1975) LG00(1), LG14(1), LG24(2), WIKTOR (1983) KG75(2), KG93(1), LG03(1), LG24(2), LG25(1), HUBENOV (In: DELCHEV et al., 1993) LG00(1), LG14(2), LG24(2).

Vertical distribution (tabl. 1, 2; fig. 1): In the Western Rhodopes it is recorded from 300 m a.s.l. at Asenovgrad up to around 1600 m a.s.l. in the area of Chudni Mostove Rock Bridges.

Ecological data: It inhabits mainly rock rubbles, especially limestone, almost exclusively on dry slopes covered by bushes (WIKTOR, 1983).

Mountain species, meso-xerophilic, calcereous.

Endemism: Balkan endemic taxon.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

**77. *Tandonia budapestensis* (Hazay, 1881)**

*Milax (Milax) budapestensis*: URBAŃSKI & WIKTOR, 1967: 80.

*Milax budapestensis*: DAMJANOV & LIKHAREV, 1975: 328.

*Tandonia budapestensis*: WIKTOR, 1983: 109.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI & WIKTOR (1967) GM45-KG54, LG03(1), LG25(1), DAMJANOV & LIKHAREV (1975) GM45(1), LG25(1), WIKTOR (1983) GM45-KG54, LG03(1), LG25(1).

Vertical distribution: In the Western Rhodopes it is recorded from 300 m a.s.l. at Asenovgrad up to around 900-1000 m a.s.l. in Lepenitsa River Valley near Velingard.

Ecological data: Largely tolerant to most ecological factors, especially as a synanthrope. Found most frequently among shrubs, sometimes in forests, ruins, rock rubble, parks and cultivated gardens, under stones and cloths of earth (WIKTOR, 1983).

Eurythermic, euryhygrobiotic.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

**78. *Tandonia cristata* (Kaleniczenko, 1851)**

*Tandonia cristata*: WIKTOR, 1983: 115.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): WIKTOR (1983) LG00(1).

New localities (tabl. 1, 2; fig. 1):

- between Hrabrino Village and Dedovo Village, LG05(2), a river valley, 27.XI.2004, leg. A. Irikov, T. Irikova.

Vertical distribution: In the Western Rhodopes it is recorded from 500 m a.s.l. in the area of Hrabrino Village up to about 1000 m a.s.l. at Smolyan.

Ecological data: Hiding under big stones deep in the soil. Found mostly in mixed and deciduous forests, also among shrubs. Found most frequently in loamy soils, lower parts of valleys and their bottoms (WIKTOR, 1983).

Mesothermic, mesophilic.

Zoogeography: Euxinian faunistic subelement, Submediterranean element, European faunistic complex.

**79. (■■■) *Tandonia pinteri* (Wiktor, 1975)**

*Milax (Tandonia) pinteri*: WIKTOR, 1975: 77.

*Tandonia pinteri*: WIKTOR, 1983: 118.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): WIKTOR (1975) KG93(1), WIKTOR (1983) KG93(1), LG00(1), KG82(1), HUBENOV (In: DELCHEV et al. 1993) KG93(1), LG00(1), KG82(1).

New localities (tabl. 1, 2; fig. 1):

- Dobrostan Ridge, Slivov Dol area, LG24(3), II.2004, leg. A. Irikov.
- between Mostovo Village and Sini Vrah Village, LG33(1), 01.V.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.



Vertical distribution: In the Western Rhodopes it is recorded from 600 m a.s.l. at Devin up to around 1600 m a.s.l. in the area of Chudni Mostove Rock Bridges.

Ecological data: Found in moist and well-shaded sites (WIKTOR, 1983).

Mesohygrophilic, microthermic.

Endemism: Bulgarian endemic taxon, known from only few localities in the Western Rhodopes.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

#### 80. (■■■) *Tandonia totevi* (Wiktor, 1975)

*Milax (Subamalia) totevi*: WIKTOR, 1975: 82.

*Tandonia totevi*: WIKTOR, 1983: 122.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): WIKTOR (1975) KG82(1), WIKTOR (1983) KG82(1).

Vertical distribution: The only known locality in the Western Rhodopes is Devin - 600 m a.s.l.  
Ecological data: Insufficient.

Endemism: Bulgarian endemic taxon, known from only one locality in the Western Rhodopes.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

### Punctidae

#### 81. *Punctum pygmaeum* (Draparnaud, 1801)

*Punctum (Punctum) pygmaeum*: RIEDEL & URBAŃSKI, 1964: 77

*Punctum pygmaeum*: PINTER L., 1968: 219.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): RIEDEL & URBAŃSKI (1964) LG25(2), PINTER L. (1968) LG24(2), URBAŃSKI (1969) KG80(2), DAMJANOV & L. PINTER (1969) LG24(4), PINTER I. & L. PINTER (1970) KG75(1), IRIKOV À. & Ò. IRIKOVA (2000) LG24(3), IRIKOV (2002) LG23-LG24-LG25-LG34.

New localities (tabl. 1, 2; fig. 1):

- Chudni Mostove Rock Bridges area KG93(1), 02.VIII.2004, leg. A. Irikov.
- Ravnogor Village, KG84, 27.III.2004, leg. D. Georgiev, S. Stoicheva.

Vertical distribution: In the Western Rhodopes this species is registered between 350 m a.s.l. at Asenova Fortress and 1600 m a.s.l. in the area of Chudni Mostove Rock Bridges.

Ecological data: It inhabits mostly humid broadleaved forests, within the leaf cover and within rocks. Mesohygrophilic, cool-loving, cold-resistant.

Zoogeography: Euroasian Palearctic element, Siberian faunistic complex.

#### # *Discus ruderatus* (Ferussac, 1821)

This species is reported for the Western Rhodopes by WAGNER A. (1927) and PETRBOK (1941) from the area of Bachkovo Village, but in our opinion this locality needs additional confirmation. According to DAMJANOV & LIKHAREV (1975) this species is met in the high mountain parts of the Rhodopes Mountain, but they didn't mention any exact locality, so at this point we think that this taxon is invalid for the Western Rhodopes.

**Limacidae****82. *Limax (Limax) maximus* Linnaeus, 1758**

*Limax maximus*: JURINICH, 1906: 11; WOHLBEREDT, 1911: 180.

*Limax maximus* var. *unicolor*: JURINICH, 1906: 12; WOHLBEREDT, 1911: 181.

*Limax (Limax) maximus*: URBAŃSKI & WIKTOR, 1968: 57.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): JURINICH (1906) GM45(4), GM46, LG02(3), WOHLBEREDT (1911) GM45(4), GM46, LG02(3), URBAŃSKI & WIKTOR (1968) LG24(2), DAMJANOV & LIKHAREV (1975 - "in all parts of the Rhodopes Mountain"), WIKTOR (1983) KG75(1).

New localities (tabl. 1, 2; fig. 1):

- Orehovo Village, Katargi area, LG04(4), northeast of the village, coniferous forest, 31.VI.2003, leg. A. Irikov.
- Trigrad Village, KG80(1), V.2002, leg. A. Irikov.
- Lepenitsa River Valley, GM45-KG54, 22.VIII.2004, leg. D.Georgiev.
- Ludi Dol Mountain Brook area, GM43, Mechkina River Valley, between Velingrad and Dospat, 23.VIII.2004, leg. D. Georgiev.
- Dedovo Village, east of the village, Tamrashka River Valley, in a beech and oak forest, LG05(1), 02.V.2003, leg. I. Mollov.

Vertical distribution: In the Western Rhodopes this species is registered between 400 m a.s.l. at Bachkovo Village and 1600 m a.s.l. in the area of Ludi Dol Mountain Brook, between Velingrad and Dospat.

Ecological data: Met in both natural and anthropogenic habitats. Most frequent in mixed and deciduous forests, especially of damp hornbeam-oak and beech type. Usually hiding under logs, stones, in stumps, less frequently under bark (WIKTOR, 1983).

Eurythermic, euryhygrobiotic, cool-loving.

Zoogeography: Mid European element, European faunistic complex.

**83. (•) *Limax (Limax) subalpinus* Lessona, 1880**

Published for the Western Rhodopes in the present study.

New localities (tabl. 1, 2; fig. 1):

- Lepenitsa River Valley, GM45-KG54, 22.VIII.2004, leg. D.Georgiev.
- Ludi Dol Mountain Brook area, GM43, Mechkina River Valley, between Velingrad and Dospat, 23.VIII.2004, leg. D. Georgiev.

Vertical distribution: The two known localities from the Western Rhodopes so far are located between 900 m a.s.l. in the area of Lepenitsa River Valley and 1600 m a.s.l. in the area of Ludi Dol Mountain Brook.

Ecological data: Insufficient.

Zoogeography: Unknown, due to incomplete data concerning the complete species areal.

**84. *Limax (Limax) cinereoniger* Wolf, 1803**

*Limax maximus* var. *cinereo-niger*: JURINICH, 1906: 12; WOHLBEREDT, 1911: 181.

*Limax (Limax) cinereoniger*: URBAŃSKI & WIKTOR, 1968: 55.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): JURINICH (1906) LG02(3), GM46, GM45(4), WOHLBEREDT (1911) LG02(3), GM45(3), URBAŃSKI & WIKTOR

(1968) LG24(2), LG05(3), DAMJANOV & LIKHAREV (1975 - "Rhodopes"), WIKTOR (1983) GM15, KG64, KG93(1,3), LG00(1), LG01(5), LG03(1), LG 04(1), LG05(3), LG24(2).  
New localites (tabl. 1, 2; fig. 1):

- Smolyan, Sredorek quarter, LG00(3), 5 km west of the town, Cherna River Valley, 03.VII.2004, leg. A. Irikov.
- Dedovo Village, LG05(1), east of the village, Tamrashka River Valley, beech and oak forest, 02.V.2003, leg. I. Mollov.
- Krushovska River Valley, LG22, 25.08.2005., leg. A. Irikov.

Vertical distribution: In the Western Rhodopes this species occurs between 400 m a.s.l. at Bachkovo Village and 1200 m a.s.l. at Zdravets Hut.

Ecological data: It inhabits mostly mixed and deciduous forests of all types, crawling on the ground and in the trees. Hiding in stumps, decaying tree trunks and under bark (WIKTOR, 1983).

Eurythermic, euryhygrobiontic species.

Zoogeography: Mid European element, European faunistic complex.

#### 85. *Limax (Limax) punctulatus* Sordelli, 1870

*Limax (Limax) punctulatus*: WIKTOR, 1983: 135.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): WIKTOR (1983) LG03(1), KG93(3); DEDOV (1998 - "Rhodopes Mountain").

New localites (tabl. 1, 2; fig. 1):

- Grueva Bichkiya area, LG02(6), southeast of the Zabardo Village, on logs, 24.V.2004, leg. A. Irikov.

Vertical distribution: In the Western Rhodopes this species is registered between 700 m a.s.l. at Hvoyna Village and 2091 m a.s.l. in the area of Persenk Summit.

Ecological data: This is a forest slug, living in similar habitats as *L. cinereoniger*, but there is little information concerning its ecological requirements (WIKTOR, 1983).

Mesohygrophilic, cool-loving, cold-resistant species.

Zoogeography: Southeuropean Mountain subelement, European Mountain element, European faunistic complex.

#### 86. (■) *Limax macedonicus* Hesse, 1928

*Limax (Limax) macedonicus*: DAMJANOV & LIKHAREV, 1975: 304.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): DAMJANOV & LIKHAREV (1975) KG80(1), HUBENOV (In: DELCHEV et al., 1993) KG80(1).

New localites (tabl. 1, 2; fig. 1):

- between Beslen Village and Slashten Village, GL49-KF59, near Mesta River, 26.VIII.2004, leg. D. Georgiev.

Vertical distribution: The so far only known locality is at 1200 m a.s.l. at Trigrad Village.

Ecological data: Living in deciduous forests of all types and in shrubs. Hiding under stones and bark of trees (WIKTOR, 1983).

Mesophilic, mesothermic species.

Endemism: Endemic taxon for the Balkan Peninsula.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

**87. *Lehmania nyctelia* (Bourguignat, 1861)**

*Limax (Malacolimax) nyctelius*: URBAŃSKI & WIKTOR, 1968: 51.

*Limax (Lehmania) nyctelius*: HUDEC & VASATKO, 1971: 8.

*Limax (Limacus) nyctelius*: DAMJANOV & LIKHAREV, 1975: 309.

*Lehmania nyctelia*: WIKTOR, 1983: 150.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI & WIKTOR (1968) GM36, GM45-KG54, KG91(1), HUDEC & VASATKO (1971) KG90, LG01(2), DAMJANOV & LIKHAREV (1975 - "The Western Part of the Rhodopes Mountain"), WIKTOR (1983) GM15, KG61(1), KG82(1), KG93(1,3), LG00(1), LG01(5), LG02(3), LG04(1), LG05(3).

New localities (tabl. 1, 2; fig. 1):

- Grueva Bichkiya area, LG02(6), southeast of the Zabardo Village, under bark of the log, 24.V.2004, leg. A. Irikov.
- Golyam Perelik Summit, KG90, under bark of the log, 23.VIII.2004, leg. A. Irikov.
- Ludi Dol Mountain Brook area, GM43, Mechkina River Valley, between Velingrad and Dospat, 23.VIII.2004, leg. D. Georgiev.

Vertical distribution: In the Western Rhodopes this species is registered between 600-700 m a.s.l. at Devin and 2190 m a.s.l. in the highest locality of the Rhodopes Mountain - Golyam Perelik Summit.

Ecological data: A forest species occurring mainly in deciduous forests, especially beech woods. Frequent in mountains, also above upper timberline. Creeping on trees and hiding under bark, hollows in tree stumps, on rocks or rock rubble. After it has rained slugs creep out in great numbers, especially high in the mountains (WIKTOR, 1983). Mesohygrophilic, cool-loving, cold-resistant species.

Zoogeography: Mid European element, European faunistic complex.

**# *Lehmania marginata* (Müller, 1774)**

This species was reported by URBAŃSKI & WIKTOR (1968) for the area of Shiroka Laka Village and later as *Limax (Lehmania) marginatus* with the same locality by DAMJANOV & LIKHAREV (1975). According to WIKTOR (1983) however this species does not occur in Bulgaria, so at this point we think that this species should be considered an invalid taxon for the Western Rhodopes.

**88. (■) *Lehmania brunneri* (Wagner, 1931)**

*Lehmania brunneri*: WIKTOR, 1983: 153.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): WIKTOR (1983) GM31, KG93(1), LG01(5), HUBENOV (In: DELCHEV et al., 1993 - "Rhodopes").

Vertical distribution: In the Western Rhodopes this species is registered between 500 m a.s.l. at Ognyanovo Village and 1600 m a.s.l. in Chudni Mostove Rock Bridges area.

Ecological data: Mountain species preferring upper timberline regions or even higher. It inhabits exclusively rocks, even when trees are nearby, hiding in crevices and rock rubble (WIKTOR, 1983).

Mesohygrophilic, cool-loving, cold-resistant species.

Endemism: Endemic taxon for the Balkan Peninsula.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

**Agriolimacidae****89. *Deroceras (Deroceras) laeve* (Müller, 1774)**

*Deroceras (Deroceras) laeve*: WIKTOR, 1983: 163.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): WIKTOR (1983) KG75(1).

Vertical distribution: This species is reported for the Western Rhodopes only by WIKTOR (1983) for the area of Peshtera (Snejanka Reserve - which is now named Kupena Reserve), with possible vertical distribution between 600 and 1000 m a.s.l.

Ecological data: Found near water, in rivers, lakes and ponds, wet meadows and forests, especially alder and oak woods. Hiding in decaying detritus, under wood logs, in soil and peat (WIKTOR, 1983).

Mesohygrophilic, cool-loving, cold-resistant species.

Zoogeography: Holarctic element, Siberian faunistic complex.

**90. *Deroceras (Deroceras) sturanyi* (Simroth, 1894)**

*Deroceras sturanyi*: URBAŃSKI & WIKTOR, 1968: 65.

*Deroceras (Deroceras) sturanyi*: DAMJANOV & LIKHAREV, 1975: 317.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI & WIKTOR (1968) LG03(1), DAMJANOV & LIKHAREV (1975) LG03(1), WIKTOR (1983) GM31, KG64, KG75(1), LG03(1), LG24(2).

New localities (tabl. 1, 2; fig. 1):

- between Beslen Village and Slashten Village, GL49-KF59, near Mesta River, 26.VIII.2004, leg. D. Georgiev.
- Barutin Village, KG60, near Dospat River, 27.VIII.2004, leg. D. Georgiev.
- between Barutin Village and Zmeitsa Village, KG61(2), Sarnena River Valley, 28.VIII.2004, leg. D. Georgiev.

Vertical distribution: In the Western Rhodopes this species is registered between 400 m a.s.l. at Bachkovo Village and 1200 m a.s.l. in the area of Sarnena River Valley between Barutin Village and Zmeitsa Village.

Ecological data: Mesophilic species found however in wet biotopes. Always in open biotopes or only shaded by brushes or under single trees. Very frequent in ruderal biotopes. Found in meadows, at roadsides, in parks and gardens (WIKTOR, 1983).

Mesophilic, mesothermic species.

Zoogeography: Mid European element, European faunistic complex.

**91. (■) *Deroceras (Agriolimax) turcicum* (Simroth, 1894)**

*Deroceras (Agriolimax) reticulatum*: URBAŃSKI & WIKTOR, 1968: 67.

*Deroceras (Agriolimax) turcicum*: WIKTOR, 1983: 172.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI (1968) LG25(2), LG24(2), WIKTOR (1983) “? Durken”, GM15, GM31, KG61(1), KG64, KG75(1), KG82(1), KG93(1,3), LG00(1), LG02(3), LG04(1), LG25(1),

New localities (tabl. 1, 2; fig. 1):

- Hrabrino Village, LG05(4), 1 km south of the village, 27.XI.2004, leg. A. Irikov, T. Irikova.
- Trigrad Village, near Dyavolsko Garlo Cave, KG81(2), 28.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.

- Teshel Village, KG71(1), near Orpheus hotel-restaurant, 30.IV.2003; Kastrakli Reserve, Chakin Dol River Valley KG71, KG72, 30.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Chairski Lakes, KG80(2), 29.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- between Mostovo Village and Sini Vrah Village, LG33(1), 01.V.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Ludi Dol Mountain Brook area, GM43, Mechkina River Valley, between Velingrad and Dospat, 23.VIII.2004, leg. D. Georgiev.
- Barutin Village, KG60, near Dospat River, 27.VIII.2004, leg. D. Georgiev.
- Bistritsa River Valley, GM40, 5 km off the flow in Mesta River, 24.VIII.2004, leg. D. Georgiev.
- Ravnogor Village, KG84, 27.III.2004, leg. D. Georgiev, S. Stoicheva.

Vertical distribution: In the Western Rhodopes the species is registered between 300 m a.s.l. at Asenovgrad and 2091 m a.s.l. in the area of Persenk Summit.

Ecological data: A forest species living in deciduous, mixed and coniferous woods, rarely in meadows. In beech and hornbeam woods, sometimes in great numbers (WIKTOR, 1983).

Mesothermic, meshyophilic species.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

#### # *Deroceras (Agriolimax) reticulatum* (Müller, 1774)

This species was reported by URBAŃSKI & WIKTOR (1968) from Asenova Fortress and Bachkovski Monastery. Later WIKTOR (1983) in his synopsis paper concerning the Bulgarian slugs did not confirm these localities for *D. reticulatum* and according to his comments in many of the cases this species was wrongfully identified with *D. turcicum*. Our study on specimens from these localities showed that the species which actually occurs there is *D. turcicum* and therefore we assume that *D. reticulatum* for now is an invalid taxon for the fauna of the Western Rhodopes.

#### 92. *Deroceras (Agriolimax) agreste* (Linnaeus, 1758)

*Agriolimax agrestis*: JURINICH, 1906: 11; WOHLBEREDT, 1911: 184.

*Deroceras agreste*: URBAŃSKI & WIKTOR, 1968: 70.

*Deroceras (Deroceras) agreste*: DAMJANOV & LIKHAREV, 1975: 320.

*Deroceras (Agriolimax) agreste*: WIKTOR, 1983: 180.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): JURINICH (1906) GM45(4), GM46, LG02(3), WOHLBEREDT (1911) GM45(4), GM46, LG02(3), URBAŃSKI & WIKTOR (1968) “? Durken”, GM36, DAMJANOV & LIKHAREV (1975) “? Durken”, GM36.

Vertical distribution: In the Western Rhodopes the species is registered in the area of “? Durken” (which is an unknown locality) and the area of Yundola at 1400 m a.s.l.

Ecological data: Insufficient.

Zoogeography: Mid European element, European faunistic complex.



93. (■) *Deroceras (Liolytopelte) bureschi* (H. Wagner, 1934)

*Deroceras (Liolytopelte) bureschi*: WIKTOR, 1983: 187.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): WIKTOR (1983) GM15, HUBENOV (In: DELCHEV et al., 1993 - "Rhodopes")

Vertical distribution: The so far only known locality of this species in the Western Rhodopes is at about 900 m a.s.l. at Yakoruda Village.

Ecological data: Insufficient.

Endemism: Endemic taxon for the Balkan Peninsula.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

**Helicidae**94. *Helicigona trizona rumelica* (Rossmässler, 1838)

*Campylea (Cattania) trizona rumelica*: WAGNER A., 1927: 376

*Helicigona (Cattania) trizona rumelica*: URBAŃSKI, 1960a: 93; 1960b: 100; HUDEC & VASATKO, 1971: 8.

*Helicigona trizona rumelica*: URBAŃSKI, 1960b: 81; 1964: 27; 1971: 225; KÖRNIG, 1983: 37.

*Helicigona trizona* subsp.: URBAŃSKI, 1969: 228.

*Helicigona trizona*: DAMJANOV & L. PINTER, 1969: 36, 38; PINTER I. & L. PINTER, 1970: 87, 88; CLAUSS, 1977: 309; KÖRNIG, 1983: 36.

*Faustina (Cattania) trizona rumelica*: DAMJANOV & LIKHAREV, 1975: 378.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): WAGNER A. (1927) LG24(2), URBAŃSKI (1960a - "Rhodopes"), URBAŃSKI (1960b) LG14(1), URBAŃSKI (1960b,c), URBAŃSKI (1964), RIEDEL & URBAŃSKI (1964) LG24(2), LG25(2), URBAŃSKI & WIKTOR (1968) LG24(2), URBAŃSKI (1969) KG80(2), DAMJANOV & L. PINTER (1969) LG24(4), LG25(3), PINTER I. & L. PINTER (1970) KG75(1), KG93(1), URBAŃSKI (1971) KG81(1), HUDEC & VASATKO (1971) LG24(2), DAMJANOV & LIKHAREV (1975) KG61(1), KG80(1), KG91(1), LG24(2), LG25(2), CLAUSS (1977) KG93(1), LG01(3,4), LG02(1), LG03(4), LG01-LG11, LG11, LG24(2), KÖRNIG (1983) LG24(1), LG00(1), LG13(2), LG23(4), HUBENOV (In: DELCHEV et al., 1993) KG61(1), KG80(1), KG91, LG00(1), LG24(1,2), LG25(1), IRIKOV À. & Ò. IRIKOVA (2000) LG24(3), IRIKOV (2002) LG23-LG24-LG25-LG34.

New localities (tabl. 1, 2; fig. 1):

- between Narechenski Bani Mountain Resort and Hvoyna Village, LG03-LG04-LG14, northern of Hvoyna Village and Chepelarska River Valley, 11.X.2001, leg. A. Irikov.
- Devin, KG82(1), Mogilitsa Village, LF09, Trigradska River Valley (from Devin to Trigrad Village) KG80-KG81-KG82, Buynovska River Gorge KG71(3), Kastrakli Reserve, Chakin Dol River Valley KG71, KG72, V.2001, V.2002, leg. A. Irikov, 30.IV.2003, leg. I. Dedov, A. Irikov, I. Mollov, K. Kirov.
- Zabardo Village, KG92, 24.V.2004, leg. A. Irikov.
- Belitsa Village, LG23(2), Belitsa River Valley, 23.VIII.2004, leg. A. Irikov, T. Irikova.
- Smolyan, Sredorek quarter, LG00(3), Cherna River Valley, 5 km west of the town, 03.VII.2004, leg. A. Irikov, T. Irikova.
- between Hvoyna Village and Chepelare, near Dragiitsa Summit, LG13(1), east of Chepelarska River, 10.VIII.2004, leg. A. Irikov, T. Irikova.

- between Hrabrino Village and Dedovo Village, LG05(2), 06.XI.2004, leg. A. Irikov, T. Irikova.
- Hrabrino Village, LG05(4), Pepelasha River Valley, 27.XI.2004, A. Irikov, T. Irikova.
- Krichim Dam area, KG84-KG85, 29.VIII.2004, leg. D. Georgiev.
- Ravnogor Village, KG84, 27.III.2004, leg. D. Georgiev, S. Stoicheva.
- Parvenets Village, LG06, Parvenetska River Valley, 26.X.2004, leg. I. Mollov.

Vertical distribution: In the Western Rhodopes the species is registered between 300 m a.s.l. at Parvenets and 1600 m a.s.l. in Chudni Mostove Rock Bridges area, but it probably reaches 2000 m a.s.l.

Ecological data: It inhabits limestones, but it can also be found in broadleaved forests and rarely in pinetree forests as well as in open rocky terrains.

Mesophilic, thermophilic, relatively drought-resistant.

Taxonomical data: Conchiologically this is one very polymorphic species, which shows great variations in form, size, color and other conchological characteristics depending on the environmental conditions and the altitude. Often specimens with deviations of the genital system are found. For example in the area of Parvenets Village a specimen was found with only one branch of the salivary gland instead of two.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

#### # *Helicigona trizona balcanica* (Kobelt, 1876)

This subspecies was wrongfully reported by KÖRNIG (1983) for the area of Velingrad, where *Helicigona trizona rumelica* occurs and in our opinion this should be considered an invalid taxon for the fauna of the Western Rhodopes.

#### 95. (■) *Helicigona haberhaueri* (Sturany, 1897)

*Helicigona* (*Cattania*) *trizona haberhaueri*: HUDEC & VASATKO, 1973: 24.

*Faustina* (*Cattania*) *trizona haberhaueri*: DAMJANOV & LIKHAREV, 1975: 381.

*Helicigona haberhaueri*: IRIKOV, 2002: 96.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): HUDEC & VASATKO (1973) LG24(2), DAMJANOV & LIKHAREV (1975 - "Rhodopes"), IRIKOV (2002) LG23-LG24-LG25-LG34.

New localities (tabl. 1, 2; fig. 1):

- Zabardo Village, Kamaka Summit area, LG03(7), Grueva Bichkiya area LG02(6), 24.V.2004, leg. Irikov.
- Dur-Daa Summit, KG81(3), north of Trigrad Village, 17.VIII.2004, leg. A. Irikov, T. Irikova.
- Lepenitsa River Valley, GM45-KG54, 22.VIII.2004, leg. D. Georgiev.
- Ludi Dol Mountain Brook area, GM43, Mechkina River Valley, between Velingrad and Dospat, 23.VIII.2004, leg. D. Georgiev.
- Velingrad, Kleptuza Lake, GM45(2), 08.IX.2003, leg. Kirov.

Vertical distribution: In the Western Rhodopes the species is registered between 400 m a.s.l. at Bachkovo Village and 1693 m a.s.l. in the area of Prestoy (Dur-Daa) Summit north of Trigrad Village.

Ecological data: It inhabits very diverse habitats in the middle and high parts of the mountain and prefers rocks within broadleaved forests, but rarely it can be found in pinetree forests with high humidity.

Meso- to microthermic, mesohygrophilic, cool-loving, cold-resistant.

Endemism: Bulgarian endemic taxon.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

#### 96. *Cepaea vindobonensis* (Ferussac, 1821)

*Cepaea vindobonensis*: PINTER L., 1968: 220.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): PINTER L. (1968) LG14-LG24-LG25(2), DAMJANOV & L. PINTER (1969) LG24(4), PINTER I. & L. PINTER (1970) KG75(1), HUDEC & VASATKO (1971) LG24(2), CLAUSS (1977) KG93(1), LG03(4), LG24(2), KÖRNIG (1983) GM45(1), LG24(1), LG23(4), IRIKOV À. & Ò. IRIKOVA (2000) LG24(3), IRIKOV (2002) LG23-LG24-LG25-LG34.

New localities (tabl. 1, 2; fig. 1):

- Chepelarska River Valley (from Bachkovo Village to Hvoyna Village) LG24-LG14-LG03, 2001-2004, leg. A. Irikov.
- Oreshitsa River Valley (from Hvoyna Village to Orehovo Village), in the direction of Persenk Summit, LG03(3), 2000 - 2004, leg. A. Irikov.
- Trigrad Village, KG80(1), Teshel Village, KG71(1), Buynovska River Gorge, KG71(3), Kastrakli Reserve, Chakin Dol River Valley KG71, KG72, V.2001, V.2002, leg. A. Irikov.
- Rudozem, LF29, 04.V.2004, leg. D. Georgiev.
- Bistritsa River Valley GM40, 5 km before the flow to Mesta River, 24.VIII.2004, leg. D. Georgiev.
- Ravnogor Village, KG84, 27.III.2004, leg. D. Georgiev, S. Stoicheva.
- Devin, Tsarkvata area, KG82(3), 2004, leg. N. Vutova.
- Parvenets Village, LG06, Parvenetska River Valley, 26.X.2004, leg. I. Mollov.

Vertical distribution: In the Western Rhodopes the species is registered between 300 m a.s.l. at Parvenets Village and 1600 m a.s.l. in the area of Chudni Mostove Rock Bridges.

Ecological data: It inhabits open herbaceous habitats, sparse broadleaved forests, within shrubs and in open rocky areas in the lower and middle parts of the mountain.

Xeromesophilic, thermophilic, drought-resistant (IRIKOV, 2002).

Zoogeography: According to IRIKOV (2002) this species belongs to the Mid European element of the European faunistic complex. After additional analysis of the species contemporary areal, its ecological requirements and the geological history of the Euroasian dryland, we think that this species should be characterized as Pontosubmediterranean subelement, Steppe element, Steppe Euroasian faunistic complex.

#### 97. *Helix (Physospira) vulgaris* Rossmässler, 1839

*Helix (Helix) philibinensis*: URBANŤSKI, 1960a: 98; 1960b: 106; URBANŤSKI & WIKTOR, 1968: 57.

*Helix philibinensis*: PINTER L., 1968: 220; DAMJANOV & L. PINTER, 1969: 36.

*Helix (Physospira) vulgaris*: DAMJANOV & LIKHAREV, 1975: 396.

*Helix vulgaris*: CLAUSS, 1977: 309; KÖRNIG, 1983: 37; HUBENOV (In: DELCHEV et al., 1993): 187.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI (1960a – “Rhodopes”), URBAŃSKI (1960b) LG24(2), LG25(1,2), URBAŃSKI & WIKTOR (1968) LG24(2), PINTER L. (1968) LG14-LG24-LG25(2), LG24(2), DAMJANOV & L. PINTER (1969) LG25(3), DAMJANOV & LIKHAREV (1975) LG25(1), CLAUSS (1977) LG03(4), KÖRNIG (1983) GM45(1), LG24(1), HUBENOV (In: DELCHEV et al., 1993) LG25(1).  
New localities (tabl. 1, 2; fig. 1):

- Bistritsa River Valley, GM40, 5 km before the flow to Mesta River, 24.VIII.2004, leg. D. Georgiev.
- between Beslen Village and Slashten Village, GL49-KF59, near Mesta River, 26.VIII.2004, leg. D. Georgiev.
- between Barutin Village and Zmeitz Village, Sarnena River Valley, KG61(2), 28.VIII.2004, leg. D. Georgiev.
- Kritchim Dam area, KG84-KG85, 29.VIII.2004, leg. D. Georgiev.

Vertical distribution: In the Western Rhodopes the species is registered between 300 m a.s.l. at Asenovgrad and 1200 m a.s.l. in the Sarnena River Valley, between Barutin Village and Zmeitsa Village.

Ecological data: It prefers open limestone terrains with herbaceous and shrub vegetation with low humidity.

Xerophilic, thermophilic, drought-resistant.

Zoogeography: Pontosubmediterranean subelement, Steppe element, Steppe Euroasian faunistic complex.

#### 98. *Helix (Helix) lucorum* Linnaeus, 1758

*Helix lucorum*: CLAUSS, 1977: 309; KÖRNIG, 1983: 37; IRIKOV, 2002: 96.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): CLAUSS (1977) LG03(3,4), KÖRNIG (1983) GM45(1), LG24(2), IRIKOV (2002) LG23-LG24-LG25-LG34..

New localities (tabl. 1, 2; fig. 1):

- Chepelarska River Valley (from Asenovgrad town to Hvoyna Village) LG03-LG04-LG14, 2001-2004, leg. A. Irikov.
- Tsigov Chark Village area, KG65, 22.VIII.2004, leg. D. Georgiev.
- Ravnogor Village, KG84, 27.III.2004, leg. D. Georgiev, S. Stoicheva.
- Parvenets Village, LG06, Parvenetska River Valley, 26.X.2004, leg. I. Mollov.

Vertical distribution: In the Western Rhodopes the species is registered between 300 m a.s.l. at Parvenets and 1000 m a.s.l. in the area of Tsigov Chark near Batak Dam.

Ecological data: It inhabits limestones with shrub and herbaceous vegetation with low and moderate humidity.

Xeromesophilic, thermophilic, drought-resistant, capable of surviving temperature fluctuations.

Zoogeography: Irano-Turanian subelement, Subiranian element, Southwestern Asiatic complex.

#### 99. *Helix (Helix) pomatia* Linnaeus, 1758

*Helix pomatia* var. *rhodopaensis*: WOHLBEREDT, 1911: 194.

*Helix (Helix) pomatia*: URBAŃSKI, 1960b: 100.

*Helix pomatia serbica*: URBAŃSKI, 1964: 27.

*Helix (Helix) pomatia serbica*: URBAŃSKI & WIKTOR, 1968: 57.

*Helix pomatia*: PINTER L., 1968: 220; DAMJANOV & L. PINTER, 1969: 38; PINTER I. & L. PINTER, 1970: 88; CLAUSS, 1977: 309; KÖRNIG, 1983: 37; IRIKOV, 2002: 96.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): WOHLBEREDT (1911 – “slopes of the Rhodopes near Plovdiv”), URBAŃSKI (1960b,c, 1964) LG24(2), URBAŃSKI & WIKTOR (1968) LG24(2), PINTER L. (1968) LG14-LG24-LG25(2), DAMJANOV & L. PINTER (1969) LG25(3), PINTER I. & L. PINTER (1970) KG75(1), CLAUSS (1977) LG01(3,4), LG02(1,4), LG11, LG01-LG11, KÖRNIG (1983) LG00(1), IRIKOV (2002) LG23-LG24-LG25-LG34.

New localities (tabl. 1, 2; fig. 1):

- Chepelarska River Valley (from Asenovgrad to Hvoyna Village) LG03-LG14-LG24-LG25, 2001-2004, leg. A. Irikov.
- Oreshitsa River Valley (from Hvoyna Village to Orehovo Village), LG03(3), in direction to Persenk Summit, 2000 - 2004, leg. A. Irikov.
- Orehovo Village, Katargi area, LG04(4), northeast of the village, 31.VI.2004, leg. A. Irikov.
- Zabardo Village, Grueva Bichkiya area, LG02(6), Kamaka Summit, LG03(7), coniferous forest, 24.V.2004, leg. A. Irikov.
- between Sini Vrah Village and Karadjov Kamak Summit, LG33(3), leg. A. Irikov.
- Belitsa Village, LG23(3), Belitsa River Valley, 28.VIII.2004, leg. A. Irikov, T. Irikova.
- Smolyan, Sredork quarter, Cherna River Valley, 5 km west of the town, LG00(3), leg. A. Irikov, T. Irikova.
- Chudni Mostove Rock Bridges area, KG93(1), leg. I. Dedov, A. Irikov, I. Mollov, K. Kirov.
- Rudozem, LF29, 05.V.2004, leg. D. Georgiev.
- Lepenitsa River Valley, GM45-KG54, 22.VIII.2004, leg. D. Georgiev.
- Barutin Village, KG60, near Dospat River, 27.VIII.2004, leg. D. Georgiev.
- Ravnogor Village, KG84, 27.III.2004, leg. D. Georgiev, S. Stoicheva.

Vertical distribution: In the Western Rhodopes the species is registered between 400 m a.s.l. at Bachkovo Village and 1600 m a.s.l. in Chudni Mostove Rock Bridge area and Pamporovo Mountain Resort area, but probably it reaches higher altitudes.

Ecological data: It inhabits broad-leaved forests as well as pinetree forests and open terrains with herbaceous vegetation, especially along rivers, mostly in the middle and the high parts of the mountain. It prefers high humidity and lower temperatures.

Mesophilic, mesothermic (IRIKOV, 2002), cool-loving.

Zoogeography: Mid European element, European faunistic complex.

#### # *Helix (Pelasga) pomacella* Mousson, 1854

This species is reported as *Helicogena (Helicogena) var. figulina eumolpia* by KOBELT (1906) for the slopes of the Rhodopes Mountain near Plovdiv, cited by URBAŃSKI (1960b), who thinks that this is one isolated locality in the Rhodopes Mountain. Additional studies of the latter and many other authors showed that this species is invalid for the fauna of the Western Rhodopes.

#### # *Helix (Pelasga) figulina* Rossmässler, 1839

This species is reported by KOBELT (1906) for the slopes of the Rhodopes Mountain near Plovdiv with the names *Helicogena (Helicogena) var. figulina eumolpia* and *Helicogena*

(*Helicogena*) var. *figulina despotina* and due the same reasons as with the previous species we think that it should be considered invalid for the fauna of the Western Rhodopes.

### Bradybaenidae

#### 100. *Bradibaena fruticum* (Müller, 1774)

*Bradibaena fruticum*: URBAŃSKI, 1960b: 80.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI (1960b) LG24(1), KG83, DAMJANOV & LIKHAREV (1975 - "Rhodopes"), IRIKOV (2002) LG23-LG24-LG25-LG34. New localities (tabl. 1, 2; fig. 1):

- Kritchim Dam area, KG84-KG85, 28.VIII.2004, leg. D. Georgiev.

Vertical distribution: In the Western Rhodopes the species is registered between 300 m and 1400 m a.s.l. in the area of Dobrostan Ridge.

Ecological data: It inhabits mostly broad-leaved forests in the lower and the middle parts of the mountain with relatively higher humidity and lower temperatures. In the Dobrostan Ridge it is found mostly in the leaf cover of monodominant beech formations with northern exposition at high humidity.

Mesophilic, cool-loving, relatively cold-resistant (IRIKOV, 2002).

Zoogeography: Mid European element, European faunistic complex.

### Helicodontidae

#### 101. *Lindbolmiola girva girva* (Frivaldsky, 1835)

*Caracollina contorta girva*: WAGNER A., 1927: 364.

*Lindbolmiola contorta*: URBAŃSKI, 1960b: 81, 100; 1960c: 127, 130; URBAŃSKI, 1964: 26; RIEDEL & URBAŃSKI, 1964: 77.

*Lindbolmiola corcyrensis*: URBAŃSKI & WIKTOR, 1968: 57; PINTER L., 1968: 220; DAMJANOV & L. PINTER, 1969: 36, 38; PINTER I. & L. PINTER, 1970: 87, 88; HUDEC & VASATKO, 1971: 8; CLAUSS, 1977: 309; KÖRNIG, 1983: 35.

*Lindbolmiola corcyrensis corcyrensis*: IRIKOV A. & T. IRIKOVA, 2000: 422; IRIKOV, 2002: 96. Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): WAGNER A. (1927) KG95(1), URBAŃSKI (1960b) LG14(1), LG24(2), LG25(2), URBAŃSKI (1960c, 1964) LG24(2), LG25(2), RIEDEL & URBAŃSKI (1964) LG24(2), LG25(2), URBAŃSKI & WIKTOR (1968) LG24(2), PINTER L. (1968) KG93(1), LG14-LG24-LG25(2), LG24(2), DAMJANOV & L. PINTER (1969) LG24(2), LG25(3), PINTER I. & L. PINTER (1970) KG75(1), KG93(1), HUDEC & VASATKO (1971) LG24(2), CLAUSS (1977) LG03(4), LG24(2), KÖRNIG (1983) GM45(1), LG00(1), LG24(2), IRIKOV A. & T. IRIKOVA (2000) LG24(3), IRIKOV (2002) LG23-LG24-LG25-LG34. New localities (tabl. 1, 2; fig. 1):

- Chepelarska River Valley (from Narechenski Bani Mountain Resort to Hvoyna Village) LG03-LG04-LG14, 2001-2004, leg. A. Irikov.
- Oreshitsa River Valley (from Hvoyna Village to Orehovo Village), in the direction of Persenk Summit, LG03(3), 2000 - 2004, leg. A. Irikov.
- Belitsa Village, LG23(3), Belitsa River Valley, 28.VIII.2004, leg. A. Irikov, T. Irikova.
- Dragiitsa Summit area, LG03(7), east of Chepelarska River Valley, (between Hvoyna Village and Chepelare), 10.VIII.2004, leg. A. Irikov, T. Irikova.
- between Hrabrino Village and Dedovo Village, LG05(2), a river valley, 06.XI.2004, leg. A. Irikov, T. Irikova.



- between Mostovo Village and Sini Vrah Village, LG33(1), 01.V.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Ravnogor Village, KG84, 27.III.2004, leg. D. Georgiev, S. Stoicheva .

Vertical distribution: In the Western Rhodopes the species is registered between 300 m a.s.l. at Krichim Village and 1600 m a.s.l. in the Chudni Mostove Rock Bridges area.

Ecological data: It inhabits limestones and prefers open terrains with sparse forest or shrub vegetation with relatively low temperatures.

Xeromesophilic, thermophilic, drought-resistant, capable of surviving considerable temperature fluctuations (IRIKOV A., 2002).

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

### 102. (■) *Lindholmiola girva pirinensis* Jaeckel, 1954

*Lindholmiola corcyrensis*: URBAŃSKI, 1969: 227; 1971: 225.

*Lindholmiola corcyrensis pirinensis*: DAMJANOV & LIHKAREV, 1975: 342; HUBENOV (In: DELCHEV et al. 1993): 183; IRIKOV, 1999: 31.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI (1969) KG80(2), URBAŃSKI (1971) KG81(1), DAMJANOV & LIKHAREV (1975) KG82(1), HUBENOV (In: DELCHEV et al. 1993) KG82(1), IRIKOV (1999) KG71(2), KG80(1), KG71, KG72.

New localities (tabl. 1, 2; fig. 1):

- Teshel Village, KG71(1), Buynovska River Gorge, KG71(3), 2001, 2002, leg. A. Irikov; Trigrad Village, Prestoy (Dur-Daa) Summit, KG81(3) in coniferous forest, 30.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov; Teshel Village, KG71(1), 28.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Lepenitsa River Valley, GM45-KG54, 22.VIII.2004, leg. D. Georgiev.
- Bistritsa River Valley, GM40, 5 km off the flow in Mesta River, 24.VIII.2004, leg. D. Georgiev.
- Barutin Village, KG60, near Dospat River, 27.VIII.2004, leg. D. Georgiev.

Vertical distribution: In the Western Rhodopes the species is registered between 500 m a.s.l. at Bistritsa River Valley and about 1550 m a.s.l. in the area of Chairski Lakes.

Ecological data: According to IRIKOV (1999) the subspecies is met under stones in the leaf cover of mixed, pinetree and broadleaved formations, under decaying tree logs and rock cracks, covered with moss and *Haberlea rhodopaensis* Friv., in hygro- to mesohygrothermic conditions.

Mesohygrophilic, mesothermic.

Endemism: Balkan endemic taxa. The Western Rhodopes is the eastern part of the subspecies areal.

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

## Hygromiidae

### # *Trichia hispida* Linnaeus, 1758

This species is reported by DAMJANOV & LIKHAREV (1975) as rarely found in the Rhodopes Mountain, but since there are no documented exact localities we think that this is an invalid taxon for the Western Rhodopes.

103. (■) *Trichia erjaveci* (Brusina, 1870)

*Trichia erjaveci*: DAMJANOV & LIKHAREV, 1975: 370.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): DAMJANOV & LIKHAREV (1975) KG64, HUBENOV (In: DELCHEV et al. 1993) KG64.

Vertical distribution: In the Western Rhodopes the species is registered only in the area of Batak Village at 1100 m a.s.l.

Ecological data: Insufficient.

Endemism: Endemic taxon for the Balkan Peninsula.

Zoogeography: Eurosiberian subelement, Euroasian Palearctic element, Siberian faunistic complex.

104. *Xerolenta obvia* (Menke, 1828)

*Helicella obvia*: PINTER L., 1968: 220; URBANĀSKI, 1969: 228; PINTER I. & L. PINTER, 1970: 88; CLAUSS, 1977: 309; IRIKOV, 2002: 96.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): PINTER L. (1968) LG14-LG24-LG25(2), LG24(2), URBANĀSKI (1969) KG93(1), PINTER I. & L. PINTER (1970) KG75(1), CLAUSS (1977) LG01-LG11, LG01(3,4), LG02(4), LG03(3,4), LG11, IRIKOV (2002) LG23-LG24-LG25-LG34 (tabl. 1, fig. 1).

New localities (tabl. 1, 2; fig. 1):

- between Kuklen Village and Sveti Vrach Monastery, LG15(2), 17.III.2005, leg. A. Irikov.
- Chepelarska River Valley (from Bachkovo Village to Hvoyna Village), LG24-LG14-LG03, 2001-2004, leg. A. Irikov.
- Devin, KG82(1), Trigrad Village, KG80(1), Teshel Village, KG71(1), Buynovska River Gorge, KG71(3), Kastrakli Reserve, Chakin Dol River Valley KG71, KG72, 2001, 2002, leg. A. Irikov.
- Belitsa Village, LG23(3), Belitsa River Valley, 23.VIII.2003, leg. A. Irikov, T. Irikova.
- between Hvoyna Village and Chepelare, near Dragiitsa Summit, LG13(1), east of Chepelarska River, 10.VIII.2004, leg. A. Irikov, T. Irikova.
- between Hrabrino Village and Dedovo Village, LG05(2), 06.XI.2004, leg. A. Irikov, T. Irikova.
- Lepenitsa River Valley, GM45-KG54, 22.VIII.2004, leg. D. Georgiev.
- Bistritsa River Valley, GM40, 5 km before the flow to Mesta River, 24.VIII.2004, leg. D. Georgiev.
- between Beslen Village and Slashten Village, GL49-KF59, near Mesta River, 26.VIII.2004, leg. D. Georgiev.
- Devin, Tsarkvata area, KG82(3), 2004, leg. N. Vutova.
- Velingrad, Avramovo Village and Sveta Petka Village, GM35, 28, 29.VI.2004, leg. M. Katchev.

Vertical distribution: In the Western Rhodopes the species is registered between 300 m a.s.l. at Kuklen Village and 1600 m a.s.l. in the area of Chudni Mostove Rock Bridges, Studenets Hut and Pamporovo Mountain Resort.

Ecological data: It inhabits open limestone terrains with tall herbaceous vegetation at low humidity.

Xerophilic, thermophilic, drought-resistant.

Zoogeography: IRIKOV (2002), characterized this species as Mid European element of the European faunistic complex, but after additional analysis of the contemporary distribution

and the ecological requirements of the species, and also having in mind the geological history of the Euroasian land we think that it is more accurate to characterize this species as Eastsubmediterranean subelement, Submediterranean element, European faunistic complex.

# *Xerolenta obvia razlogi* Pinter, 1969

This species is reported for the Western Rhodopes by PINTER (1969) for the area of Velingrad, but due to its unproven taxonomical independence we support the opinion that this is an invalid taxon for the Western Rhodopes.

105. (•) *Helicopsis dejecta* (Jan, 1832)

Published for Rhodopes from: present study.

Localities (tabl. 1, 2; fig. 1):

· Lepenitsa River Valley, GM45-KG54, 22.VIII.2004, leg. D.Georgiev.

Vertical distribution: The only locality, where the species was found in the Western Rhodopes, is at 1041 m a.s.l.

Ecological data: Insufficient.

Taxonomical data: After a complete study of the genital system of the only found specimen this species was established for certain as a species which occurs in the above mentioned locality in the Western Rhodopes. The shell and the intact genital system are kept in the collection of D-r A. Irikov.

Zoogeography: Euxinian subelement, Submediterranean element, European faunistic complex.

106. *Pseudotrichia rubiginosa* (Schmidt, 1853)

*Pseudotrichia rubiginosa*: IRIKOV, 2002: 96.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): IRIKOV (2002) LG23-LG24-LG25-LG34.

Vertical distribution: In the Western Rhodopes the species is registered between 400 m and 900 m a.s.l. in Dobrostan Ridge. It's known from few localities in this region, although IRIKOV (2002) reported it for Dobrostan Ridge in general.

Ecological data: According to IRIKOV (2002) this species is meso- to mesohygrophilic, mesothermic and considerably cool-loving.

Zoogeography: Mid European element, European faunistic complex.

107. *Perforatella incarnata* (Müller, 1774)

*Perforatella incarnata*: PINTER L., 1968: 220; DAMJANOV & L. PINTER, 1969: 36; PINTER I. & L. PINTER, 1970: 87, 88; CLAUSS, 1977: 309.

*Monachoides incarnata*: DAMJANOV & LIKHAREV, 1975: 367.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): PINTER L. (1968) LG24(2), DAMJANOV & L. PINTER (1969) LG24(4), PINTER I. & L. PINTER (1970) KG75(1), KG93(1), DAMJANOV & LIKHAREV (1975 - "Rhodopes"), CLAUSS (1977) LG01-LG11, LG01(3), IRIKOV Å. & Ö. IRIKOVA (2000) LG24(3), IRIKOV (2002) LG23-LG24-LG25-LG34.

New localities (tabl. 1, 2; fig. 1):

· Trigrad Village, Dyavolsko Garlo Cave, KG81(2), 28.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov; Kastrakli Reserve, Chakin Dol River Valley KG71, KG72, 30.IV.2003, leg. I. Dedov, A. Irikov, I. Mollov, K. Kirov.

- between Mostovo Village and Sini Vrah Village, LG33(1), 01.V.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Lepenitsa River Valley, GM45-KG54, 22.VIII.2004, leg. D. Georgiev.
- Barutin Village, near Dospat River, KG60, 24, 27.VIII.2004, leg. D. Georgiev.
- Ravnogor Village, KG84, 27.III.2004, leg. D. Georgiev, S. Stoicheva.
- Velingrad, Kleptuza Lake, GM45(2), 08.IX.2003, leg. Kirov.

Vertical distribution: In the Western Rhodopes this species is registered between 400 m a.s.l. and 1600 m a.s.l. in Chudni Mostove Rock Bridges area and Paqmporovo Mountain Resort. Ecological data: A forest species, which prefers humid broadleaved forests, but rarely it can be found in humid pinetree forests.

Mesophilic, mesothermic (IRIKOV, 2002).

Zoogeography: Mid European element, European faunistic complex.

### 108. *Monacha (Monacha) cartusiana* (Müller, 1774)

*Monacha cartusiana*: URBAŃSKI, 1960b: 100; 1964: 27; PINTER L., 1968: 220.

*Monacha (Monacha) cartusiana*: URBAŃSKI, 1960c: 130; RIEDEL & URBAŃSKI, 1964: 77; URBAŃSKI & WIKTOR, 1968: 57.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI (1960b,c, 1964) LG24(2), RIEDEL & URBAŃSKI (1964) LG24(2), LG25(2), URBAŃSKI & WIKTOR (1968) LG24(2), PINTER L. (1968) LG24(2), HUDEC & VASATKO (1971) LG24(2), CLAUSS (1977) LG01(3), LG02(4), LG03(3,4), IRIKOV (2002) LG23-LG24-LG25-LG34.

New localities (tabl. 1, 2; fig. 1):

- Belitsa Village, LG23(2), Belitsa River Valley, 23.VIII.2003, leg. A. Irikov, T. Irikova.
- Trigrad Village, Dyavolsko Garlo Cave, KG81(2), 28.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov; Kastrakli Reserve, Chakin Dol River Valley KG71, KG72, 30.IV.2003, leg. I. Dedov, A. Irikov, I. Mollov, K. Kirov.
- between Mostovo Village and Sini Vrah Village, LG33(1), 01.V.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Bistritsa River Valley, 5 km before the flow to Mesta River, GM40, 24.VIII.2004, leg. D. Georgiev.

Vertical distribution: In the Western Rhodopes the species is registered between 350 m a.s.l. at Asenova Fortress and 1600 m a.s.l. in the area of Pamporovo Mountain Resort. Ecological data: It prefers open herbaceous terrains with tall grass and shrubs.

Mesophilic, thermophilic, relatively drought-resistant.

Taxonomical data: According to HAUSDORF (2000) the distribution of this species in Bulgaria is uncertain, because very often it is wrongfully identified and confused with its conchiological twin *Monacha claustralis* (Menke, 1828). Our preliminary anatomical studies on limited material from the valley of Chepelarska River in the area of Bachkovo, Narechenski Bani Mountain Resort and Hvoyna Village, and also from Kamaka Summit area near Zabardo Village showed that only *Monacha claustralis* occurs there. These results show that it is indeed very possible that all of the material from the Western Rhodopes reported as *M. cartusiana* belongs to *M. claustralis*. To clarify the distribution of these two close species in the Western Rhodopes and in Bulgaria additional studies are required.

Zoogeography: Mid European element, European faunistic complex.

109. (••) *Monacha (Monacha) claustralis* (Menke, 1828)

Published for the Western Rhodopes in the present study.

New localities (tabl 1, 2; fig. 1):

- Chepelarska River Valley (from Narechenski Bani Village to Hvoyna Village) LG03-LG14-LG24-LG25, 2001-2004, leg. A. Irikov.
- Zabardo Village, Kamaka Summit area LG03(7), 02.VIII.2004, leg. A. Irikov.

Vertical distribution: In the Western Rhodopes this species is registered between 600 m a.s.l. and 1600 m a.s.l. in Kamaka Summit area.

Ecological data: It prefers open herbaceous terrains with tall grass, but often it can be found as synanthrope in agricultural lands, meadows and gardens as well as in house yards in urban areas.

Mesohydrophilic, mesothermic.

Zoogeography: Pontosubmediterranean subelement, Steppe element, Steppe Euroasiatic faunistic complex.

110. *Monacha (Monacha) carascaloides* (Bourguignat, 1855)

*Monacha (Monacha) carascaloides*: URBAŃSKI, 1960c: 127, 130; RIEDEL & URBAŃSKI, 1964: 77.

*Monacha carascaloides*: URBAŃSKI, 1964: 27; PINTER L., 1968: 220.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI (1960c, 1964) LG25(2), RIEDEL & URBAŃSKI (1964) LG25(2), PINTER L. (1968) LG14-LG24-LG25(2), LG24(2), DAMJANOV & L. PINTER (1969) LG25(3), CLAUSS (1977) LG24(2).

Vertical distribution: In the Western Rhodopes the species is registered between 350 m a.s.l. at Asenova Krepост and 600 m a.s.l. in the area of Narechenski Bani Mountain Resort.

Ecological data: Insufficient.

Taxonomical data: In our opinion more confirmations are needed for the presence of the species in Chepelarska River Valley after performance of anatomical studies of the genital system. According to HAUSDORF (2000) a big part of the material reported as *M. carascaloides* from Bulgaria is wrongfully identified and confused with its conchological twin *Monacha solidior* (Mousson, 1863). All of the material that we examined anatomically from Bachkovo Village, Narechenski Bani Mountain Resort and Hvoyna Village and Chepelarska River Valley showed that it belongs to *M. claustralis*, but we recommend additional studies on that matter.

Zoogeography: Asia Minor subelement, Subiranian element, Southwestern Asiatic faunistic complex.

111. *Eumphalia strigella* (Draparnaud, 1801)

*Eumphalia (Eumphalia) strigella mehadiae*: URBAŃSKI, 1960b: 99; RIEDEL & URBAŃSKI, 1964: 77; URBAŃSKI & WIKTOR, 1968: 57.

*Eumphalia strigella mehadiae*: URBAŃSKI, 1960c: 130; 1964: 27; URBAŃSKI, 1971: 255; DAMJANOV & LIKHAREV, 1975: 374.

*Eumphalia strigella*: PINTER L., 1968: 220; DAMJANOV & L. PINTER, 1969: 36; PINTER I. & L. PINTER, 1970: 88; CLAUSS, 1977: 309; IRIKOV A. & T. IRIKOVA, 2000: 422.

*Eumphalia strigella*: IRIKOV, 2002: 96.

Published for the Western Rhodopes by (tabl. 1, 2; fig. 1): URBAŃSKI (1960b,c, 1964) LG24(2), RIEDEL & URBAŃSKI (1964) LG24(2), URBAŃSKI & WIKTOR (1968)

LG24(2), PINTER L. (1968) LG14-LG24-LG25(2), LG24(2), DAMJANOV & L. PINTER (1969) LG24(4), PINTER I. & L. PINTER (1970) KG75(1), URBAŃSKI (1971) KG81(1), DAMJANOV & LIKHAREV (1975 - "Chepelarska Reka River Valley"), CLAUSS (1977) LG01-LG11, LG01(3,4), LG02(1,2,4), LG03(3,4), LG24(2) LG11, IRIKOV A. & O. IRIKOVA (2000) LG24(3), IRIKOV (2002) LG23-LG24-LG25-LG34.

New localities (tabl. 1, 2; fig. 1):

- Chepelarska River Valley (from Narechenski Bani Mountain Resort to Hvoyna Village) LG04-LG14, 2001-2004, leg. A. Irikov.
- Smolyan town, Sredorek quarter, LG00(3), Cherna River Valley, 5 km west of the town, leg. A. Irikov, T. Irikova.
- Teshel Village, KG71(1), Orpheus near hotel-restaurant, 30.IV.2003, leg. I. Dedov, A. Irikov, I. Mollov, K. Kirov.
- Kastrakli Reserve, Chakin Dol River Valley, KG71, KG72, 30.IV.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov.
- Chairski Lakes, KG80(2), 29.IV.2003, leg. Irikov.
- between Mostovo Village and Sini Vrah Village, LG33(1), 01.V.2003, leg. I. Dedov, A. Irikov, K. Kirov, I. Mollov
- Lepenitsa River Valley, GM45-KG54, 22.VIII.2004, leg. D. Georgiev
- Barutin Village, KG60, near Dospat River, 27.VIII.2004, leg. D. Georgiev
- Ravnogor Village, KG84, 27.III.2004, leg. D. Georgiev, S. Stoicheva
- Yundola Mountain Resort, GM36, 24.VI.2004, leg. M. Kechev

Vertical distribution: In the Western Rhodopes the species is registered between 400 m a.s.l. at Bachkovski Monastery and 1600 m a.s.l. in the area of Studenets Hut and Pamporovo Mountain Resort.

Ecological data: A forest species, which prefers broad-leaved forests especially in the mountain river valleys. It inhabits humid and shady places.

Mesophilic, cool-loving, cold-resistant (IRIKOV, 2002 - wrongfully written under N 62).

Zoogeography: Mid European element, European faunistic complex.

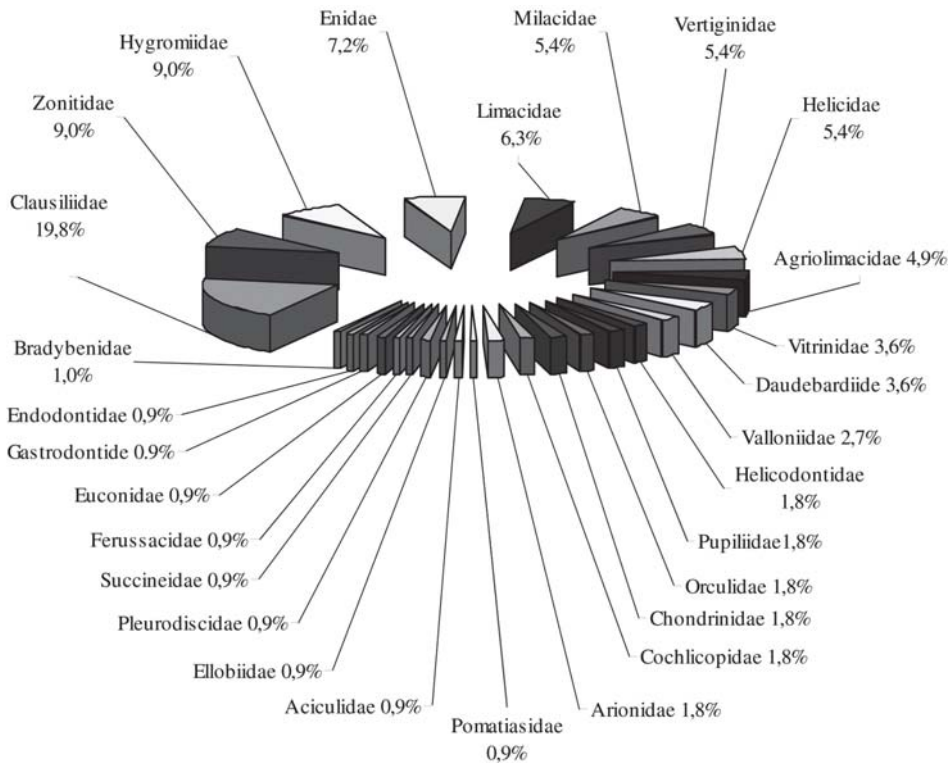
## Discussion

After a critical evaluation of some recent data we consider the Bulgarian terrestrial malacofauna consisting of 228 species and 51 subspecies of terrestrial snails (these numbers include new taxa established by IRIKOV, 2006-in press and new taxa for Bulgarian fauna reported in the current paper).

For the Western Rhodopes Mountain 106 species and 19 subspecies (111 taxa) of terrestrial snails were established which represent 46 % of the terrestrial malacofauna of Bulgaria.

The terrestrial snails inhabiting the Western Rhodopes Mountain are represented by 28 families of the 30 known for the Bulgarian malacofauna. The number of species and subspecies is as follows (fig. 2): Clausiliidae - 22, Zonitidae and Hygromiidae - by 9, Enidae - 8, Limacidae - 7, Milacidae, Vertiginidae, Helicidae - with 6, Agriolimacidae - 5, Vitrinidae, Daudebardiidae - by 4, Valloniidae - 3, Helicodontidae, Pupillidae, Orculidae, Chondrinidae, Cochlicopidae, Arionidae - by 2 Pomatiasidae, Aciculidae,





**Fig. 2.** Percentage apportionment of the terrestrial snails in the Western Rhodopes by families (1 taxa = 1,5 %).

Ellobiidae, Pleurodiscidae, Succenidae, Ferussaciidae, Euconidae, Gastrodontidae, Endodontidae, Bradybaenidae - by 1.

For the first time in Bulgaria 5 new taxa for the fauna of the Rhodopes Mountain are reported and 4 new taxa for the Bulgarian fauna. After a critical evaluation of 24 taxa has been carried out, we consider them invalid for the fauna of the Western Rhodopes Mountain.

There are 32 endemic taxa registered: 19 taxa endemic for Bulgaria, 16 of which are regional endemics for the Western Rhodopes Mountain, and 13 taxa endemic to the Balkan Peninsula.

In the process of ecological characterization three large ecological groups were established, which include a great number of variety in terms of the species ecological type. The first ecological group comprises mesophilic and mesothermic species and subspecies part of them having ecological requirements and tolerance to the humidity and temperature close to the average values (21, 27, 32, 33, 42, 45, 64, 65, 67, 78, 79, 86, 90, 91, 99, 107, 109 - 17 taxa). Here we could add two more different groups distinguished by their thermophily and thermo tolerance - one consisting mesophilic, cold-loving and cold tolerant species and subspecies (3, 17, 19, 29, 37, 38, 39, 57, 69, 81, 111 - 11 taxa), and the other involving mesophilic, thermophilic and drought-resistant species and subspecies (, 30, 76, 94, 100, 108 - 6 taxa). Thirty-four taxa make up this diverse group with average or close to the average ecological preferences and tolerance.

The second ecological group consists of hygrophites or mesohygrophites, cool- or cold-resistant species and subspecies (2, 10, 12, 14, 18, 40, 43, 52, 53, 55, 56, 60, 66, 70, 71, 72, 74, 85, 87, 88, 89, 95, 106 - 23 taxa). That ecological group is also characterized by a large variability mainly concerning preferences and tolerance to temperature.

The third ecological group consists of xerophitic or xeromesophitic, thermophilic and to some extent drought-resistant species and subspecies (4, 8, 9, 13, 15, 16, 20, 22, 23, 24, 25, 26, 35, 48, 50, 59, 63, 68, 97, 98, 102, 104 - 22 taxa). This group also varies within its extent of the xerophility and the drought-resistance.

Because of the high limit of tolerance and euryphily to the ecological conditions many taxa are separated in a separate group of euryhigrobiontic and eurythermic species and subspecies (15, 16, 20, 22, 23, 39, 41, 51, 54, 61, 62, 65, 75, 77, 82, 84 - 16 taxa).

The lack of ecological information or insufficient information on some taxa in the studied region till now have led to inability to typify the species ecologically (5, 6, 7, 11, 28, 30, 31, 34, 44, 46, 47, 49, 58, 73, 80, 83, 92, 103, 105, 110 - 20 taxa).

Fifteen species are determined as absolute calcareousness demanding (12, 15, 16, 30, 32, 33, 35, 37, 38, 40, 41, 43, 50, 51, 76 - 15 taxa), 10 taxa are closely connected with rocks (15, 16, 31, 35, 37, 38, 40, 41, 43, 50) and the first two species (15, 16) can be classified as petrophiles.

The terrestrial malacofauna of the Western Rhodopes Mountain consists of 5 faunistic complexes and has the following zoogeographic structure (fig. 3):

Northern Holarctic complex - 1 species:

1. Boreo-mountainous element - 1 species;

Siberian complex - 15 species:

1. Euroasiatic Palaeartic element - 6 species:

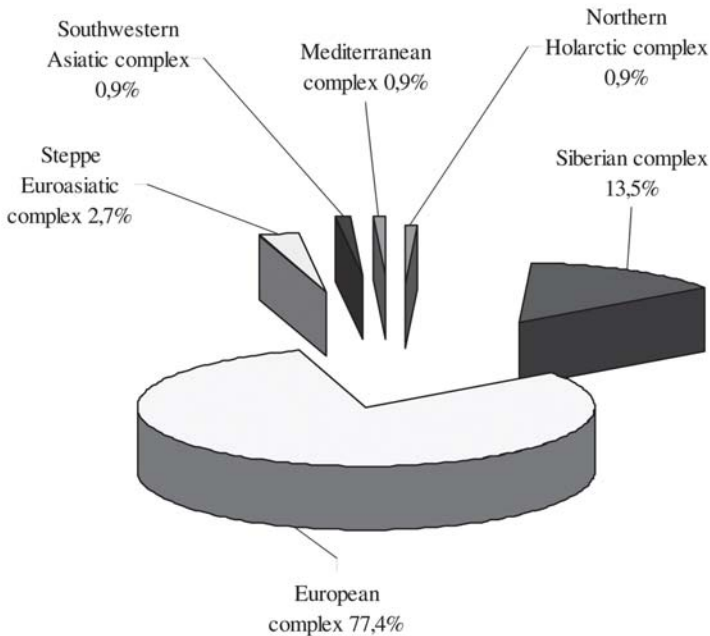


Fig. 3. Percentage apportionment of the terrestrial snails in the Western Rhodopes by zoogeographic faunistic complexes (1 taxa = 1,5 %).

- a. Eurosiberian subelement - 3 species;
  - b. Transpalaeartic subelement - 3 species;
  - 2. Holarctic element - 9 species;
  - European complex - 86 species and subspecies:
    - 1. Mid European element - 28 species;
    - 2. European mountainous element - 11 species and subspecies:
      - a. Mid European mountainous subelement - 5 species and subspecies;
      - b. South European mountainous subelement - 6 species;
    - 3. Submediterranean element - 47 species and subspecies:
      - a. Holosubmediterranean subelement - 1 species;
      - b. Eastsubmediterranean subelement - 42 species and subspecies;
    - c. Euxinian subelement - 4 species;
  - Steppe Euroasiatic complex - 3 species:
    - 1. Steppe element - 3 species:
      - a. Pontosubmediterranean subelement - 3 species;
  - Southwestern Asiatic complex - 4 species:
    - 1. Subiranian element - 4 species:
      - a. Irano-Turanian subelement - 2 species;
      - b. Asia Minor subelement - 2 species;
  - Mediterranean complex - 1 species:
    - 1. Eastmediterranean element - 1 species
- One taxon has no clear zoogeographical status.

The Western Rhodopes Mountain is a physico-geographical region with extremely large species diversity of terrestrial snails, where a considerably small area is inhabited by almost half of the whole Bulgarian malacofauna. The reasons for that are complex. The Rhodopes are geologically old land, where the complicated composition of the recent malacofauna had been formed for a long time; whereas the optimal climatic conditions and physico-geographical situation of the Western Rhodopes Mountain had permitted the affirmation of diverse ecological and zoogeographical types and groups and are the reason for the very complex character of the malacofauna. The geological development of the Eurasian land showed that fauna from different regions and with different direction has crossed the Rhodopes; the presence of proterozoic marbles and other limestones having a positive effect on the development of many calcareous and thermophilic forms; the absence of icing in the Western Rhodopes during the glacial period and last but not least the great variety of habitats in horizontal and vertical direction.

The diverse and complex character of the Western Rhodopes is confirmed by the presence of species and subspecies of 28 families of terrestrial snails in Bulgaria. The Clausiliidae family distinctively stands out among most taxa, which is due to the presence of suitable ecological and geological (limestones) conditions for this mountain in terms of origin and existence group.

The Western Rhodopes Mountain is characterized by a very high percent of endemism - 51% of the endemic taxa for the Bulgarian malacofauna. The presence of 16 regional endemic taxa defines the Western Rhodopes as a mountain territory with the biggest diversity of regional endemics and a powerful center of species formation. In comparison we present actual data on the endemism of the Bulgarian terrestrial

malacofauna: fifty-eight (58) taxa endemic to Bulgaria and 29 taxa endemic to the Balkan Peninsula (in general 87 taxa). The distribution of the Bulgarian endemic taxa in physico-geographical regions is as follows (fig. 4): 18 for the Rhodopes Mountain (16 taxa for the Western Rhodopes and 2 for the Rhodopes in general); 15 for Stara Planina Mountain (7 for the Western, 5 for the Middle, 2 for the Eastern and 1 taxa for the whole territory of Stara Planina Mountain); 9 for Pirin Mountain; 3 for Black Sea Coast; 2 for Rila Mountain; 2 for Sredna Gora Mountain; 2 for Gornotrakiiska Lowland, 2 for Stara Planina Mountain and Dobrudja Lowland; 1 for Strandja Mountain; 1 for Middle Stara Planina Mnt. and the Western Rhodopes Mnt.; 1 for Northwestern Bulgaria; 1 for Southeastern Bulgaria and 1 typical for most of the mountain regions of Bulgaria.

Most of the regional endemic taxa belong to the Clausiliidae family (12 taxa), which in the Western Rhodopes is characterized by strongly fragmented and often “island” type of distribution. The species formation processes in this typically mountain group are stimulated by the presence of diverse ecological conditions in the different parts of the mountain. The puzzle-type of distribution of the limestone terrains has lead up to the formation of very different fauna, which has developed in conditions of isolation and close specialization to the specific environmental conditions.

On the other hand, due to the colonization of monotypic limestone habitats by this rich in species and subspecies group, there was probably a strong ecological specialization present in terms of differentiation of the ecological niches. The process of differentiation of the “clusilid” niches in some taxa was probably attended with the formation of close food specialization. In this way we can explain the common “island” distribution of many of the taxa within the range of wide limestone terrains where their distribution is probably limited by the presence of specific food base (lichen, fungi etc.) – the distribution of *Macedonica zilchi* in the wide Trigradski Karst Gorge, for example, is limited only to a very small patch of the Trigradsko Zhdrelo area, *Macedonica hartmuti* – only in a small valley of Mostovska Suchitsa Riverà, *Macedonica teodorae* – only on a rocky hill etc. To prove this hypothesis, however, additional future studies on the food ecology of the mentioned taxa are needed.

The ecological typification showed that in the Western Rhodopes the mesophilic and mesothermic species and subspecies predominate. In terms of humidity variations and temperature, most of the species prefer the moderate part of the spectrum, followed by the ones, which prefer “cold and humid” and those, which prefer “warm and dry” spectrum. The domination of this ecological group defines the Western Rhodopes as a territory where there are most suitable conditions for the existence of terrestrial snails typical for the deciduous forests of Central and Eastern Europe.

The other two ecological groups include terrestrial snails with contrast requirements for humidity and temperature (hygro- ! xero-) and they are far removed from the moderate spectrum.

The terrestrial snails with preferences for the “cold and humid” spectrum inhabit different northern areas in Europe and Asia or such, which are common for the Palearctic and Holarctic. In the Western Rhodopes these species find suitable environmental conditions in the beech and pinetree zone or near mountain brooks and rivers, lakes and swamps. Some of them have glacial origin and mountain disjunctive areal in Bulgaria.

The terrestrial snails, which prefer the “warm and dry” spectrum, have very diverse genesis, but their distribution in the Western Rhodopes is positively influenced by the presence of limestone terrains, which are the most suitable habitats for thermophilic species.

Most of the taxa classified as euryvalent are mainly with European genesis, formed in conditions of big daily and seasonal fluctuations of temperature and humidity and in the Western Rhodopes they inhabit all altitudes.

The richness of petrophilic, calcareous and thermophilic forms in the Western Rhodopes is due to the presence of wide limestone terrains in this part of the mountain in contrast to the Eastern Rhodopes, where due to the predominance of silicate rocks many of the calcareous forms do not occur.

In relation to zoogeography the main part of the malacofauna of the Western Rhodopes is composed of terrestrial snails from the European faunistic complex (fig. 3), where taxa belonging to the submediterranean element (namely to eastmediterranean subelement) are distinctively predominant, followed by taxa that belong to the Mid European and European mountainous elements. This correlation shows that the Western Rhodopes belong to the submediterranean zoogeographical province and widen the list of the submediterranean faunistic taxa in Bulgaria.

The next group is of the species from the Siberian faunistic complex, which according to IRIKOV A., (2002) shows the “European closeness of the malacofauna” from this region and “its relation to the European-West Siberian biogeographic province of the Palearctic”. According to the same author “the high level of presence of limestone terrains and the presence of xerothermic regions is positively influencing the invasion and the settling of small number of species with Southwestern Asian center of distribution”, which belong to the Southwestern Asiatic faunistic complex. The other three faunistic complexes mentioned before have insignificant presence in the Western Rhodopes.

### **Conservation status and contemporary threats to the malacofauna in the Western Rhodopes**

From the Bulgarian terrestrial malacofauna only three taxa, inhabiting the Western Rhodopes, are evaluated as having conservation significance and have the following conservation status (by HUBENOV, in press): *Balea perversa* (included in the European Red Book in the “vulnerable” category; included in the CORINE program); *Helix lucorum* (included in Appendix <sup>2</sup>V of Zakon za Biologichnoto Raznoobrazie [The Biodiversity Law] - Darzhaven vestnik [State Gazette], 77/2002); *Helix pomatia* (included in Appendix <sup>2</sup>V of Zakon za Biologichnoto Raznoobrazie [The Biodiversity Law] - State Gazette [Darzhaven vestnik], 77/2002; Appendix <sup>222</sup> of the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention); Appendix V of Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora; the CORINE Program, European Red Book).

In our opinion there is an urgent need of contemporary analysis and evaluation of the condition of the terrestrial malacofauna in Bulgaria and the preparation of an expert evaluation of its conservation significance and status.

The Western Rhodopes is a unique territory in Bulgaria, where at this point many local endemics have been established, most of which have an “island” type of distribution and inhabit very small territories (see IRIKOV, 2006-in press). These species don't have conservation problems, which are typical for most animals, but due to our concrete observations it is our opinion that they are potentially vulnerable as an object of a hidden and very significant contemporary threat – collecting of large amounts of live specimens (rarely empty shells due to the bad condition of their upper layer) and their illegal transfer across Bulgarian borders and their use by dealers and collectors of scallops in the world. A disturbing proof of the scale of this process are the many dealer's sites in the Global network, where many of the rarest, endemic species of terrestrial snails of Bulgaria are offered for sale.

Having in mind our expert evaluation of the recent condition and the contemporary threats to the local Bulgarian endemic terrestrial snails from the Western Rhodopes and considering the concepts of the Global Strategy for the Biodiversity Conservation (“every form of life is unique and has the right to be preserved”), the Convention On Biological Diversity (ratified for Bulgaria on 29.02.1996) and last but not least the Convention on International Trade in Endangered Species of Wild Flora and Fauna (SITES, ratified for Bulgaria in 1990 and applicable from April 1991) (by GEORGIEV, 2004) with the current paper we suggest the following:

1. All local Bulgarian endemics of terrestrial snails from the Western Rhodopes must be included in the new edition of the Bulgarian Red Book in the categories “vulnerable” or “threatened”.

2. All local Bulgarian endemic species of terrestrial snails from the Western Rhodopes should be categorized with European ? of global significance and should be included in the European Red List.

3. To strengthen up the customs control and a more effective application of the SITES convention must be ensured concerning the terrestrial snails. In many of the cases, through the Bulgarian border many unregistered alive animals are transferred, which are hidden inside the shell and at the customs they are declared as scallops and souvenirs. Because of this, additional control on the transfer of scallops through the Bulgarian border should be exercised or it should be forbidden in general.

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## Сухоземна гастроподна фауна (Mollusca: Gastropoda) на Западните Родопи (България)

Атанас ИРИКОВ, Ивелин МОЛЛОВ

(Р е з ю м е)

За първи път чрез тази обзорна статия е направен обобщен анализ на сухоземната малакофауна на Западни Родопи.

По литературни и нови данни в Западните Родопи са установени 106 вида и 19 подвида (111 таксона) сухоземни охлюви, което представлява приблизително половината от сухоземната малакофауна на България. За всеки таксон е представен синонимен списък за Западните Родопи, списък на авторите, които го съобщават, УТМ координатите на съобщаваните локалитети, както и нови данни за разпространението, вертикалното разпространение, таксономични и екологични данни, ендемизъм и зоогеографска принадлежност.

Установените в Западни Родопи видове и подвидове сухоземни охлюви принадлежат към 28 семейства.

Съобщават се 4 нови таксона за фауната на Родопите и 4 нови таксона за фауната на България.

Авторите считат, че 24 таксона въобще или поне на този етап са невалидни за фауната на Западни Родопи.

Като особеност се изтъква наличието на голямо видово богатство на сухоземната малакофауна на Западни Родопи, където се срещат почти половината от известните за България сухоземни охлюви и се коментират някои от причините за това.

Регистрирани са 32 ендемични таксона: 19 таксона са ендемични за България, 16 от които са регионални ендемити за Западни Родопи, а други 13 таксона са ендемични за Балканския полуостров. Западните Родопи се характеризират като физикогеографски район с много висок процент на ендемизъм, където се срещат повече от 1/3 от ендемичните таксона на Българската малакофауна. Сред регионалните ендемити преобладават таксона от планинското по произход семейство *Clausiliidae*. Авторите оценяват Западните Родопи като планинска територия с най-голямо разнообразие на регионални ендемити в България и като мощен, център на формообразуване. За сравнение, по физикогеографски региони са представени данни относно ендемизма на сухоземната малакофауна на България.

Направена е екологичната характеристика на сухоземните охлюви на Западни Родопи и те са причислени към три екологични групи, с много разновидности и вариации в екологичният тип. Към първата екологична група се отнасят мезофилни и мезотермни видове и подвидове част, от които имат екологични изисквания и толерантност към влажността и температурата близки до средните, но тук също са причислени и мезофили, които малко или много са хладнолюбиви и хладноустойчиви както и мезофили, които са малко или много топлолюбиви и сухоустойчиви. Към тази разнородна група със средни или близки до средните екологични предпочитания и толерантност са причислени 34 таксона. Счита се, че доминирането на тази екологична група определя Западни Родопи като територия, в която има най-благоприятни условия за съществуване на сухоземни охлюви характерни за листопадните и смесени гори на Средна и Източна Европа.

Към втората екологична група са причислени хигрофилни или мезохигрофилни, хладнолюбиви, хладно- или студоустойчиви видове и подвидове, където също е отчетена голяма вариабилност най-вече по отношение на предпочитанията и толерантността към температурата.

Към третата екологична група са причислени ксерофилни или ксеромезофилни, топлолюбиви и в различна степен сухоустойчиви видове и подвидове с частични вариации относно степента на ксерофилност и сухоустойчивост.

Поради големият предел на толерантност и еврифилност спрямо екологичните условия много таксона са отделени в отделна обобщена група на еврихигробионтните и евритермни видове и подвидове. Повечето от тези таксона се счита, че са с Европейски генезис, възникнали в условията на големи денонощни и сезонни флуктуации на температурата и влажността и в Западни Родопи се срещат от най-малките до най-големите височини.

Посочени са и таксоните, които са калцифилни и петрофилни, чието изобилие в Западни Родопи се дължи на наличието на обширни карстови терени.

В зоогеографско отношение, основната част от малакофауната на Западни Родопи се разглежда като част от Европейския фаунистичен комплекс с отчетливо доминиране на таксона от субмедитеранския фаунистичен елемент (по точно източносубмедитеранския поделемент), следвани от средноевропейски и европейски планински фаунистични елементи, което съотношение според авторите показва принадлежността на Западните Родопи към субмедитеранската зоогеографска провинция в България.

Следващите по големина зоогеографски групи принадлежат към Сибирския и Югозападноазиатския фаунистични комплекси, а Степния Евразийски, Северния Холарктичен, и Медитеранския фаунистични комплекси са с незначително присъствие в Западни Родопи.