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Terrestrial gastropods (Mollusca, Gastropoda) of Strandzha Mountain and the Black Sea coast (Bulgaria and Turkey)

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Abstract: The current synopsis presents an overview of the terrestrial malacofauna of Strandzha Mountain in Bulgaria and Turkey, based on previously published and new data. As a result of the research we recorded 101 species and subspecies of terrestrial molluscs belonging to 27 families. The data on the terrestrial malacofauna from the Turkish part of Strandzha is entirely new and presented here for the first time. The synopsis includes a list of synonymous species and subspecies concerning the area of research, all known localities, new localities reported for 50 taxa, systematic and environmental data. For the first time a zoogeographical and conservation analysis of the terrestrial snails is made.

Key words: terrestrial gastropods, snails, slugs, Strandzha Mountain, Bulgaria, Turkey.

Introduction

50 publications contain data on the terrestrial malacofauna of Strandzha Mountain in Bulgaria. For Strandzha Mnt. in Turkey there are limited data only on the presence of a few species of the genus *Monacha* (Hausdorf, 2000). Most publications report species composition and localities or describe new taxa. Information on the malacofauna is fragmentary and mostly referring to the Bulgarian part of Strandzha. With almost no data on the Turkish part of Strandzha, this is the first major study of Turkish region.

In contrast, the first reports of molluscs in Strandzha in Bulgaria were published more than 80 years ago (Wagner, 1927). Most data refer to terrestrial species, but there are some data on aquatic species of molluscs.

Notwithstanding the accumulated information (mainly for the coastal part of the mountain), there is no summarizing study about the contemporary state of malacofauna of Strandzha Mnt.

The purpose of this paper is to present a review of the malacofauna from Strandzha (Bulgaria and Turkey) based on all published data so far, and also on new data from modern research.

In the present work, malacofaunistic data from 50 publications and new data of the authors are summarized.

Original data on species distribution, as well as taxonomic, systematic, zoogeographical and ecological data resulting from studies in the years 2002-2010 are included.

Material and methods

Names of species and subspecies, with a few exceptions, follow Irikov & Mollov (2006). The list of synonyms applies only to Strandzha Mnt. New data resulting from research in the period 2002-2010 are presented. Comments, taxonomic data, ecological data, and zoogeographic classification are given below each taxon.

Figure 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.

Tables 1 and 2 present all localities of terrestrial snails in the Strandzha (Bulgaria and Turkey) from literature sources or new records with a UTM code. Serial number of each locality within the UTM quadrant is provided.

Symbols used:

- Species or subspecies identified as new to the

fauna of Strandzha or Southern Black Sea coast in Bulgaria;

●● Species or subspecies identified as new to the fauna of Strandzha or Southern Black Sea coast in Turkey;

●●● Species or subspecies identified as new to the fauna of Strandzha (Bulgaria and Turkey);

■ Species and subspecies identified as new to the fauna of Turkey;

S Species (or subspecies) synonymized;

▲ Species or subspecies with revised nomenclature: taxa transferred to other genera or a change of species / sub-species status;

Species (or subspecies) not found in Strandzha and southwestern Black Sea Coast (Bulgaria and Turkey);

? Species (or subspecies) questionable for the researched areas;

≈ Species registered under Black Sea coast, but not part of the malacofauna in the researched area (Bulgaria and Turkey). All found shells are carried by sea currents from other close or distant regions, and deposited by waves on the Bulgarian and Turkish coast.

I Species or subspecies introduced in Bulgaria or Turkey;

BGE species endemic to Bulgaria;

BLE species endemic to the Balkan Peninsula;

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 range of the taxa as a reflection of its ecological requirements.

For the zoogeographical characteristics of the species the contemporary range of each species is noted and also its ecological requirements and adaptations as a reflection of its historical development, geological 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, 2000a, 2000b, 2002a, 2002b), Gruev (In: Gruev & Kuzmanov, 1999), Gruev & Bechev (2000), Damjanov & Likharev (1975), as well as the zoogeographic characteristics made for terrestrial snails from the Dobrostan Ridge in the Western Rhodopes by Irikov (2002) and Irikov & Mollov (2006) for terrestrial snails from the Western Rhodopes.

The names of the zoogeographic categories (complexes, elements, subelements) follow Gruev & Bechev (2000).

The snails were identified in laboratory conditions by their conchiological indices and anatomical

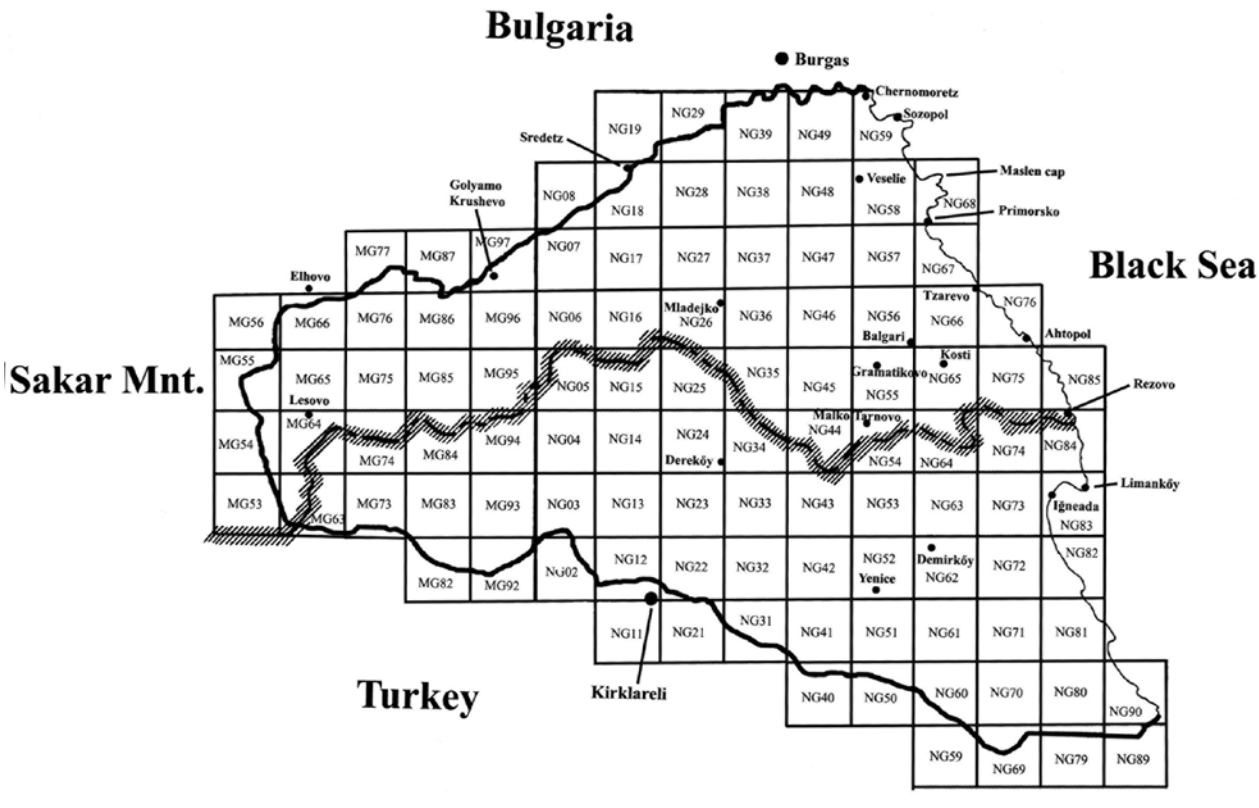

Fig. 1. Map of the studied region

Table 1. Codes of the localities of the terrestrial gastropods in Strandzha Mountain

UTM code	Locality	Notes
NG17	Varovnik Village	River Fakiyska 7 km west of the village
NG18	Sredetz Town	
NG26	Mladezhko	about 40 km north- west of Malko Tarnovo
NG34	Dereköy Village	
NG35	Cave Hambarcheto	Brashljan Village district
NG36	Zvezdetz Village	
NG44	Malko Tarnovo Town	
NG45-1	Cave Bazat	Stoilovo Village district
NG45-2	Cave Malkata vapa	Stoilovo Village district
NG45-3	Cave Peshterata s dvata vhoda	Stoilovo Village district
NG48-58	Yasna Polyana Village	
NG49-59	Bakarlaka Hills	Between villages Rosen and Ravadinovo, in "Medni Rid" Hill
NG51	3 km north-east of Yenice	
NG55-1	Gramatikovo Village	
NG55-2	Place Kachul	About 20 km northeast of Malko Tarnovo Town
NG56-1	Kondolovo Village	On 3 km west of the village
NG56-2	Coomb Trionski dol	Upstream Trionska River, at 5-7 km north of the village Balgari
NG56-3	Balgari Village	
NG58-1	Riverside on Ropotamo River	200 meters east of the bridge on the road Sozopol - Primorsko
NG58-2	Veselie Village	
NG58-3	Arkutino	Camping and marsh
NG58-4	Between villages Veselie and Yasna Polyana	
NG58-5	Riverside on Ropotamo River	3, 5 km upstream from the mouth of the river
NG58-6	Mouth of Ropotamo River	1-5 km from the river outfall
NG58-7	Mouth of Ropotamo River	3 km upstream from the outfall
NG58-68	Mouth of Ropotamo River	
NG59-1	Cape Sveta Agalina	Between Sozopol and "Diuni" Resort
NG59-2	Sozopol	
NG59-3	Camping site "Zlatna Ribka"	About 5 km south of Chernomorets
NG59-4	Camping site "Kavatsite"	Camping site "Kavatsite"
NG62	Demirköy	About 5 km southwest of the town
NG65-1	Cave Kerechiyca	Kosti Village district
NG65-2	Reserve Silkosia	Kosti Village district
NG66-1	Tsarevo Town	
NG66-2	Izgrev Village	Place Glarus Bair
NG66-3	Protected area "Marina reka"	Between villages Izgrev and Balgari
NG67-1	Kiten Village	
NG67-2	Lozenets	
NG67-3	North of Tsarevo Town	Few kilometers
NG67-4	Camping site "Arapya"	2 km north of Tsarevo
NG67-5	Beach "Popski plaz"	In the northern part of Tsarevo
NG67-6	Camping site "Oazis"	South of Lozenets
NG67-68	Primorsko Town	
NG68-1	Cape Maslen nos	
NG68-2	Cape Kondrus nos	
NG73(1)	5 km west of Iğneada Town	
NG73(2)	Half-way between Demirköy Town and Iğneada Town	
NG-75	Lower reaches and mouth of Veleka River	Betveen Ahtopol Town and Sinemorets Village
NG76-1 NG76-2	Varvara Village, Ahtopol Town	
NG76-3	Between Varvara Village and Tsarevo Town	
NG83(1)	1 km west of Iğneada	
NG83(2)	beach to Iğneada Village	
NG84	Rezovo Village	
NG85-1	Silistar River	Firth of the river mouth
NG85-2	Sinemorets Village	

Table 2. Codes of the localities of the terrestrial gastropods in Strandzha Mountain

UTM code	Areas
NG58-NG68-NG67-NG66-NG76-NG75-NG85-NG84	Between outfall of Ropotamo River and outfall of Rezovska River
NG59-NG68-NG67-NG66-NG76-NG75-NG85-NG84	Between Sozopol resort and outfall of Rezovska River
NG59-NG58-NG68-NG57-NG67-NG66-NG76	Between Sozopol and Tsarevo

and morphological peculiarities of the genital system. For identifying the taxa, we used mainly the works of Damjanov & Likharev (1975), Nordsieck (1973, 1974), Urbański (1960b,c, 1964, 1969), Riedel (1963-2000), Wiktor (1983) and others.

Results

As a result of the research conducted in Strandzha (Bulgaria and Turkey) we found 101 species and subspecies terrestrial mollusks belonging to 27 families. One taxon new for Strandzha Mountain and the Black Sea coast in Bulgaria was found, 16 taxa are new for Strandzha Mountain and the Black Sea coast in Turkey, two taxa are new for Strandzha in Bulgaria and Turkey, one taxon is new to the fauna of Turkey, 16 taxa with a revised nomenclature are reported; we believe that 13 taxa cannot be found in the study area and 7 taxa remain under question, 1 species is thought to have been introduced in Bulgaria, 4 taxa were brought to the Bulgarian coast from other regions through sea currents, 3 taxa are Bulgarian and 9 Balkan endemites. New localities are reported for 50 taxa.

The nature of this article, with its summary of all previously available and newly included data makes it useful as a basis for future research, as well as for new data finding.

List of the taxa of terrestrial snails, inhabiting the Strandzha Mountain and the Black Sea Coast (Bulgaria and Turkey):

Terrestrial snail

Family Pomatiasidae

1. *Pomatias elegans* (Müller, 1774)

Pomatias elegans: Urbański, 1960b: 93.

Pomatias elegans: Urbański, 1960c: 139, 140.

Pomatias elegans: Urbański & Wiktor, 1968: 56, 60.

Pomatias elegans: Pintér & Pintér, 1970: 88.

Pomatias elegans: Damjanov & Likharev, 1975: 87.

Pomatias elegans: Körnig, 1983: 32.

Published for the studied area (Table 1; Fig. 1): Urbański (1960b) NG66(1); Urbański (1960c) NG58(3), NG58-68, NG67-68 (south-east coast of Dyavolsko Marsh); Urbański & Wiktor (1968) NG58(3,7), NG58-68; Pintér & Pintér (1970) ("right bank of the Ropotamo River"), NG66(1); Damjanov & Likharev (1975) ("the entire Black Sea coast"); Körnig (1983) NG58(3), NG59(2), NG66(1).

New localities (Table 1; Fig. 1):

- Malko Tarnovo town (Bulgaria), NG44, 3.03.2003, leg. S. Uzunov.

- Mladezhko village, NG26 (Bulgaria), 9.05.2005, leg., A. Irikov.

Ecological data: In the Black Sea coast it occurs in leaf surface of deciduous forests, and also among coastal bushes and grass vegetation.

Mesophilic and thermophilic species with relatively high drought resistance.

Zoogeography: Atlanto-Mediterranean subelement, Atlantic element, European faunistic complex.

 # Pomatias rivulare (Eichwald, 1829)

Pomatias rivulare: Pintér & Pintér, 1970: 88.

Notes: The species is wrongly reported by Pintér & Pintér (1970) for the region of Tsarevo together with *Pomatias elegans* (Müll.). Our studies showed that *P. rivulare* does not occur in Strandzha or anywhere in the Black Sea coast in the studied area.

Family Aciculidae

2. *Platyla polita* (Hartmann, 1840)

Acicula (*Platyla*) *polita*: Damjanov, 1971: 23.

Acicula (*Platyla*) *polita*: Damjanov & Likharev, 1975: 89.

Acicula polita: Hubenov (In: Delchev et al., 1993): 188.

Acicula polita: Dedov, 1998: 746.

Platyla polita: Hubenov, 2005: 233.

Published for the studied area (Table 1; Fig. 1): Damjanov (1971) NG85(1); Damjanov & Likharev (1975) NG67(1), NG76(1), NG85(1); Hubenov (In: Delchev et al., 1993) ("Silistar River"), NG67(1), NG76(1); Hubenov (2005) ("Strandzha");

New localities (Table 1; Fig. 1):

- Silkosiya Reserve, near Kosti village (Bulgaria), NG65(2), 23.06.2001, leg., A. Irikov.

Ecological data: Lives among leaf litter and in rotten wood residues mixed with soil at high humid-

ity (Damjanov & Likharev, 1975) and in the crevices of rocks (Falkner et al., 2013). Mesohygrophilic (Hubenov, 2005).

Zoogeography: Mid European element, European faunistic complex.

Conservation status: Listed as "Least Concern" (LC) under IUCN criteria (Falkner et al., 2013).

3. ▲ *Platyla similis* (Reinchardt, 1880)

Acicula similis: Körnig, 1983: 32.

Published for the studied area (Table 1; Fig. 1): Körnig (1983) ("Bosna ridge");

Ecological data: Inhabits limestones within the leaf cover of deciduous forests with high humidity and moderate or low temperature, usually found under stones or at the base of rocks. However this is not an obligate rock-dwelling species (Páll-Gergely, 2013a). Mesohygrophilic, cool-loving species (Irikov, 2002).

Zoogeography: East-Submediterranean subelement, Submediterranean element, European faunistic complex (Irikov & Mollov, 2006).

Conservation status: Listed as "Least Concern" (LC) under IUCN criteria. Local subpopulations might be threatened by destruction of the vegetation (Páll-Gergely, 2013a).

4. *Platyla orthostoma* (Jackiewicz, 1979) BGE

Acicula (*Platyla*) *orthostoma*: Jackiewicz, 1979: 137.

Platyla orthostoma: Hubenov, 2005. 233.

Published for the studied area (Table 1; Fig. 1): Jackiewicz (1979) NG55(1); Hubenov (2005) ("South Black Sea coast");

Ecological data: Occurs in subterranean part of rocky (mostly limestone) habitats or under decaying leaf litter (Páll-Gergely, 2013b). Mesohygrophilic (Hubenov, 2005).

Zoogeography: Bulgarian endemic.

Conservation status: Listed as "Near Threatened" (NT) under IUCN criteria. A potential threat to the species is destruction of the rocks it inhabits by quarrying, road construction or other. However the total destruction of the whole habitat is not very likely, therefore this threat is mostly hypothetical. Deforestation of its habitat can be a threat to this species, however this is not an ongoing threat. The species is not protected at national level in Bulgaria. The geographic range and the existing sub-populations of this species are not exactly known, therefore research activities should focus on these two areas (Páll-Gergely, 2013b).

Family Ellobiidae

5. *Carychium minimum* Müller, 1774

Carychium minimum: Körnig, 1983: 32.

Published for the studied area (Table 1; Fig. 1): Körnig (1983) ("Bosna ridge");

Ecological data: Lives in places with high humidity, in dense deciduous forests and meadows, under leaf litter, among decaying plant debris, moss-grown stumps, especially in marshy places up to 1000 m altitude (Damjanov & Likharev, 1975).

Zoogeography: Mid European element, European faunistic complex.

Family Piramidulidae

 # Pyramidula rupestris (Draparnaud, 1801)

Pyramidula rupestris: Damjanov, 1971: 25.

Published for the studied area (Table 1; Fig. 1): Damjanov (1971) NG75, NG85(1);

Notes: We reckon that the presence of this species in the studied regions is questionable. There is no other data about it, except those of Damjanov (1971). The material from Strandzha reported by Damjanov (1971) is most probably related to *P. cephalonica* (Westerlund, 1898) or less probably to *P. pusilla* (Vallot, 1801) (see Dedov & Subai, 2012).

6. *Pyramidula cephalonica* (Westerlund, 1898)

Pyramidula cephalonica: Dedov & Subai, 2012: 104.

Published for the studied area (Table 1; Fig. 1): Dedov & Subai (2012) NG44.

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

Family Vertiginidae

Subfamily Vertigininae

7. *Vertigo* (*Vertigo*) *pygmaea* (Draparnaud, 1801)

Vertigo pygmaea: Körnig, 1983: 32.

Published for the studied area (Table 1; Fig. 1): Körnig (1983) ("Ropotamo River");

Ecological data: Usually lives under the leaf cover in grass and moss, with high humidity, in mixed and deciduous forests (Damjanov & Likharev, 1975).

Zoogeography: Holarctic element, Siberian faunistic complex.

8. ● *Vertigo* (*Vertilla*) *angustior* (Jeffreys, 1830)

Published for the studied area in the present study.

Localities (Table 1; Fig. 1):

- Kiten resort (Bulgaria), NG67(1), leg. D. Georgiev.

Ecological data: Lives in very moist woodlands

among grass and moss, under stones and in leaf litter (Damjanov & Likharev, 1975).

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

Conservation status: Included in Annex II of the Bulgarian Biodiversity Act (State Gazette, 2002) and Annex II of Council Directive 92/43/EEC (CD92/43, 1992).

Subfamily Truncatellininae

9. *Truncatellina claustralis* (Gredler, 1856)

Truncatellina claustralis: Damjanov, 1971: 24, 25.

Truncatellina claustralis: Damjanov & Likharev, 1975: 126.

Published for the studied area (Table 1; Fig. 1): Damjanov (1971) NG75, NG85(1); Damjanov & Likharev (1975) ("the entire Black Sea coast").

Ecological data: Inhabits limestones (calcerous) in the mountains with medium and low humidity (xeromesophile), thermophile, in dry periods considerably drought-resistant (Irikov & Mollov, 2006).

Zoogeography: Mid European mountainous subelement, European mountainous element, European faunistic complex (Irikov & Mollov, 2006).

10. *Truncatellina cylindrica* (Ferussac, 1807)

Truncatellina cylindrica: Urbański, 1960b: 89.

Truncatellina cylindrica: Pintér & Pintér, 1970: 88, 89.

Published for the studied area (Table 1; Fig. 1): Urbański (1960b) NG58(3), NG58-68; Pintér & Pintér (1970) ("right coast of Ropotamo River").

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

New localities (Table 1; Fig. 1):

- Camping "Zlatna Ribka", south of Chernomorets Town (Bulgaria), NG59(3), 30.06.2004, leg. A. Irikov.

Zoogeography: Mid European element, European faunistic complex (Irikov & Mollov, 2006).

11. *Truncatellina costulata* (Nilsson, 1822)

Truncatellina costulata: Damjanov & Likharev, 1975: 129.

Truncatellina costulata: Hubenov (In: Delchev et al., 1993): 191.

Truncatellina costulata: Dedov, 1998: 748.

Truncatellina costulata: Hubenov, 2005: 236.

Published for the studied area (Table 1; Fig. 1): Damjanov & Likharev (1975) ("between Malko Tarnovo town and Elhovo village"); Hubenov (In: Delchev et al., 1993) NG44; (2005) ("Strandzha");

Ecological data: Lives in dry places, overgrown with shrubs and grass, in plant debris mixed with soil (Damjanov & Likharev, 1975). Mesophilic and calciphilous (Hubenov, 2005).

Zoogeography: Mid European element, European faunistic complex.

Family Lauridaea

12. *Lauria cylindracea* (Da Costa, 1778)

Lauria (*Lauria*) *cylindracea cylindracea*: Urbański, 1960b: 89.

Lauria (*Lauria*) *cylindracea*: Pintér, 1968: 211.

Lauria (*Lauria*) *cylindracea*: Pintér & Pintér, 1970: 88, 89.

Lauria cylindracea: Damjanov & Pintér, 1969: 39.

Lauria cylindracea: Damjanov, 1971: 24, 25.

Lauria cylindracea: Damjanov & Likharev, 1975: 102.

Lauria cylindracea: Körnig, 1983: 32.

Lauria cylindracea: Hubenov (In: Delchev et al., 1993): 185, 191.

Lauria cylindracea: Dedov, 1998: 748.

Lauria cylindracea: Hubenov, 2005: 236.

Published for the studied area (Table 1; Fig. 1): Urbański (1960b) NG58(3), NG58-68; Pintér (1968) ("estuary Ropotamo River"); Pintér & Pintér (1970) ("right coast of Ropotamo River"), NG58(3); Damjanov & & Pintér (1969) NG58(1); Damjanov (1971) NG75, NG85(1); Damjanov & Likharev (1975) ("South Black Sea coast") NG44; Körnig (1983) ("Ropotamo River"); Hubenov (In: Delchev et al., 1993) NG44; Hubenov (2005) ("South Black Sea coast and Strandzha Mountain");

New localities (Table 1; Fig. 1):

- Tsarevo town (Bulgaria), NG66(1), leg. D. Georgiev.

Ecological data: The species is found on sunny slopes, under andesite stones and among dry grass vegetation. Lives in average wet and dry places under grasses, crop residues and leaves in low mixed forests and shrubs (Damjanov & Pintér, 1969; Damjanov, 1971; Damjanov & Likharev, 1975).

Mesophilic (Hubenov, 2005).

Zoogeography: Atlantomediterranean subelement, Atlantic element, European faunistic complex.

13. *Euxinolauria schweigeri* (Götting, 1963)

Lauria (*Leiostyla*) *anglica*: Damjanov, 1971: 24.

Lauria (*Leiostyla*) *anglica*: Damjanov & Likharev, 1975: 104.

Lauria anglica: Körnig, 1983: 32.

Lauria anglica: Hubenov (In: Delchev et al., 1993): 185, 191.

Lauria anglica: Dedov, 1998: 748.

Leiostyla anglica: Hubenov, 2005: 236.

Euxinolauria schweigeri: Irikov & Erőss, 2008: 200.

Published for the studied area (Table 1; Fig. 1): Damjanov (1971) NG75, NG85(1); Damjanov & Likharev (1975) NG75, NG85(1); Körnig (1983) ("Bosna ridge"); Hubenov (In: Delchev et al., 1993) ("Veleka River and Silistar River"); Hubenov (2005) ("South Black Sea coast");

New localities (Table 1; Fig. 1):

- Silkosiya Reserve, near Kosti village (Bulgaria), NG65(2), 23.06.2001, leg., A. Irikov.

- Maslen Nos Cape (Bulgaria), NG68(1), 4.06.2005, leg. A. Irikov.

Taxonomical data: The species *Lauria* (*Leiostyla*) *anglica* has not previously been distinguished from *Euxinolauria schweigeri* and therefore was erroneously reported in Bulgaria (Irikov & Erőss, 2008).

Ecological data: The species occurs in mixed forests at the base of cliffs in shady and humid places under decayed leaves mixed with soil (Damjanov, 1971; Damjanov & Likharev, 1975).

Mesohygrophilic (Hubenov, 2005).

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

Family Argnidae

14. **?** *Agardhiella parreyssii* (Pfeiffer, 1848) BLE

Agardhiella rumelica: Hubenov (In: Delchev et al., 1993): 183.

Published for the studied area (Table 1; Fig. 1): Hubenov (In: Delchev et al., 1993) ("Strandzha Mountain" in Bulgaria).

Notes: This species was reported as *A. rumelica* (Hesse, 1916) by Hubenov (1993) with no specific deposit in Strandzha Mountain. We consider that the existence of this species in the studied regions is questionable. Strandzha does not meet the ecological requirements of the species – it lacks the typical medium-and high karst habitats.

Taxonomical data: According to Subai (2011), *A. rumelica* is a synonym of *A. parreyssii*.

Zoogeography: Endemic for the Balkan Peninsula (Irikov, 2008).

Family Orculidae

15. *Orcula* (*Hausdorfia*) *zilchi* Urbański, 1960

Orcula (*Orcula*) *zilchi*: Urbański, 1960a: 57.

Orcula (*Orcula*) *zilchi*: Urbański, 1960c: 139.

Orcula (zilchi): Damjanov & Likharev, 1975: 115.

Orcula zilchi: Körnig, 1983: 32.

Orcula zilchi: Hubenov (In: Delchev et al., 1993): 181.

Orcula zilchi: Hubenov, 2005: 236.

Orcula (*Hausdorfia*) *zilchi*: Páll-Gergely et al., 2013: 37, 38.

Published for the studied area (Table 1; Fig. 1): Urbański (1960a) NG58-68 (right bank of the river, 3 km from the mouth); Urbański (1960c) NG58-68; Damjanov & Likharev (1975) NG58-NG68-NG67-NG66-NG76-NG75-NG85-NG84; Körnig (1983) ("Ropotamo River and Bosna ridge"); Hubenov (In: Delchev et al., 1993) ("South Black Sea coast and Strandzha Mountain"); Hubenov (2005) ("South Black Sea coast and Strandzha Mountain"); Páll-Gergely et al. 2013 NG56(1), NG65(2).

Notes: A. Irikov (in: Páll-Gergely et al., 2013) could not find this species in the type locality. It is reasonable to suppose that Urbański's population was "washed down" from some location in the Strandzha Mountain and settled a temporary subpopulation in the Ropotamo floodplain (Páll-Gergely et al., 2013).

Ecological data: The species lives in shady and damp places under leaf waste mixed with soil, under rotten boles at the base of syenite rocks, in mixed forests and shrubs near the swamps of the Black Sea coast (Urbański, 1960a; Damjanov & Likharev, 1975). In Strandzha Mountain (near Kondolovo village), living specimens were collected in an oriental beech (*Fagus orientalis*) forest in shady and moist microhabitats between the leaf litter and soil (Páll-Gergely et al., 2013).

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

Conservation status: Listed as vulnerable (V) under IUCN criteria (Páll-Gergely, 2011). Deforestation and disturbance of the forests are the main threat to this species (Páll-Gergely et al., 2013).

16. **?** *Orculella ignorata* Hausdorf, 1996

Orculella ignorata: Dedov & Subai, 2012: 104.

Published for the studied area (Table 1; Fig. 1): Dedov & Subai (2012) NG44:104.

Notes: So far, there has been no evidence for the existence of this species in Strandzha.

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

17. ▲ *Sphyradium doliolum* (Bruguiere, 1792)

Orcula (*Sphyradium*) *doliolum*: Urbański, 1960a: 59.

Orcula (*Sphyradium*) *doliolum*: Urbański, 1960c: 139.

Orcula (*Sphyradium*) *doliolum*: Urbański & Wiktor, 1968: 60.

Orcula (*Sphyradium*) *doliolum*: Pintér & Pintér, 1970: 88, 89.

Orcula doliolum: Körnig, 1983: 32.

Published for the studied area (Table 1; Fig. 1): Urbański (1960a) NG58(7); Urbański (1960c) NG58-68; Urbański & Wiktor (1968) NG58(3,7); Pintér & Pintér (1970) ("right bank of the Ropotamo River"); Körnig (1983) ("Ropotamo").

New localities (Table 1; Fig. 1):

- Maslen Nos cape (Bulgaria), NG68(1), 4.06.2005, leg. A. Irikov.

- Near the mouth of Veleka River (Bulgaria), NG75, 28.06.2004, leg. A. Irikov.

- Near the mouth of Rezovska River (Bulgaria), NG84, 27.08.2004, leg. T. Irikova & A. Irikov.

Ecological data: Inhabits limestones at moderate humidity, in the leaf cover of deciduous and rarely pine forests. Because of the thermophilic preferences this species is considerable drought-resistant and can be found in xerothermic sites. Mesophilic, thermophilic species with relatively high drought-resistance. Euryhygro- and eurythermibiontic (Irikov, 2002; Irikov & Mollov, 2006).

Zoogeography: Mid European element, European faunistic complex (Irikov & Mollov, 2006).

Family Valloniidae

Subfamily Valloniinae

18. *Vallonia pulchella* (Müller, 1774)

Vallonia pulchella: Pintér & Pintér, 1970: 88, 89.

Published for the studied area (Table 1; Fig. 1): Pintér & Pintér (1970) ("right bank of the Ropotamo River"), NG58(2);

Ecological data: Mesohygrophilic, cool-loving, cold-resistant species, eurythermic, standing considerable temperature fluctuations and continuous dry periods (Irikov, 2002; Irikov & Mollov, 2006).

Zoogeography: Holarctic element, Siberian faunistic complex (Irikov & Mollov, 2006).

Subfamily Acanthinulinae

19. *Acanthinula aculeata* (Müller, 1774)

Acanthinula aculeata: Damjanov, 1971: 24, 25.

Acanthinula aculeata: Körnig, 1983: 32.

Published for the studied area (Table 1; Fig. 1): Damjanov (1971) NG75, NG85(1); Körnig (1983) ("Ropotamo River");

Ecological data: Mesophilic, cool-loving and relatively cold-resistant (Irikov, 2002).

Zoogeography: Mid European element, European faunistic complex (Irikov & Mollov, 2006).

Superfamily Cochlicopoidea

Family Cochlicopidae

20. *Cochlicopa lubrica* (Müller, 1774)

Cochlicopa lubrica: Pintér & Pintér, 1970: 88, 89.

Cochlicopa lubrica: Körnig, 1983: 33.

Published for the studied area (Table 1; Fig. 1): Pintér & Pintér (1970) ("right bank of the Ropotamo River"); Körnig (1983) ("Ropotamo River");

Ecological data: It inhabits wooded areas under the leaf cover, under moss and grass, at high moisture (Damjanov & Likharev, 1975).

Zoogeography: Holarctic element, Siberian faunistic complex (Irikov & Mollov, 2006).

21. *Cochlicopa lubricella* (Porro, 1838)

Cochlicopa lubricella: Pintér & Pintér, 1970: 88, 89.

Cochlicopa lubricella: Körnig, 1983: 33.

Published for the studied area (Table 1; Fig. 1): Pintér & Pintér (1970) ("right bank of the Ropotamo River"), NG58(2); Körnig (1983) ("Bosna ridge");

Ecological data: Mesohygrophilic, cool-loving and cold-resistant species (Irikov, 2002).

Zoogeography: Irikov & Mollov (2006) assigned the species to the Siberian faunistic complex, but erroneously as a Holarctic element. The species actually belongs to the Siberian faunistic complex, but just to be classified as Euroasiatic Palaearctic element and just like Euro-south-Siberian (sub-Siberian) subelement of this faunistic complex.

Family Enidae

Subfamily Eninae

22. ▲ *Merdigera obscura* (Müller, 1774)

Ena obscura: Pintér & Pintér, 1970: 88, 92.

Ena obscura: Körnig, 1983: 32.

Published for the studied area (Table 1; Fig. 1): Pintér & Pintér (1970) ("right coast of the Ropotamo River") NG58(2); Körnig (1983) ("Ropotamo and Bosna ridge");

New localities (Table 1; Fig. 1):

- Near the mouth of Veleka River (Bulgaria), NG75, 28.06.2004, leg. A. Irikov.

Ecological data: Mostly forest species – inhabits its diverse microsites in deciduous and mixed forests and bushy habitats. Drought-resistant, capable of standing tough conditions and continuous dry periods. Mesophilic, thermophilic, drought-resistant, eurythermic and euryhygrophilic species (Irikov, 2002; Irikov & Mollov, 2006).

Zoogeography: Mid European element, European faunistic complex (Irikov & Mollov, 2006).

 # Ena montana (Draparnaud, 1801)

Ena montana: Damjanov, 1971: 25.

Published for the studied area (Table 1; Fig. 1): Damjanov (1971) NG75, NG85(1).

Notes: In our study this species was not found in the lower reaches of rivers Veleka and Silistar or elsewhere in the studied area, where it was reported previously. We consider that *E. montana* does not occur in Strandzha (Bulgaria) due to the lack of suitable habitats. Most likely the determination by Damjanov (1971) is a mistake – probably confused with a shell of *Mastus rossmaessleri* (Pfeiffer, 1846) with no or underdeveloped angularis.

 # ≈ Ena nogeli (Roth, 1850)

Chondrula (*Mastus*) *ponticus*: Hudec & Vašátko, 1971: 7.

Ena nogeli: Irikov & Mollov (2014).

Notes: Hudec & Vašátko (1971) reported this species as *Chondrula* (*Mastus*) *ponticus* (Retowski, 1887) from the Ropotamo River mouth. According to Irikov & Mollov (2014), the shell found belongs to *Ena nogeli*, which cannot be found in Bulgaria. According to these authors, sea currents brought the shell from northwestern Turkey to the Bulgarian coast.

23. *Zebrina kindermanni* (Pfeiffer, 1853)

Zebrina kindermanni kindermanni: Damjanov & Likharev, 1975: 144.

Zebrina kindermanni: Hubenov, 2005: 236.

Published for the studied area (Table 1; Fig. 1): Damjanov & Likharev (1975) ("South Black Sea coast"); Hubenov (2005) ("South Black Sea coast");

Ecological data: Lives in very dry places, overgrown with low shrubs and herbaceous plants under leaf cover and soil (Damjanov & Likharev, 1975).

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

≈ Zebrina varnensis (Pfeiffer, 1847)

Zebrina (*Zebrina*) *varnensis*: Pintér & Pintér, 1970: 92.

Zebrina varnensis: Damjanov & Likharev, 1975: 145.

Zebrina varnensis: Hubenov (In: Delchev et al., 1993): 182.

Published for the studied area (Table 1; Fig. 1): Pintér & Pintér (1970) NG66(1); Damjanov & Likharev (1975) NG76-2; Hubenov (In: Delchev et al., 1993) NG76(2);

Notes: Our studies showed that this species does not live in the southern Black Sea coast of Bulgaria and all reports are based on found empty shells, brought by sea currents from more northern regions. We consider this Balkan endemic species occurs only on the northern Bulgarian Black Sea coast and southern Romanian coast.

In our research we found in tidewrack on the coast of Arkutino Beach NG58(3), empty shells, brought by sea currents, 12.09.2005, leg. A. Irikov.

24. **?** ▲ *Multidentula ovularis* (Olivier, 1801)

Jaminia ovularis: Damjanov & Likharev, 1975: 149.

Published for the studied area (Table 1; Fig. 1): Damjanov & Likharev (1975) ("the entire Black Sea coast");

Notes: In our study this species was not found anywhere on the Black Sea coast or in Strandzha. We consider that this species does not live in the researched area and if it is registered, it will probably be shells brought by sea currents from other regions.

Ecological data: In Bulgaria lives in damp places, in soil mixed with plant debris and under the grass (Damjanov & Likharev, 1975).

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

25. ▲ *Pseudochondrula seductilis* (Rossmässler, 1846)

Jaminia seductilis: Damjanov, 1971: 24, 25.

Imparietula seductilis seductilis: Damjanov & Likharev, 1975: 150.

Published for the studied area (Table 1; Fig. 1): Damjanov (1971) NG75, NG85(1);

Notes: The morphology of the shell shows considerable variability in different populations. There are large variations in terms of size of shell and the degree of development of folds in the mouth.

Ecological data: In Strandzha (Bulgaria) species found in mixed forests at the base of rocks in shady and humid places under decayed leaves mixed with soil. (Damjanov, 1971). Lives in soil among grass

and bushes vegetation at low humidity (Damjanov & Likharev, 1971).

Xerophilic, termophilic, drought-resistant.

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

Subfamily Chondrulinae

26. **?** *Chondrula* (*Chondrula*) *tridens* (Müller, 1774)

Chondrula (*Chondrula*) *tridens*: Pintér & Pintér, 1970: 89.

Published for the studied area (Table 1; Fig. 1): Pintér & Pintér (1970) NG66 (1).

Notes: In our study this species was not found anywhere in the town of Tsarevo and elsewhere in Strandzha (Bulgaria).

The shell of this species is characterized by strong variability in terms of size, shape and degree of development of folds in the mouth.

Ecological data: Lives in the soil, in dry places covered with grass, low shrubs and low-growing rare mixed forests (Damjanov & Likharev, 1975).

Xerophilic, termophilic, drought-resistant.

Zoogeography: Mid European element, European faunistic complex (Irikov & Mollov, 2006).

27. *Chondrula* (*Chondrula*) *microtraga* (Rossmässler, 1839)

Chondrula microtraga: Urbański, 1960b: 92, 93.

Chondrula microtraga: Damjanov & Pintér, 1969: 39.

Chondrula (*Chondrula*) *microtraga*: Pintér & Pintér, 1970: 88, 89.

Chondrula (*Chondrula*) *microtraga*: Hudec & Vašátko, 1971: 5.

Chondrula microtraga microtraga: Körnig, 1983: 32.

Published for the studied area (Table 1; Fig. 1): Urbański (1960b) NG66(1), NG67(1), NG67-68; Damjanov & L. PINTÉR (1969) NG58 (1); Pintér & Pintér (1970) ("right bank of the Ropotamo River") NG58(3); Hudec & Vašátko (1971) NG58(3), NG59(2); Körnig (1983) NG58(3), NG59(2);

New localities (Table 1; Fig. 1):

- Camping "Zlatna ribka", south of Chernomorets town (Bulgaria), NG59(3), 30.06.2004, leg. A. Irikov.

Taxonomical data: The species is characterized by large variability and varies greatly in terms of size and shape of the shell and the formation of the folds in the mouth.

According to Hudec & Vašátko (1971) on the South Black Sea coast (between the town of Sozopol and camping "Arkutino") there are transitional forms between *Chondrula* (*Chondrula*) *tricuspidata* (Küster, 1841) and the nominate subspecies.

Ecological data: Damjanov & Pintér (1969) found this species in Strandzha on a sunny hillside under andesite stones and among dry grass vegetation.

Xerophilic, termophilic, drought-resistant (Irikov, 2002).

Zoogeography: Asia Minor subelement, Subiranian element, Southwestern Asiatic complex. In Irikov & Mollov (2006) the species is erroneously classified as Mid European element, European faunistic complex.

28. ▲ *Chondrula* (*Chondrula*) *tricuspidata* (Küster, 1841)

Chondrula (*Chondrula*) *microtraga tricuspidata*: Urbański, 1960b: 92.

Published for the studied area (Table 1; Fig. 1): Urbański (1960b) NG67(2).

New localities (Table 1; Fig. 1):

- Sandy beach north of the estuary Ropotamo River (Bulgaria), NG58-68, 26.06.2004, leg. A. Irikov.

- Camping „Oazis", south of Lozenets resort (Bulgaria), NG67(6), 25,27.08.2007, A. Irikov.

Taxonomical and ecological data: (see previous species).

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

29. *Eubrephulus bicallosus* (Pfeiffer, 1847)

Brephulus (*Eubrephulus*) *bicallosus*: Wagner, 1927: 310.

Eubrephulus bicallosus: Urbański, 1960c: 140.

Eubrephulus bicallosus: Pintér, 1968: 229.

Eubrephulus bicallosus: Damjanov & Pintér, 1969: 39.

Chondrula (*Eubrephulus*) *bicallosa*: Pintér & Pintér, 1970: 88, 89.

Chondrula (*Eubrephulus*) *bicallosa*: Hudec & Vašátko, 1973: 5.

Eubrephulus bicallosus: Damjanov & Likharev, 1975: 160.

Chondrula bicallosa: Körnig, 1983: 33.

Published for the studied area (Table 1; Fig. 1): Wagner (1927) "Strandzha"; Urbański (1960c) NG58-68; Pintér (1968) ("Reserve Ropotamo"); Damjanov & Pintér (1969) NG58 (1); Pintér & Pintér (1970) ("right bank of the Ropotamo River") NG58(2,3), NG66(1), NG67-68; Hudec & Vašátko (1973) NG67(1), NG67-68; Damjanov & Likharev (1975) ("Strandzha area"); Körnig (1983)

("Ropotamo River and Bosna ridge"), NG58(3), NG66(1), NG67(1);

New localities (Table 1; Fig. 1):

- Malko Tarnovo town (Bulgaria), NG44, 3.03.2003, leg. S. Uzunov.

Ecological data: Damjanov & Pintér (1969) found this species on sunny hillside under the andesite stones and among the dry grass vegetation. Lives in soil and under stones to a depth of 10-15 cm, most often in oak forests, at an average humidity (Damjanov & Likharev, 1975).

Xerophilic, termophilic, drought-resistant (Irikov, 1999; Irikov, 2002; Irikov & Mollov, 2006).

Zoogeography: Asia Minor subelement, Sub-Iranian element, Southwestern Asiatic complex (Irikov & Mollov, 2006).

30. *Mastus rossmaessleri* (Pfeiffer, 1846)

Chondrula rossmaessleri: Damjanov & Pintér, 1969: 39.

Chondrula (*Mastus*) *rossmaessleri*: Pintér & Pintér, 1970: 88, 89.

Chondrula (*Mastus*) *rossmaessleri gocevi*: Hudec & Vašátko, 1971: 5.

Mastus rossmaessleri: Damjanov & Likharev, 1975: 157.

Mastus rossmaessleri: Körnig, 1983: 33.

Published for the studied area (Table 1; Fig. 1): Damjanov & Pintér (1969) NG58(1); Pintér & Pintér (1970) ("right bank of the Ropotamo River") NG58(2,3); Hudec & Vašátko (1971) NG58(3), NG59(2); Damjanov & Likharev (1975) ("the entire Black Sea coast"); Körnig (1983) ("Ropotamo River"), NG66(1), NG67(2);

New localities (Table 1; Fig. 1):

- Malko Tarnovo town (Bulgaria), NG44, 3.03.2003, leg. S. Uzunov.

- Near the mouth of the Rezovska River (Bulgaria), NG84, 27.08.2004, leg. T. Irikova & A. Irikov.

- Popski Beach, Tsarevo town (Bulgaria), NG67(5), 06.2002, A. Irikov & K. Kirov.

- Firth of estuary of Silistar River (Bulgaria), NG85(1), 25.08.2006, A. Irikov.

- Fakiyska River, 7 km west of the Varovnik village (Bulgaria), NG17, 8.05.2006, A. Irikov.

Ecological data: Damjanov & Pintér (1969) found this species on sunny hillside under the andesite stones and among the dry grass vegetation. Lives under leaf cover on the outskirts of mixed forests and shrubs, at low humidity (Damjanov & Likharev, 1975).

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

31. *Mastus carneolus* (Mousson, 1863)

Mastus carneolus: Wagner, 1927: 313.

Chondrula (*Mastus*) *carneola*: Urbański, 1960b: 92, 93.

Chondrula (*Mastus*) *carneolas*: Urbański, 1960c: 139.

Mastus carneola carneola: Damjanov & Likharev, 1975: 158.

Mastus carneolus: Körnig, 1983: 33.

Mastus carneolus: Hubenov, 2005: 237.

Published for the studied area (Table 1; Fig. 1): Wagner (1927) NG44; Urbański (1960b) NG66(1), NG67(2); Urbański (1960c) NG58-68; Körnig (1983) ("Ropotamo River"), NG66(1), NG67(2); Hubenov (2005) ("South Black Sea coast");

New localities (Table 1; Fig. 1):

- Fakiyska River, 7 km west of the Varovnik village (Bulgaria), NG17, 8.05.2006, A. Irikov.

Ecological data: Mesophilic and calciphilos (Hubenov, 2005).

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

 # Mastus etuberculatus (Frauenfeld, 1867)

Mastus pupa: Damjanov & Likharev, 1975: 158.

Published for the studied area (Table 1; Fig. 1): Damjanov & Likharev (1975) ("rare the entire Black Sea coast").

Notes: This species has been erroneously reported as *Mastus pupa*, which does not occur in Bulgaria.

 # ≈ Mastus pontica (Retowski, 1887)

Chondrula (*Mastus*) *pontica*: Hudec & Vašátko, 1971: 6.

Notes: See comments for *Ena nogeli*.

Family Clausiliidae

Subfamily Serrulininae

Tribe Serrulinini

32. ●● *Serrulina* (*Serrulina*) *serrulata* (Pfeiffer, 1847)

Serrulina (*Serrulina*) *serrulata*: Urbański, 1960c: 114, 143.

Serrulina (*Serrulina*) *serrulata*: Urbański & Wiktor, 1968: 56, 60.

Serrulina serrulata: Damjanov, 1971: 24, 25.

Serrulina serrulata: Körnig, 1983: 33.

Serrulina serrulata: Hubenov (In: Delchev et al., 1993): 186.

Serrulina serrulata: Dedov, 1998: 750.

Published for the studied area (Table 1; Fig. 1): Urbański (1960c) NG58(3), NG58(7), ("protected natural area Ropotamo"), NG59(1); Urbański & Wiktor (1968) NG58(3,7); Damjanov (1971) NG75, NG85(1); Damjanov & Likharev (1975) NG58-NG68-NG67-NG66-NG76-NG75-NG85-NG84; Körnig (1983) ("Bosna ridge"); Hubenov (In: Delchev et al., 1993) ("Rezovska River – Kamchiya River");

New localities (Table 1; Fig. 1):

- Silkosiya Reserve, near Kosti village (Bulgaria), NG65(2), 23.06.2001, 2.06.2005, leg., A. Irikov.

- Within 3 km east of the Malko Tarnovo town (Bulgaria), NG44, 4.06.2004, leg., A. Irikov.

- Veleka River the Gramatikovo village (Bulgaria), NG55(1), 2.06.2005, leg. A. Irikov.

- About 6 km southwest of Demirköy town (Turkey), in the valley of the creek with vegetation of alder (*Alnus glutinosa*) and undergrowth of pontic rhododendron (*Rhododendron ponticum*), NG62, 10.05.2006, leg. A. Irikov.

Ecological data: The species lives in humid forests, under putrescent bark, in damp and rotten holes in the trees and stumps (Damjanov & Likharev, 1975).

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

33. *Dobatia goettingi* (Brandt, 1961)

Dobatia goettingi: Nordsieck, 1973: 82.

Dobatia goettingi: Urbański, 1977: 236.

Dobatia goettingi: Nordsieck, 1979: 253.

Dobatia goettingi: Dedov, 1998: 750.

Dobatia goettingi: Erőss & Fehér, 2001. 139-142.

Dobatia goettingi: Hubenov, 2005: 237.

Published for the studied area (Table 1; Fig. 1): Nordsieck (1973) "reserve Ropotamo"; Urbański (1977) NG67(1); Nordsieck (1979) ("Soth-east Bulgaria"); Dedov (1998) ("reserve Ropotamo") NG67(1); Erőss & Fehér (2001) NG56(1), ("River basins of Ropotamo, Veleka and Rezovska"); Hubenov (2005) ("South Black Sea coast").

New localities (Table 1; Fig. 1):

- Place "Glarus Bair" near Izgrev village (Bulgaria), NG66(2), 26.VI.2004, leg., A. Irikov.

Ecological data: Mesophilic (Hubenov, 2005).

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

Subfamily Alopiinae

Tribe Cochlodinini

Cochlodina laminata (Montagu, 1803)

Cochlodina laminata: Urbański, 1960a: 59.

Published for the studied area (Table 1; Fig. 1): Urbański (1960a) NG58(7);

Notes: In our study this species was not found in the lower reaches of the Ropotamo or elsewhere in the researched area. Our opinion is that this species does not occur in Strandzha Mountain and along the Black sea coast.

Subfamily Mentissoideinae

Tribe Acrotomini

≈ *Scrobifera taurica* (Pfeiffer, 1848)

One shell was found in tidewrack of camping "Arapya", 2 km north of Tsarevo, NG67(4), 26.08.2004, leg. A. Irikov.

Notes: According to Irikov & Mollov (2014), this species does not belong to the Bulgarian fauna. According to these authors, sea currents brought the shell to the Bulgarian coast from the Caucasus region or from northeastern Turkey.

Tribe Mentissoideini

34. ●● *Euxina* (*Euxina*) *circumdata* (Pfeiffer, 1848)

Euxina (*Euxina*) *circumdata*: Urbański, 1960a: 59.

Euxina (*Euxina*) *circumdata*: Urbański, 1960b: 93.

Euxina (*Euxina*) *circumdata*: Urbański, 1960c: 116, 140, 143, 144.

Euxina (*Euxina*) *circumdata*: Urbański & Wiktor, 1968: 56, 60.

Euxina (*Euxina*) *circumdata*: Damjanov, 1971: 24, 25.

Euxina (*Euxina*) *circumdata*: Hudec & Vašátko, 1973: 9.

Euxina (*Euxina*) *circumdata*: Damjanov & Likharev, 1975: 183.

Euxina circumdata: Körnig, 1983: 33.

Euxina circumdata: Hubenov (In: Delchev et al., 1993): 186.

Euxina circumdata: Hubenov, 2005: 237.

Published for the studied area (Table 1, 2; Fig. 1): Urbański (1960a) NG58(7); Urbański (1960b) NG66(1); Urbański (1960c) NG58(3,5,6), NG59(1,2), NG58-68, "protected natural area Ropotamo", NG66(1), NG67(1,2), NG67-68 (south-eastern coast of Dyavolsko Marsh), NG68(1,2); Urbański & Wiktor (1968) NG58(3,7); Damjanov (1971) NG75, NG85(1); Hudec & Vašátko (1973) NG58(3), NG67(1), NG67-68; Damjanov & Likharev (1975) NG59-NG68-NG67-NG66-NG76-

NG75-NG85-NG84, (place "Padaloto"), NG44, NG55(1); Körnig (1983) ("Ropotamo River and Bosna ridge"), NG58(3), NG67(1); Hubenov (In: Delchev et al., 1993) NG59-NG68-NG67-NG66-NG76-NG75-NG85-NG84, ("place "Padaloto""), NG44, NG55(1); Hubenov (2005) ("South Black Sea coast and Strandzha Mountains");

New localities (Table 1; Fig. 1):

- Silkosiya Reserve, near Kosti village (Bulgaria), NG65(2), 1.06.2001, 2.06.2005, leg., A. Irikov.

- Place "Glarus Bair" near Izgrev village (Bulgaria), NG66(2), 24.06.2004, leg., A. Irikov.

- 5 km west of Iğneada town (Turkey), in leaf litter of the oak forest to the road to Demirköy, NG73(1), 10.05. 2006, leg. A. Irikov.

Ecological data: The species is found in mixed forests at the base of rocks in shady and humid places under decayed leaves mixed with soil (Damjanov, 1971).

Mesophilic (Hubenov, 2005).

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

35. ●● *Euxina* (*Euxina*) *persica* (Boettger, 1879)

Euxina (*Thraciella*) *paulhessei*: Urbański, 1960a: 59.

Euxina (*Thraciella*) *paulhessei*: Urbański, 1960c: 116, 136, 143.

Euxina (*Thraciella*) *paulhessei*: Urbański & Wiktor, 1968: 56, 60.

Euxina (*Persica*) *paulhessei*: Damjanov, 1971: 24, 25.

Euxina (*Euxina*) *persica paulhessei*: Hudec & Vašátko, 1973: 10.

Euxina persica paulhesse: Damjanov & Likharev, 1975: 184.

Euxina persica paulhesse: Körnig, 1983: 33.

Euxina persica paulhesse: Hubenov (In: Delchev et al., 1993): 179.

Euxina persica paulhesse: Dedov, 1998: 752

Euxina persica: Hubenov, 2005: 237.

Published for the studied area (Table 1; Fig. 1): Urbański (1960a) NG58(7); Urbański (1960c) NG44, NG58(3,7), "protected natural area Ropotamo", NG59(1), NG67-68 (south-eastern coast of Dyavolsko Marsh), NG68(2); Urbański & Wiktor (1968) NG58(3), NG58-68; Damjanov (1971) NG75, NG85(1); Hudec & Vašátko (1973) NG67(1), NG67-68; Damjanov & Likharev (1975) ("River basins Ropotamo, Veleka and Rezovska"), NG59(1), NG58(3), NG67(1), NG67-68, ("place "Padaloto"), NG44; Körnig (1983) ("Ropotamo River and Bosna ridge"); Hubenov (In: Delchev et al., 1993) ("River basins Ropotamo, Veleka and Rezovska"), NG58(3), NG59(1), NG67(1), NG67-68, NG44, ("place "Padaloto""); Hubenov (2005) ("South Black Sea coast and Strandzha Mountains");

New localities (Table 1; Fig. 1):

- Silkosiya reserve, near Kosti village (Bulgaria), NG65(2), 1.06.2001, leg., A. Irikov.

- Mladezhko village (Bulgaria), NG26, 3.V.2005, leg., A. Irikov.

- Place "Glarus Bair" near Izgrev village (Bulgaria), NG66(2), 24.06.2004, leg., A. Irikov.

- Popski Beach, Tsarevo (Bulgaria), NG66(1), 6.06.2004, leg. A. Irikov.

- Half-way between Demirköy and Iğneada (Turkey), in leaf litter in the oak forest, NG73(2), 10.05. 2006., leg. A. Irikov.

- About 5 km southwest of Demirköy (Turkey), in the valley of the river with riverbank vegetation of alder (*Alnus glutinosa*) and undergrowth of pontic rhododendron (*Rhododendron ponticum*), NG62, 10.05. 2006, leg. A. Irikov.

Ecological data: The species is found in mixed forests at the base of rocks in shady and humid places under decayed leaves mixed with soil (Damjanov, 1971). Lives in both humid subtropical forest along the rivers, as well as in the dry oak forests in soil and under leaf cover, and also on the trunks of decaying trees (Damjanov & Likharev, 1975).

Mesohygrophilic (Hubenov, 2005).

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

36. ▲ *Euxina* (*Euxina*) *pontica* (Retowski, 1887)

Euxina (*Thraciella*) *borisi*: Urbański, 1960c: 116, 141.

Euxina (*Thraciella*) *borisi*: Urbański & Wiktor, 1968: 60.

Megalleuxina borisi: Damjanov, 1971: 24, 25.

Megalleuxina borisi: Damjanov & Likharev, 1975: 186.

Megaleuxina circumdata: Hubenov (In: Delchev et al., 1993): 186.

Elia (*Megaleuxina*) *borisi*: Dedov, 1998: 752.

Published for the studied area (Table 1; Fig. 1): Urbański (1960c) NG58-68, NG58(5); Urbański & Wiktor (1968) NG58(7); Damjanov (1971) NG75, NG85(1); Damjanov & Likharev (1975) ("River basins of Ropotamo and Rezovska"); Hubenov

(In: Delchev et al., 1993) ("Ropotamo River and Rezovska River");

Ecological data: The species is found in mixed forests at the base of rocks in shady and humid places under decayed leaves mixed with soil (Damjanov, 1971). Lives in humid subtropical forests on trunks of decaying trees (Damjanov & Likharev, 1975).

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

37. ●● *Elia* (*Elia*) *corpulenta* (Pfeiffer, 1847)

Published for the studied area in the present study.

Localities (Table 1; Fig. 1):

- 5 km south-west of Demirköy (Turkey), river (Asker Deresi) with a bridge near the main road, NG62, 10.05. 2006, leg. A. Irikov.

- 5 km west of Iğneada (Turkey), in leaf litter of the oak forest to the road to Demirköy, NG73(1), 10.05. 2006, leg. A. Irikov.

- 1 km west of Iğneada (Turkey), on rocks on the riverside of a small creek in oak forest, NG83, 10.05. 2006, leg. A. Irikov.

Ecological data: In oak woods, near small rivers, on the rocks and among leaf litter.

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

≈ *Elia* (*Acroeuxina*) *huebneri* (Pfeiffer, 1848)

One shell was found in tidewrack of camping "Arapya", 2 km north of Tsarevo, NG67(4), 26.08.2004, leg. A. Irikov.

Notes: According to Irikov & Mollov (2014), this species does not belong to the Bulgarian fauna. According to these authors, sea currents brought the shell to the Bulgarian coast from the Caucasus region or from northeastern Turkey.

38. *Galeata schwerzenbachi* (Pfeiffer 1848)

Galeata galeata schwerzenbachi: Damjanov & Likharev, 1975: 188.

Galeata schwerzenbachi: Hubenov (In: Delchev et al., 1993). 186.

Galeata schwerzenbachi: Dedov, 1998: 752.

Galeata schwerzenbachi: Hubenov, 2005: 237.

Published for the studied area (Table 1; Fig. 1): Damjanov & Likharev (1975) ("Veleka River and Silistar River"), ("Strandzha Mountain – between Zvezdets and Malko Tarnovo"); Hubenov (In: Delchev et al., 1993) ("Veleka River and Silistar River"), NG44, NG18; Hubenov (2005) ("South Black Sea coast and Strandzha Mountain");

New localities (Table 1; Fig. 1):

- Mladezhko Village (Bulgaria), NG26, 3.05.2005, leg., A. Irikov.

Ecological data: Lives in subtropical forests on the banks of small rivers flowing into the Black Sea, as well as in oak forests in leaf litter and under the stones (Damjanov & Likharev, 1975).

Mesophilic (Hubenov, 2005).

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

Subfamily Baleinae

39. *Mentissella rebeli* (Sturany, 1897) BGE

Laciniaria (*Bulgarica*) *rebeli*: Damjanov & Likharev, 1975: 210.

Mentissella rebeli: Hubenov (In: Delchev et al., 1993): 180.

Published for the studied area (Table 1; Fig. 1): Damjanov & Likharev (1975) ("River basins of Ropotamo, Veleka and Rezovska); Hubenov (In: Delchev et al., 1993) ("Strandzha Mountain and River basins of Ropotamo, Veleka and Rezovska);

New localities (Table 1; Fig. 1):

- Malko Tarnovo (2 km north of the town) (Bulgaria), NG44, 7.07.2004, leg. S. Uzunov.

- Mladezhko (Bulgaria), NG26, 3.05.2005, leg., A. Irikov.

Ecological data: Inhabits dry slopes overgrown with bushes, under stones, among plant debris and rocks, especially limestone rocks (Damjanov & Likharev, 1975).

Zoogeography: Bulgarian endemic.

40. ●● *Laciniaria plicata plicata* (Draparnaud, 1801)

Laciniaria (*Laciniaria*) *plicata* race: Urbański, 1960a: 59.

Laciniaria (*Laciniaria*) *plicata* subsp. ? : Urbański, 1960c: 116, 140, 143.

Laciniaria (*Laciniaria*) *plicata* subsp. ? : Urbański & Wiktor, 1968: 60.

Laciniaria (*Laciniaria*) *plicata:* Damjanov, 1971: 24, 25.

Laciniaria plicata: Körnig, 1983: 33.

Published for the studied area (Table 1; Fig. 1): Urbański (1960a) NG58(1), "protected natural area Ropotamo"; Urbański (1960c) NG58-68, NG67-68 (south-eastern coast of Dyavolsko Marsh); Urbański & Wiktor (1968) NG58(7); Damjanov (1971) NG75, NG85(1); Körnig (1983) ("Ropotamo River and Bosna ridge")

New localities (Table 1; Fig. 1):

- Kiten resort (Bulgaria), NG67(1), 7.06.2002, leg. A. Irikov.

- Banks of the river flowing into the sea by camping "Arapya", under fallen and decaying trees, NG67(4), 29.08.2004, leg. A. Irikov.

- Arkutino marsh (Bulgaria), NG58(3), 26.06.2004, leg. A. Irikov.

- Mladezhko (Bulgaria), NG26, 3.V.2005, leg., A. Irikov.

- Near the mouth of the Rezovska River (Bulgaria), NG84, 27.08.2004, leg. T. Irikova & A. Irikov.

- Dense forest to the mouth of the Silistar River (Bulgaria), NG85(1), 27.08.2004, leg. T. Irikova & A. Irikov.

- Izgrev (Bulgaria), NG66(2), 24.06.2004, leg. A. Irikov.

- Silkosiya reserve (Bulgaria), near Kosti, NG65(2), 23.06.2001, leg., A. Irikov.

- About 5 km southwest of Demirköy (Turkey), in the valley of the river with riverbank vegetation of alder (*Alnus glutinosa*) and undergrowth of pontic rhododendron (*Rhododendron ponticum*), NG62, 10.05. 2006, leg. A. Irikov.

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 (Irikov & Mollov, 2006).

Zoogeography: Mid European element, European faunistic complex (Irikov & Mollov, 2006).

41. ■ ●●● *Alinda* (*Alinda*) *biplicata orientalis* Nordsieck, 2008 BLE

Alinda biplicata: Körnig, 1983: 33.

Published for the studied area (Table 1; Fig. 1): Körnig (1983) ("Ropotamo River")

New localities (Table 1; Fig. 1):

- Mouth of Veleka (Bulgaria), NG75, 28.06.2004, leg. A. Irikov.

- Dense forest to the mouth of Silistar (Bulgaria), NG85(1), 27.08.2004, leg. T. Irikova & A. Irikov.

- Silkosiya reserve, near Kosti (Bulgaria), NG65(2), 23.06.2001, leg., A. Irikov.

- 1 km west of Iğneada (Turkey), on rocks on the shore of a small creek in oak forest, NG83, 10.05. 2006, leg. A. Irikov.

Ecological data: Mesophilic and mesothermic species.

Zoogeography: Endemic for the Balkan Peninsula.

42. **?** *Bulgarica* (*Bulgarica*) *varnensis varnensis* (Pfeiffer, 1848) BLE

Laciniaria (*Bulgarica*) *varnensis*: Damjanov & Likharev, 1975: 211.

Bulgarica varnensis: Körnig, 1983: 33.

Bulgarica varnensis: Hubenov (In: Delchev et al., 1993): 179.

Published for the studied area (Table 1; Fig. 1): Damjanov & Likharev (1975) NG44; Körnig (1983) NG58(3), NG59(2); Hubenov (In: Delchev et al., 1993) NG44, NG58 (3), NG59(2);

Notes: Our opinion is that the presence of this species in the researched area is doubtful until further reliable evidence and confirmation of its presence in areas where it is reported by Damjanov & Likharev (1975) and Körnig (1983).

Ecological data: It inhabits low-moist places among bushes and grasses, especially in limestone habitats (Damjanov & Likharev, 1975).

Zoogeography: Endemic for the Balkan Peninsula.

43. ▲ ●● *Bulgarica* (*Denticularia*) *denticulata thessalonica* (Olivier, 1801) BLE

Laciniaria (*Denticularia*) *thessalonica*: Urbański, 1960a: 59.

Laciniaria (*Denticularia*) *thessalonica*: Urbański, 1960b: 93.

Laciniaria (*Denticularia*) *thessalonica*: Urbański, 1960c: 140.

Laciniaria (*Bulgarica*) *thessalonica*: Urbański & Wiktor, 1968: 60.

Bulgarica (*Bulgarica*) *thessalonica*: Sajó, 1968: 453.

Laciniaria (*Bulgarica*) *thessalonica*: Damjanov, 1971: 24, 25.

Bulgarica (*Bulgarica*) *thessalonica*: Hudec & Vašátko, 1973: 11.

Laciniaria (*Bulgarica*) *thessalonica*: Damjanov & Likharev, 1975: 212.

Bulgarica thessalonica: Körnig, 1983: 35.

Bulgarica thessalonica: Hubenov (In: Delchev et al., 1993): 182.

Published for the studied area (Table 1; Fig. 1): Urbański (1960a) NG58(7); Urbański (1960b) NG66(1); Urbański (1960c) NG58-68; Sajó (1968) ("mouth of Ropotamo River"); Urbański & Wiktor (1968) NG58(7); Damjanov (1971) NG75, NG85(1); Hudec & Vašátko (1973) NG67(1), NG67-68; Damjanov & Likharev (1975) ("Rezovska River to Shabla Lake"); Körnig (1983) ("Ropotamo River"), NG58(3), NG59(2), NG66(1), NG67(1,2); Hubenov (In: Delchev et al., 1993) ("Strandzha Mountain");

New localities (Table 1; Fig. 1):

Maslen Nos cape (Bulgaria), NG68(1), 4.06.2005, leg. A. Irikov.

Near the mouth of Rezovska (Bulgaria), NG84, 27.08.2004, leg. T. Irikova & A. Irikov.

Dense forest to the mouth of Silistar (Bulgaria), NG85(1), 25,27.08.2004, leg. T. Irikova & A. Irikov.

Popski Beach, Tsarevo (Bulgaria), NG67(5), 06.2002, A. Irikov & K. Kirov.

Camping "Oazis", south of Lozenets resort (Bulgaria), NG67(6), 25,27.08.2007, A. Irikov.

1 km west of Iğneada (Turkey), on rocks on the shore of a small creek in oak forest, NG83, 10.05. 2006, leg. A. Irikov.

Ecological data: This is one of the polyvalent species from the Clausiliidae family, which inhabits very diverse types of habitats. Polysubstrate, eurybiontic species. (Irikov & Mollov, 2006).

Zoogeography: Endemic for the Balkan Peninsula (Irikov & Mollov, 2006).

Superfamily Succineioidea

Family Succineidae

44. *Succinea oblonga* Draparnaud, 1801

Succinea (*Succinea*) *oblonga*: Pintér & Pintér, 1970: 88, 92.

Succinea oblonga: Körnig, 1983: 35.

Published for the studied area (Table 1; Fig. 1): Pintér & Pintér (1970) ("right bank of the Ropotamo River), NG58(2); Körnig (1983) ("Ropotamo River");

New localities (Table 1; Fig. 1):

- Creek next to "Arapya" camping (Bulgaria), NG67(4), 29.06.2004, leg. A. Irikov & D. Georgiev.

Ecological data: Mesohygrophilic, drought-resistant species (Irikov, 2002) cool-loving (Irikov & Mollov, 2006).

Zoogeography: Transpalearctic subelement, Euroasiatic Palearctic element, Siberian faunistic complex.

45. *Oxyloma elegans* (Risso, 1826)

Succinea (*Oxyloma*) *elegans*: Pintér & Pintér, 1970: 92.

Oxyloma elegans: Damjanov & Likharev, 1975: 224.

Oxyloma elegans: Hubenov (In: Delchev et al., 1993): 191.

Published for the studied area (Table 1; Fig. 1): Pintér & Pintér (1970) NG58(2); Damjanov & Likharev (1975) ("basin Ropotamo River"); Hubenov (In: Delchev et al., 1993) ("Ropotamo River");

New localities (Table 1; Fig. 1):

- Popski Beach, Tsarevo (Bulgaria), NG67(5), 2.VI.2005, leg. I. Mollov.

- Mladezhko (Bulgaria), NG26, 3.V.2005, leg., A. Irikov.

Ecological data: Inhabits wet habitats near freshwater reservoirs (rivers, streams, floods, swamps, etc.).

Zoogeography: Transpalearctic subelement, Euroasiatic Palearctic element, Siberian faunistic complex.

Superfamily Achatinoidea

Family Ferussaciidae

46. *Cecilioides janii* (De Betta & Martinati, 1855) BLE

Cecilioides aciculoides: Damjanov & Likharev, 1975: 229.

Cecilioides aciculoides: Hubenov (In: Delchev et al., 1993): 183.

Cecilioides janii: Georgiev & Stoycheva, 2013: 1.

Published for the studied area (Table 1; Fig. 1): Damjanov & Likharev (1975) ("the mouth of Veleka River to Dobrudja plane"); Hubenov (In: Delchev et al., 1993) ("Veleka River"); Georgiev & Stoycheva (2013) ("the mouth of Veleka River").

Ecological data: He lives in the root system of grass plants, mainly in calcareous soils to a depth of 50 cm and more (Damjanov & Likharev, 1975).

Zoogeography: Endemic for the Balkan Peninsula.

Superfamily Punctacea

Family Punctidae

Subfamily Punctinae

47. *Punctum pygmaeum* (Draparnaud, 1801)

Punctum pygmaeum: Pintér & Pintér, 1970: 88, 92.

Punctum pygmaeum: Damjanov, 1971: 24, 25.

Punctum pygmaeum: Körnig, 1983: 35.

Published for the studied area (Table 1; Fig. 1): Pintér & Pintér (1970) ("right bank of the Ropotamo River); Damjanov (1971) NG75, NG85(1); Körnig (1983) ("Ropotamo River");

Ecological data: Mesohygrophilic, cool-loving, cold-resistant (Irikov & Mollov, 2006).

Zoogeography: Eurosiberian subelement, Euroasian Palearctic element, Siberian faunistic complex.

Family Gastrodontidae

48. *Zonitoides nitidus* (Müller, 1774)

Zonitoides nitidus: Damjanov & Likharev, 1975: 299.

Published for the studied area (Table 1; Fig. 1): Damjanov & Likharev (1975) ("the entire Black Sea coast");

New localities (Table 1; Fig. 1):

- Protected area "Marina Reka", between villages Izgrev and Balgari (Bulgaria), NG66(3), 24.06.2004, leg. A. Irikov.

Ecological data: Hygrophilic, cool-loving, cold-resistant species (Irikov & Mollov, 2006).

Zoogeography: Holarctic element, Siberian faunistic complex (Irikov & Mollov, 2006).

Family Euconulidae

49. *Euconulus fulvus* (Müller, 1774)

Euconulus fulvus: Pintér & Pintér, 1970: 88, 93.

Euconulus fulvus: Damjanov, 1971: 24, 25.

Euconulus fulvus: Körnig, 1983: 35.

Published for the studied area (Table 1; Fig. 1): Pintér & Pintér (1970) ("right bank of the Ropotamo River"), NG58(2); Damjanov (1971) NG75, NG85(1); Körnig (1983) ("Ropotamo River");

Ecological data: According to Irikov (2002) this species is mesohygrophilic and cool-loving.

Zoogeography: Holarctic element, Siberian faunistic complex (Irikov & Mollov, 2006).

Superfamily Vitrinoidea

Family Vitrinidae

50. ▲ *Gallandia annularis* (Studer, 1820)

Phenacolimax (*Gallandia*) *annularis*: Damjanov & Likharev, 1975: 299.

Published for the studied area (Table 1; Fig. 1): Damjanov & Likharev (1975) NG67-68.

Ecological data: Xeromesophilic and thermophilic species (Irikov, 2002).

Zoogeography: South European mountainous subelement, European mountainous element, European faunistic complex (Irikov & Mollov, 2006).

Family Zonitidae

Subfamily Vitreininae

51. *Vitrea diaphana diaphana* (Studer, 1829)

Vitrea diaphana diaphana: Damjanov & Likharev, 1975: 258.

Vitrea diaphana diaphana: Riedel, 2000: 44.

Published for the studied area (Table 1; Fig. 1): Damjanov & Likharev (1975) ("Strandzha Mountain"); Riedel (2000) ("South-east Bulgaria");

Ecological data: Inhabits mountain forests in leaf litter and under the stones (Damjanov & Likharev, 1975).

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

52. *Vitrea contracta* (Westerlund, 1871)

Vitrea contracta: Pintér & Pintér, 1970: 88, 92.

Vitrea contracta: Pintér, 1972: 272.

Vitrea contracta: Damjanov & Likharev, 1975: 263.

Vitrea contracta: Körnig, 1983: 35.

Published for the studied area (Table 1; Fig. 1): Pintér & Pintér (1970) ("right bank of the Ropotamo River); Pintér (1972) ("Ropotamo River"); Damjanov & Likharev (1975) ("the entire Black Sea coast"); Körnig (1983) ("Ropotamo River");

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

Zoogeography: Mid European element, European faunistic complex (Irikov & Mollov, 2006).

53. *Vitrea riedeli* Damjanov & L. Pintér, 1969

Vitrea riedeli: Damjanov & Pintér, 1969: 38-39.

Vitrea riedeli: Pintér & Pintér, 1970: 88, 92.

Vitrea riedeli: Damjanov, 1971: 24, 25.

Vitrea riedeli: Pintér, 1972: 262.

Vitrea riedeli: Damjanov & Likharev, 1975: 264.

Vitrea riedeli: Riedel, 1975: 160.

Vitrea riedeli: Riedel, 1981: 230.

Vitrea riedeli: Körnig, 1983: 35.

Vitrea riedeli: Riedel, 1992: 28.

Vitrea riedeli: Riedel, 1995: 18.

Vitrea riedeli: Riedel, 1998: 18.

Vitrea riedeli: Riedel, 2000: 46.

Vitrea riedeli: Hubenov, 2005: 238.

Published for the studied area (Table 1; Fig. 1): Damjanov & Pintér (1969) NG55(1), NG58 (1,2,3), NG76 (1,2), NG84, NG85(1); Pintér & Pintér (1970) ("right bank of the Ropotamo River), NG58(2,3), ("Widespread in Strandzha Mountain"); Damjanov (1971) NG75, NG85(1); Pintér (1972) ("Ropotamo River"), NG55(1), NG58(2,3), NG66(1), NG76(1,2), NG84, NG85(1); Damjanov & Likharev (1975) ("basins of Ropotamo, Veleka, Silistar and Rezovo River"); Riedel (1975) (Strandzha Mountain); Riedel (1981) ("South-east Bulgaria"); Körnig (1983) ("Ropotamo River"), NG66(1); Riedel (1992) ("right bank of the Ropotamo River"); Riedel (1995) ("South-east Bulgaria"); Riedel (1998) ("South-east Bulgaria"); Riedel (2000) ("South-east Bulgaria"); Hubenov (2005) ("South Black Sea coast");

Ecological data: In the type locality this species is found on sunny slopes, under andesite rocks and also among dry grass vegetation. It occurs also in mixed forests at the base of cliffs in shady and humid places under decayed leaves mixed with soil (Damjanov, 1971).

Mesophilic (Hubenov, 2005).

In our opinion the species is mesophilic, drough-resistant.

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

54. *Vitrea pygmaea* (Boettger, 1880)

Vitrea pygmaea: Damjanov & Likharev, 1975: 265.

Vitrea pygmaea: Hubenov (In: Delchev et al., 1993): 187.

Published for the studied area (Table 1; Fig. 1): Damjanov & Likharev (1975) ("Strandzha Mountain"); Hubenov (In: Delchev et al., 1993) ("Strandzha Mountain");

Ecological data: Xeromesophilic and thermophilic species Irikov (2002).

Zoogeography: Irano-Turanian subelement, Subiranian element, Southwestern Asiatic faunistic complex (Irikov & Mollov, 2006).

Vitrea sp.

Vitrea sp.: Urbański, 1960c: 140.

Vitrea sp.: Urbański & Wiktor, 1968: 60.

Published for the studied area (Table 1; Fig. 1): Urbański (1960c) NG58-68; Urbański & Wiktor (1968) NG58(7).

Subfamily Zonitinae

55. *Aegopinella minor* (Stabile, 1864)

Aegopinella minor: Pintér & Pintér, 1970: 92.

Aegopinella minor: Damjanov & Likharev, 1975: 272.

Published for the studied area (Table 1; Fig. 1): Pintér & Pintér (1970) NG58(2); Damjanov & Likharev (1975) ("the entire Black Sea coast");

New localities (Table 1; Fig. 1):

- Fakiyska River, 7 km west of the Varovnik Village (Bulgaria), NG17, 8.05.2006, A. Irikov.

Ecological data: According to Irikov & Mollov (2002) the species is mesophilic and mesothermic, relatively eurythermic and euryhygrobiontic.

Zoogeography: Mid European element, European faunistic complex (Irikov & Mollov, 2006).

56. ▲ *Oxychilus* (*Mediterranea*) *hydatinus* (Rossmässler, 1838)

Oxychilus (*Oxychilus*) *hydatinus*: Damjanov & Likharev, 1975: 281.

Oxychilus (*Oxychilus*) *hydatinus*: Riedel, 1975: 162.

Published for the studied area (Table 1; Fig. 1): Damjanov & Likharev (1975) ("South Black Sea coast"); Riedel (1975) (Strandzha Mountain);

Ecological data: Lives in the top layer of soil and in caves (Damjanov & Likharev, 1975)

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

57. ●● *Oxychilus* (*Longiphallus*) *deilus rumelicus* (Hesse, 1913)

Oxychilus (*Longiphallus*) *deilus rumelicus*: Urbański, 1960a: 59.

Oxychilus (*Longiphallus*) *deilus rumelicus*: Urbański, 1960b: 93.

Oxychilus (*Longiphallus*) *deilus rumelicus*: Urbański, (1960c): 116, 140, 143.

Oxychilus (*Longiphallus*) *deilus rumelicus*: Riedel, 1963: 483, 484.

Oxychilus (*Longiphallus*) *deilus rumelicus*: Urbański & Wiktor, 1968: 56, 60.

Oxychilus (*Longiphallus*) *deilus rumelicus*: Pintér & Pintér, 1970: 88, 92.

Oxychilus (*Longiphallus*) *deilus rumelicus*: Damjanov, 1971: 24, 25.

Oxychilus (*Longiphallus*) *deilus rumelicus*: Damjanov & Likharev, 1975: 280.

Oxychilus (*Longiphallus*) *deilus rumelicus*: Riedel, 1975: 162.

Oxychilus deilus rumelicus: Körnig, 1983: 35.

Oxychilus deilus malinowskii: Hubenov (In: Delchev et al., 1993). 184.

Oxychilus deilus rumelicus: Hubenov (In: Delchev et al., 1993): 187.

Published for the studied area (Table 1; Fig. 1): Urbański (1960a) NG58(7); Urbański (1960b) NG66(1); Urbański (1960c) NG58(3), NG58-68, "Protected natural area Ropotamo", NG67-68 (south-eastern coast of Dyavolsko marsh); Riedel (1963) NG58-68, NG55(1); Urbański & Wiktor (1968) NG58(3,7); Pintér & Pintér (1970) ("right bank of the Ropotamo River"), NG58(2,3), NG67-68; Damjanov (1971) NG75, NG85(1); Damjanov & Likharev (1975) ("Strandzha Mountain and coastal areas of the Black sea"); Riedel (1975) (Strandzha Mountain); Körnig (1983) ("Ropotamo River"), NG59(2), NG66(1); Hubenov (In: Delchev et al., 1993) ("Strandzha Mountain"); 1971).

New localities (Table 1; Fig. 1):

Malko Tarnovo (Bulgaria), NG44, 3.03.2003, leg. S. Uzunov.

Veleka River by Gramatikovo (Bulgaria), NG55(1), 2.06.2005, leg. A. Irikov.

Mladezhko (Bulgaria), NG26, 9.05.2005, leg., A. Irikov.

"Arapya" camping, 2 km north of Tsarevo (in tidewrack on the coast) (Bulgaria), NG67(4), 26.08.2004, leg. A. Irikov.

Kiten resort (Bulgaria), NG67(1), 7.06.2002, leg. A. Irikov.

Fakiyska River (Bulgaria), 7 km west of Varovnik, NG17, 8.05.2006, A. Irikov.

Half-way between Demirköy and Iğneada (Turkey), in leaf litter of the oak forest, NG73(2), 10.05. 2006, leg. A. Irikov.

5 km west of Iğneada (Turkey), in leaf litter of the oak forest to the road to Demirköy, NG73(1), 10.05. 2006, leg. A. Irikov.

About 5 km southwest of Demirköy (Turkey), in the valley of the river with riverbank vegetation of alder (*Alnus glutinosa*) and undergrowth of pontic rhododendron (*Rhododendron ponticum*), NG62, 10.05. 2006, leg. A. Irikov.

Ecological data: The species is found in mixed forests at the base of rocks in shady and humid places under decayed leaves mixed with soil (Damjanov & Likharev (1975).

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

58. ▲ *Oxychilus* (*Spinophallus*) *investigatus* Riedel, 1993

Oxychilus (*Schistophallus*) *oscari*: Riedel, 1961: 134, 137.

Oxychilus (*Schistophallus*) *oscari*: Riedel, 1963: 483.

Oxychilus (*Schistophallus*) *oscari*: Riedel, 1969a: 39.

Oxychilus (*Schistophallus*) *moussoni*: Riedel, 1969c: 191.

Oxychilus (*Schistophallus*) *moussoni*: Damjanov & Likharev, 1975: 284.

Oxychilus (*Schistophallus*) *moussoni*: Riedel, 1975: 163.

Oxychilus moussoni: Hubenov (In: Delchev et al., 1993): 187.

Oxychilus (*Schistophallus*) *investigatus*: Riedel, 1998: 49.

Oxychilus (*Schistophallus*) *moussoni*: Dedov, 1998: 757.

Oxychilus (*Schistophallus*) *investigatus*: Riedel, 2000: 66.

Oxychilus investigatus: Hubenov, 2005: 239.

Published for the studied area (Table 1; Fig. 1): Riedel (1961) NG55(1); Riedel (1963) NG55(1); Riedel (1969a) ("Strandzha Mountain"); Riedel (1969c) NG55(1); Damjanov & Likharev (1975) ("Strandzha Mountain"); Riedel (1975) NG55(2), "Aydere-river near Malko Tarnovo"; Hubenov (In: Delchev et al., 1993) ("Strandzha Mountain"); Riedel (1998) ("South-east Bulgaria"); Riedel (2000) ("South-east Bulgaria"); Hubenov (2005) ("Strandzha Mountain");

New localities (Table 1; Fig. 1):

Protected area "Marina Reka", between Izgrev and Balgari (Bulgaria), NG66(3), 24.06.2004, leg. A. Irikov.

Camping Arapya, 2 km north of Tsarevo (in tidewrack on the coast) (Bulgaria), NG67 (4), 26.08.2004, leg. A. Irikov.

Ecological data: Mesophilic, trogloxenic (Hubenov 2005).

Usually inhabits the leaf litter of forests at middle and high humidity. Mesohygrophilic.

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

Oxychilus (*Schistophallus*) *moussoni* (Kobelt, 1878)

This species has been erroneously reported from Bulgaria (see Riedel, 1993).

59. ●● *Oxychilus* (*Morlina*) *glaber striarius* (Westerlund, 1881)

Oxychilus (*Morlina*) *glaber*: Riedel, 1969: 97.

Oxychilus (*Morlina*) *glaber*: Pintér & Pintér, 1970: 92.

Oxychilus (*Morlina*) *glaber striarius*: Riedel, 1975: 163.

Published for the studied area (Table 1; Fig. 1): Riedel (1969b) ("South-east Bulgaria"); Pintér & Pintér (1970) NG58(2); Riedel (1975) "Strandzha Mountain".

New localities (Table 1; Fig. 1):

Protected area "Marina Reka", between Izgrev and Balgari (Bulgaria), NG66(3), 24.06.2004, leg. A. Irikov.

Dense forest near the mouth of Silistar River (Bulgaria), NG85(1), 27.08.2004, leg. T. Irikova & A. Irikov.

Fakiyska River, 7 km west of Varovnik, NG17, 8.05.2006, A. Irikov.

- About 5 km southwest of Demirköy (Turkey), in the valley of the river with riverbank vegetation of alder (*Alnus glutinosa*) and undergrowth of pontic rhododendron (*Rhododendron ponticum*), NG62, 10.05. 2006, leg. A. Irikov.

Ecological data: Mesohygrophilic, mesothermic and cool-loving (Irikov & Mollov, 2002).

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex (Irikov & Mollov, 2006).

60. *Oxychilus* (*Morlina*) *urbanskii* Riedel, 1963

Oxychilus (*Morlina*) *urbanskii*: Riedel, 1963: 473-477, 483, 484.

Oxychilus (*Morlina*) *urbanskii*: Riedel, 1969b: 97.

Oxychilus (*Morlina*) *urbanskii*: Pintér & Pintér, 1970: 88, 92.

Oxychilus (*Morlina*) *urbanskii*: Damjanov & Likharev, 1975: 287.

Oxychilus (*Morlina*) *urbanskii*: Riedel, 1975: 163.

Oxychilus urbanskii: Körnig, 1983: 35.

Oxychilus urbanskii: Hubenov (In: Delchev et al., 1993): 187.

Oxychilus (*Morlina*) *urbanskii*: Beron, 1994: 7.

Oxychilus (*Morlina*) *urbanskii*: Riedel, 1997: 382.

Oxychilus (*Morlina*) *urbanskii*: Riedel, 2000: 67.

Oxychilus urbanskii: Hubenov, 2005: 239.

Published for the studied area (Table 1; Fig. 1): Riedel (1963) NG58-68, NG55(1); Riedel (1969b) NG55(1); Pintér & Pintér (1970) ("right bank of the Ropotamo River"), NG84; Damjanov & Likharev (1975) ("Strandzha Mountain and South Black Sea coast"); Riedel (1975) NG59-NG58-NG68-NG57-NG67-NG66-NG76, NG44, NG55(1); Körnig (1983) ("Ropotamo River and Bosna ridge"); Hubenov (In: Delchev et al., 1993) ("South Black Sea coast"); Beron (1994) NG35, NG45(1,2,3); Riedel (1997) ("South-east Bulgaria"); Riedel (2000) ("South-east Bulgaria"); Hubenov (2005) ("South Black Sea coast");

New localities (Table 1; Fig. 1):

- Fakiyska River, 7 km west of Varovnik (Bulgaria), NG17, 8.05.2006, A. Irikov.

Ecological data: Beron (1972) found this species in three caves in the area of Stoilovo and classified it as troglophilous. According to Damjanov & Likharev (1975), this species inhabits moist subtropical forest in holes in fallen trees and under stones. Mesophilic, troglophilous (Hubenov, 2005).

Usually inhabits the leaf litter of forests at middle and high humidity. Troglophilous ? (Riedel, 1997).

We classify this species as mesohygrophilic.

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

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

Vitrea (*Mediterranea*) *inopinata*: Urbański, 1960b: 89.

Oxychilus (*Riedelius*) *inopinatus*: Damjanov & Likharev, 1975: 289.

Oxychilus inopinatus: Körnig, 1983: 35.

Published for the studied area (Table 1; Fig. 1): Urbański (1960b) NG58(3), NG58-68; Damjanov & Likharev (1975) ("Strandzha Mountain"); Körnig (1983) ("Ropotamo River"), NG66(1);

Ecological data: 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 (Irikov & Mollov, 2006).

62. ●●● *Oxychilus* (*Riedelius*) *depressus* (Sterki, 1880)

Published for the studied area in the present study.

Localities (Table 1; Fig. 1):

- 5 km south of Panchevo (Bulgaria), NG17, 8.05.2010, leg. A. Irikov.

- Fakiyska River, 5 km west of Varovnik (Bulgaria), NG83, 9.05.2010, leg. A. Irikov.

- Half-way between Demirköy and Iğneada (Turkey), in leaf litter of the oak forest, NG73(2), 9.05. 2006, leg. A. Irikov.

- About 5 km southwest of Demirköy (Turkey), in the valley of the river with riverbank vegetation of alder (*Alnus glutinosa*) and undergrowth of pontic rhododendron (*Rhododendron ponticum*), NG62, 10.05. 2006, leg. A. Irikov.

Ecological data: According to Irikov (2002) it is a mesophilic, cool-loving and cold-resistant species.

Zoogeography: Mid European Mountain subelment, European Mountain element, European faunistic complex (Irikov & Mollov, 2006).

Subfamily Daudebardiinae

63. *Daudebardia* (*Daudebardia*) *brevipes* (Draparnaud, 1805)

Daudebardia brevipes: Riedel, 1967: 469, 471.

Daudebardia brevipes: Damjanov & Likharev, 1975: 294.

Daudebardia brevipes: Körnig, 1983: 35.

Daudebardia brevipes: Hubenov, 2005: 239.

Published for the studied area (Table 1; Fig. 1): Riedel (1967) ("Bosna ridge in Strandzha", "Ropotamo reserve near Arkutino") Damjanov & Likharev (1975) ("Southern Black Sea coast"); Körnig (1983) ("Ropotamo and Bosna ridge");

Hubenov (2005) ("Southern Black Sea coast");

Ecological data: Mesohygrophilic, trogloxenic according Hubenov (2005). According to Irikov & Mollov (2002) this species is mesohygrophilic, cool-loving, cold-resistant.

Zoogeography: Mid European Mountain subelment, European Mountain element, European faunistic complex.

64. ●● *Daudebardia* (*Daudebardia*) *rufa cycladum* Martens, 1889

Daudebardia rufa: Riedel, 1967: 466, 469.

Daudebardia rufa: Pintér & Pintér, 1970: 88, 92.

Daudebardia rufa cycladum: Riedel, 1978: 149.

Daudebardia rufa: Körnig, 1983: 35.

Published for the studied area (Table 1; Fig. 1): Riedel (1967) ("Bosna ridge in Strandzha Mountain", "three deposits in reserve Ropotamo") NG44; NG59(4); Pintér & Pintér (1970) ("right bank of the Ropotamo River"); Riedel (1978) ("Balkan Peninsula"); Körnig (1983) ("Ropotamo River and Bosna ridge");

New localities (Table 1; Fig. 1):

- 5 km south-west of Demirköy (Turkey), river (Asker Deresi) with bridge to main road, NG62, 10.05. 2006, leg. A. Irikov.

Ecological data: Mesohygrophilic, cool-loving, cold-resistant (Irikov & Mollov, 2006).

Zoogeography: East-Submediterranean subelement, Submediterranean element, European faunistic complex (Irikov & Mollov, 2006).

Daudebardia (*Libania*) *wiktori* Riedel, 1967

Daudebardia wiktori: Körnig, 1983: 35.

Published for the studied area (Table 1; Fig. 1): Körnig (1983) ("Ropotamo River");

Notes: This species is found only in the Western Rhodope Mountains and its announcement for Strandzha and the Black Sea coast is untrustworthy.

65. *Carpatica* (*Illyrica*) *stussineri* (Wagner A., 1895)

Carpatica stussineri: Hubenov, 2005: 239.

Published for the studied area (Table 1; Fig. 1): Hubenov (2005) ("Strandzha Mountain");

Ecological data: Mesohygrophilic (Hubenov, 2005).

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

66. *Carpathica* (*Illyrica*) *bielawskii* Riedel, 1963 BLE

Carpathica bielawskii: Riedel, 1963: 477-482, 484.

Carpathica bielawskii: Riedel, 1967:475, 477.

Carpathica bielawskii: Pintér, 1968: 215.

Carpathica bielawskii: Riedel, 1969a: 40.

Carpathica (*Carpathica*) *bielawskii*: Hudec & Vašátko, 1973: 6.

Carpathica bielawskii: Damjanov & Likharev, 1975: 296.

Carpathica bielawskii: Riedel, 1975: 165.

Carpathica bielawskii: Riedel, 1978: 185.

Carpathica bielawskii: Hubenov (In: Delchev et al., 1993): 181.

Carpathica (*Illyrica* ?) *bielawskii*: Riedel, 1998: 61.

Carpathica bielawskii: Dedov, 1998: 757.

Carpathica (*Illyrica* ?) *bielawskii*: Riedel, 2000: 72.

Carpathica bielawskii: Hubenov, 2005: 239

Published for the studied area (Table 1; Fig. 1): Riedel (1963) NG55(1); Riedel (1967) ("reserve Ropotamo") NG48-58, NG55(1,2), NG58(2), NG58-68, NG56(2), NG58(2), NG59(4), NG85(2); Pintér (1968) NG67(1), NG67-68; Riedel (1969a) ("Strandzha Mountain"); Hudec & Vašátko (1973) NG67(1), NG67-68; Damjanov & Likharev (1975) ("Rezovska River"), NG59(2), NG44, NG55(1); Riedel (1975) "Strandzha Mountain"; Riedel (1978) ("Strandzha Mountain"); Hubenov (In: Delchev et al., 1993) NG59-NG68-NG67-NG66-NG76-NG75-NG85-NG84, NG44, NG55(1); Riedel (2000) ("South-east Bulgaria"); Hubenov (2005) ("South Black Sea coast and Strandzha Mountain");

New localities (Table 1; Fig. 1):

- Silkosiya reserve, near Kosti (Bulgaria), NG65(2), 2.06.2005, leg. A. Irikov.

- Protected area "Marina Reka", between Izgrev and Balgari (Bulgaria), NG66(3), 24.06.2004, leg. A. Irikov.

Ecological data: Mesophilic (Hubenov, 2005).

Zoogeography: Endemic for the Balkan Peninsula.

Superfamily Arionidae

Family Arionidae

67. *Arion subfuscus* (Draparnaud, 1805)

Arion subfuscus: Wiktor, 1983: 86.

Published for the studied area (Table 1; Fig. 1): Wiktor (1983) NG55(1), place Aydere-river near Malko Tarnovo.

Ecological data: Lives under rotting tree trunks, in trunks and under leaf litter of deciduous and coniferous forests (Damjanov & Likharev, 1975).

Zoogeography: Eurosiberian subelement, Euroasian Palearctic element, Siberian faunistic complex.

Family Milacidae

68. *Milax parvulus* Wiktor, 1968 BGE

Milax parvulus: Damjanov & Likharev, 1975: 334.

Milax parvulus: Wiktor, 1983: 97.

Milax parvulus: Hubenov (In: Delchev et al., 1993): 181.

Milax parvulus: Hubenov, 2005: 239.

Published for the studied area (Table 1; Fig. 1): Damjanov & Likharev (1975) ("Silistar River"), NG36; Wiktor (1983) ("Silistar River"), NG36; Hubenov (In: Delchev et al., 1993) NG18, ("Silistar River"); Hubenov (2005) ("South Black Sea coast");

Ecological data: Mesohygrophilic, calciphilos (Hubenov, 2005).

Zoogeography: Bulgarian endemic.

Milax sp.

Milax sp.: Urbański, 1960c: 140.

Published for the studied area (Table 1; Fig. 1): Urbański (1960c) NG58-68.

69. *Tandonia kusceri* (Wagner H., 1931)

Milax kusceri: Urbański & Wiktor, 1968: 56, 60, 86.

Milax kusceri: Damjanov & Likharev, 1975: 330.

Tandonia kusceri: Wiktor, 1983: 102.

Published for the studied area (Table 1; Fig. 1): Urbański & Wiktor (1968) NG58(3,7), NG58-68, NG59(2); Damjanov & Likharev (1975) ("around the Black Sea coast"), Wiktor (1983) NG67-68.

Localities (Table 1; Fig. 1):

Tsarevo (Bulgaria), NG66-1, leg. 23.06.2004, I. Mollov.

Ecological data: In old beech woods, under bark of fallen, decaying trees (Urbański & Wiktor, 1968). 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 (Irikov & Mollov, 2006).

Zoogeography: East-Submediterranean subelement, Submediterranean element, European faunistic complex (Irikov & Mollov, 2006).

70. *Tandonia cristata* (Kaleniczenko, 1851)

Milax cristatus: Damjanov & Likharev, 1975: 330.

Tandonia cristata: Wiktor, 1983: 115.

Published for the studied area (Table 1; Fig. 1): Damjanov & Likharev (1975) ("Ropotamo River"), Wiktor (1983) NG49-59, NG58(3).

New localities (Table 1; Fig. 1):

Place "Glarus Bair" near Izgrev (Bulgaria), NG66(2), 24.06.2004, leg. A. Irikov & D. Georgiev.

Ecological data: Hiding under large 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 (Irikov & Mollov, 2006).).

Zoogeography: Euxinian subelement, Submediterranean element, European faunistic complex (Irikov & Mollov, 2006).

Superfamily Limacoidea

Family Limacidae

71. *Limax* (*Limax*) *maximus* Linnaeus, 1758

Limax (*Limax*) *maximus*: Urbański & Wiktor, 1968: 56, 60.

Limax (*Limax*) *maximus*: Damjanov & Likharev, 1975: 330.

Limax maximus: Körnig, 1983: 35.

Limax maximus: Wiktor, 1983: 126.

Published for the studied area (Table 1; Fig. 1): Urbański & Wiktor (1968) NG49-59; Damjanov & Likharev (1975) ("Strandzha Mountain"); Körnig (1983) ("Bosna ridge"); Wiktor (1983) NG44, NG55(1), NG49-59, NG58(3).

Ecological data: Found 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, euryhygrobiontic, cool-loving (Irikov & Mollov, 2006).).

Zoogeography: Mid European element, European faunistic complex (Irikov & Mollov, 2006).

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

Limax (*Limax*) *cinereoniger*: Urbański & Wiktor, 1968: 56, 60.

Limax (*Limax*) *cinereoniger*: Damjanov & Likharev, 1975: 330.

Limax (*Limax*) *cinereoniger*: Wiktor, 1983: 131.

Published for the studied area (Table 1; Fig. 1): Urbański & Wiktor (1968) NG58(3), NG58(7); Damjanov & Likharev (1975) ("Strandzha Mountain"); Wiktor (1983) NG55(1,2), place Aydere River near Malko Tarnovo.

Ecological data: 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 (Irikov & Mollov, 2006).

Zoogeography: Mid European element, European faunistic complex (Irikov & Mollov, 2006).

73. *Limax* (*Limax*) *macedonicus* Hesse, 1928 BLE

Limax (*Limax*) *macedonicus*: Urbański & Wiktor, 1968: 59.

Limax (*Limax*) *macedonicus*: Hudec & Vašátko, 1973: 7.

Limax (*Limax*) *macedonicus*: Damjanov & Likharev, 1975: 304.

Limax (*Limax*) *macedonicus*: Wiktor, 1983: 139.

Limax macedonicus: Hubenov (In: Delchev et al., 1993): 183.

Published for the studied area (Table 1; Fig. 1): Urbański & Wiktor (1968) NG58(7); Hudec & Vašátko (1973) NG58(3); Damjanov & Likharev (1975) ("to Ropotamo River"); Wiktor (1983) NG55(1), NG58(3); Hubenov (In: Delchev et al., 1993) ("Ropotamo River");

New localities (Table 1; Fig. 1):

Camping "Zlatna Ribka", south of Chernomorets (Bulgaria), NG59(3), 30.06.2004, leg. A. Irikov.

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

Mesophilic, mesothermic species (Irikov & Mollov, 2006).

Zoogeography: Endemic for the Balkan Peninsula (Irikov & Mollov, 2006).

74. *Limax* (*Limacus*) *flavus* Linnaeus, 1758

Limax (*Limacus*) *flavus*: Urbański & Wiktor, 1968: 56, 60.

Limax (*Limacus*) *flavus*: Damjanov & Likharev, 1975: 307.

Published for the studied area (Table 1; Fig. 1): Urbański & Wiktor (1968) NG55(1) place "Hasekiyata", NG58(3,7), NG68(1); Damjanov & Likharev (1975) ("the entire Black Sea coast");

Ecological data: In natural conditions inhabits deciduous forests, most often under rotten logs, felled trees, under stones and hollows (Damjanov & Likharev, 1975). Sinantropic widespread species introduced into many countries and continents (North and Central Europe, Chile and South Africa), where found among the vegetable gardens, places with concentrated compost, wells, gardens, farmyards, entrance halls of the caves, basements of abandoned old buildings and ruderal habitats with high humidity and concentration of organics.

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

75. ? *Limax* (*Limacus*) *maculatus* (Kaleniczenko, 1851)

Limax maculatus: Wiktor, 1983: 147.

Limax maculatus: Hubenov, 2005: 239.

Published for the studied area (Table 1; Fig. 1): Wiktor (1983) NG44, NG55(1), NG49-59, place Aydere River near Malko Tarnovo, NG68(1); Hubenov (2005) ("Strandzha Mountain");

New localities (Table 1; Fig. 1):

Place "Glarus Bair" near Izgrev (Bulgaria), NG66(2), 24.06.2004, leg. A. Irikov & D. Georgiev.

Notes: Taxonomic status of this species is unclear (variable) (Wiktor, 2001).

Ecological data: Mesophilic (Hubenov, 2005).

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

Limax sp.

Limax sp.: Urbański, 1960c: 116, 143.

Published for the studied area (Table 1; Fig. 1): Urbański (1960c) NG58-68, "Protected natural area Ropotamo".

76. *Lehmania nyctelia* (Bourguignat, 1861)

Limax (*Limacus*) *nyctelius*: Damjanov & Likharev, 1975: 309.

Limax nyctelius: Körnig, 1983: 35.

Lehmania nyctelia: Wiktor, 1983: 150.

Published for the studied area (Table 1; Fig. 1): Damjanov & Likharev (1975) ("Strandzha Mountain"); Körnig (1983) ("Bosna ridge"); Wiktor (1983) NG44, NG55(1).

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 rain slugs creep out in great numbers, especially high in the mountains (Wiktor, 1983).

Mesohygrophilic, cool-loving, cold-resistant species (Irikov & Mollov, 2006).

Zoogeography: Mid European element, European faunistic complex (Irikov & Mollov, 2006).

 # Lehmania marginata (Müller, 1774)

This species is reported by Damjanov & Likharev (1975) an area in Strandzha Mountain, between Malko Tarnovo and Gramatikovo, and by Körnig (1983) in Bosna ridge. According to Wiktor (1983), however, the species does not occur in Bulgaria. Our opinion is that it is inot part of the fauna of Strandzha and probably has been confused with the very similar *Lehmania nyctelia*.

Family Agriolimacidae

77. *Deroceras* (*Deroceras*) *sturanyi* (Simroth, 1894)

Deroceras (*Deroceras*) *sturanyi*: Damjanov & Likharev, 1975: 317.

Deroceras sturanyi: Wiktor, 1983: 166.

Deroceras sturanyi: Hubenov (In: Delchev et al., 1993): 183.

Published for the studied area (Table 1; Fig. 1): Damjanov & Likharev (1975) NG84; Hubenov (In: Delchev et al., 1993) NG84; Wiktor (1983) NG58-68.

New localities (Table 1; Fig. 1):

Camping "Zlatna Ribka", south of Chernomorets (Bulgaria), NG59(3), 30.06.2004, leg. A. Irikov.

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 (Irikov & Mollov, 2006).

78. *Deroceras* (*Agriolimax*) *turcicum* (Simroth, 1894)

Deroceras turcicum: Wiktor, 1983: 172.

Published for the studied area (Table 1; Fig. 1): Wiktor (1983) NG58-68.

Taxonomical data: This species has been mixed for a long time with the morphologically very close *Deroceras reticulatum* (Müller, 1774). The latter turns out to be much less spread in Bulgaria than *Deroceras turcicum* (see the species below – taxonomical data).

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, meshygrophilic species (Irikov & Mollov, 2006).

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex (Irikov & Mollov, 2006).

 # Deroceras (*Agriolimax*) *reticulatum* (Müller, 1774)

Deroceras (*Agriolimax*) *reticulatum*: Wiktor, 1983: 175.

Deroceras reticulatum: Hubenov, 2005: 240.

Published for the studied area (Table 1; Fig. 1): Wiktor (1983) "reserve Ropotamo"; Hubenov (2005) ("South Black Sea coast");

Taxonomical data: Although *Deroceras reticulatum* was reported by Wiktor (1983) and Hubenov (2005) we consider that it does not occur in the studied area and the reports are based on the very close species *Deroceras turcicum*.

79. *Deroceras* (*Agriolimax*) *thersites* (Simroth, 1886) BLE

Agriolimax (*Agriolimax*) *thersites*: Wagner, 1934. 54.

Deroceras thersites: Urbański & Wiktor, 1968: 70.

Deroceras (*Deroceras*) *thersites*: Damjanov & Likharev, 1975: 321.

Deroceras (*Agriolimax*) *thersites*: Wiktor, 1983: 178.

Deroceras thersites: Hubenov (In: Delchev et al., 1993): 183.

Published for the studied area (Table 1; Fig. 1): Wagner (1934) NG44, NG56(3); Urbański & Wiktor (1968) NG55(1) place "Hasekiyata"; Damjanov & Likharev (1975) ("Strandzha Mountain – between Malko Tarnovo and Tsarevo"); Wiktor (1983) NG44, NG84, Hubenov (In: Delchev et al., 1993) NG84;

New localities (Table 1; Fig. 1):

Silkosiya reserve, near Kosti (Bulgaria), NG65(2), 2.06.2005, A. Irikov.

Ecological data: insufficient data.

Zoogeography: Balkan endemic.

80. ▲ *Deroceras* (*Agriolimax*) *agreste* (Linnaeus, 1758)

Deroceras (*Deroceras*) *agreste*: Damjanov & Likharev, 1975: 320.

Deroceras (*Deroceras*) *agreste*: Wiktor, 1983: 180.

Published for the studied area (Table 1; Fig. 1): Damjanov & Likharev (1975) ("Strandzha Mountain – place Padaloto"); Wiktor 1983 ("Strandzha Mountain – place Padaloto").

Ecological data: Lives in humid forests, scrubs and meadows, as well as in swamps. In arid areas lives very close to water tanks. More often found in natural than cultivated biotopes (Damjanov & Likharev, 1975).

Zoogeography: Mid European element, European faunistic complex (Irikov & Mollov, 2006).

81. ●● *Krynickillus urbanskii* (Wiktor, 1971)

Deroceras melanocephalus: Urbański & Wiktor, 1968: 60, 72.

Deroceras (*Krynickillus*) *urbanskii*: Wiktor, 1971. 265.

Deroceras (*Krynickillus*) *urbanskii*: Damjanov & Likharev, 1975: 324.

Deroceras urbanskii: Körnig, 1983. 35.

Krynickillus urbanskii: Wiktor, 1983: 190.

Krynickillus urbanskii: Hubenov (In: Delchev et al., 1993): 187.

Krynickillus urbanskii: Hubenov, 2005: 240.

Published for the studied area (Table 1; Fig. 1): Urbański & Wiktor (1968) NG58(7), NG58-68; Wiktor A. (1971) NG58-68, NG 55(1) "in the valley of Veleka River", "place Aydere-river near Malko Tarnovo"; Damjanov & Likharev (1975) ("Strandzha Mountain and Ropotamo River"); Körnig (1983) ("Bosna ridge"); Wiktor (1983) NG44, NG55(1) ("place Aydere River near Malko Tarnovo"), NG58-68, NG67(1), NG67-68; Hubenov (In: Delchev et al., 1993) ("Strandzha Mountain and Ropotamo River"); Hubenov (2005) ("Strandzha Mountain");

New localities (Table 1; Fig. 1):

Place "Glarus Bair" near Izgrev (Bulgaria), NG66(2), 24.06.2004, leg. A. Irikov.

Banks of the creek to camping "Arapya", 2 km north of Tsarevo (Bulgaria), NG67(4), 29.08.2004, leg. A. Irikov.

Mouth of the Silistar River (Bulgaria), NG85(1), 27.08.2004, leg. A. Irikova, T. Irikov.

Protected area "Marina Reka", between Izgrev and Balgari (Bulgaria), 25.06.2004, leg. A. Irikov.

- 5 km south-west of Demirköy (Turkey), river (Asker Deresi) with bridge, NG62, 10.05. 2006, leg. A. Irikov.

- Half-way between Demirköy and Iğneada (Turkey), in leaf litter of the oak forest, NG73(2), 10.05. 2006, leg. A. Irikov.

- 5 km west of Iğneada (Turkey), in leaf litter of the oak forest, next to the road to Demirköy, NG73(1), 10.05. 2006, leg. A. Irikov.

Ecological data: In old shady deciduous trees (oak, elm, beech, ash, field maple, blackberry, under sprouting *Ruscus aculeatus*), with climbing plants such as *Vitis silvestris*, *Smilax excelsa*, *Periploca greca* and others, under rotten bark of fallen trees (Urbański & Wiktor, 1968).

Trogloxenic (Hubenov, 2005).

Zoogeography: East-Submediterranean subelement, Submediterranean element, European faunistic complex (Irikov & Mollov, 2006).

Superfamily-group of the Helicoidea

Superfamily Hygromioidea

Family Helicodontidae

Subfamily Lindholmiolinae

82. ▲ *Lindholmiola girva* (Frivaldsky, 1835)

Caracollina contorta girva: Wagner, 1927: 364.

Lindholmiola contorta: Urbański, 1960b. 93.

Lindholmiola contorta: Urbański, 1960c. 140.

Lindholmiola corcyrensis: Urbański & Wiktor, 1968: 60.

Lindholmiola corcyrensis: Körnig, 1983. 35.

Published for the studied area (Table 1; Fig. 1): Wagner (1927) NG44; Urbański (1960b) NG66(1); Urbański (1960c) NG58(7), NG67-68 (on the southeastern coast of the Dyavolsko marsh); Urbański & Wiktor (1968) NG58-68; Körnig (1983) ("Ropotamo and Bosna ridge"), NG58(3), NG59(2);

New localities (Table 1; Fig. 1):

Popski Beach, Tsarevo (Bulgaria), NG67(5), 1.06.2004, leg. A. Irikov.

Near the mouth of Veleka River (Bulgaria), NG75, 28.06.2004, leg. A. Irikov.

Mladezhko village (Bulgaria), NG26, 3.05.2005, leg. A. Irikov.

Kiten resort, NG67(1), 7.06.2002, leg. A. Irikov.

Firth of estuary of Silistar River (Bulgaria), NG85(1), 25.08.2006, A. Irikov.

Ecological data: Xeromesophilic, thermophilic, drought-resistant, capable of surviving considerable temperature fluctuations (Irikov, 2002). Usually found in open habitat within forest and shrublands (Triantis, 2013a).

Zoogeography: East-Submediterranean subele-

ment, Submediterranean element, European faunistic complex (Irikov & Mollov, 2006).

Conservation status: Indexed as "Least Concern" (LC) under IUCN criteria (Triantis, 2013a).

Superfamily-group of the Helicoidea
Superfamily Hygromioidea
Family Hygromiidae
Subfamily Trichiinae
Tribe Trichiini

83. *Trichia erjaveci* (Brusina, 1870) BLE

Trichia erjaveci: Damjanov & Likharev, 1975: 370.

Trichia erjaveci: Hubenov (In: Delchev et al., 1993): 183.

Published for the studied area (Table 1; Fig. 1): Damjanov & Likharev (1975) ("south-eastern coast of Dyavolsko marsh"); Hubenov (In: Delchev et al., 1993) ("Ropotamo River");

Ecological data: In wooded areas around swamps and rivers, under the leaf litter and under the stones, with high humidity (Damjanov & Likharev, 1975).

Zoogeography: Endemic for the Balkan Peninsula (Irikov & Mollov, 2006).

Tribe Helicellini

84. ▲ *Xerolenta obvia obvia* (Menke, 1828)

Helicella (*Helicella*) *obvia*: Urbański, 1960b: 93.

Helicella (*H.*) *obvia dobrudschae*: Hudec & Vašátko, 1971: 5.

Published for the studied area (Table 1; Fig. 1): Urbański (1960b) NG66(1); Hudec & Vašátko (1971) NG58(3), NG59(2);

Ecological data: Xerophilic, thermophilic, drought-resistant (Irikov & Mollov, 2006).

Zoogeography: Eastsubmediterranean subelement, Submediterranean element, European faunistic complex (Irikov & Mollov, 2006).

85. ? *Xerolenta obvia pappi* (Schüt, 1962)

Xerolenta obvia pappi: Dedov & Subai, 2012: 105.

Published for the studied area (Table 1; Fig. 1): Dedov & Subai (2012) NG44.

Notes: We believe that there are no reliable data on the presence of this species in Bulgaria.

Zoogeography: East-Submediterranean subelement, Submediterranean element, European faunistic complex.

86. ▲ *Xerolenta spiruloides* (Wagner A., 1916) BLE

Helicella (*Helicella*) *spiruloides*: Urbański, 1964: 33.

Helicella (*H.*) *spiruloides*: Hudec & Vašátko, 1971: 5.

Helicella (*Helicella*) *spiruloides*: Damjanov & Likharev, 1975: 349.

Helicella spiruloides: Körnig, 1983: 36.

Helicella spiruloides: Hubenov (In: Delchev et al., 1993): 181.

Published for the studied area (Table 1; Fig. 1): Urbański (1964) NG66(1); Hudec & Vašátko (1971) NG58(3), NG59(2); Damjanov & Likharev (1975) NG66(1); Körnig (1983) NG58(3); Hubenov (In: Delchev et al., 1993) NG58(3), NG66(1);

New localities (Table 1; Fig. 1):

Sandy beach north of the estuary of Ropotamo River (Bulgaria), NG58-68, 26.06.2004, leg. A. Irikov.

Camping "Arapya" (in tidewrack) (Bulgaria), NG67(4), 26.08.2004, leg. A. Irikov.

Ecological data: Most often lives in stems and leaves of various herbaceous plants, but sometimes also occurs under stones in sandy soils and sands, near the sea. Survives long drought by hiding in the roots of grass plants (Damjanov & Likharev, 1975).

Zoogeography: Endemic for the Balkan Peninsula.

Conservation status: Indexed as "Least Concern" (LC) under IUCN criteria. Local sub-populations might be threatened by the complete or severe destruction of the vegetation (Páll-Gergely, 2013c).

87. ▲ *Helicopsis striata* (Müller, 1774)

Helicella (*Helicopsis*) *striata*: Damjanov & Likharev, 1975: 351.

Published for the studied area (Table 1; Fig. 1): Damjanov & Likharev (1975) ("by Rezovo to Varna");

New localities (Table 1; Fig. 1):

Camping "Arapya" (in tidewrack) (Bulgaria), NG67(4), 26.08.2004, leg. A. Irikov.

Ecological data: Lives mostly on leaves and stems of herbaceous plants in dry meadows and shrubs along roads adjacent to waterways and the sea in sandy soils. Survives drought by hiding in plant roots (Damjanov & Likharev, 1975).

Zoogeography: Holo-Submediterranean subelement, Submediterranean element, European faunistic complex.

Conservation status: Listed as "Least Concern" (LC) under IUCN criteria. Abandonment of grazing and the subsequent encroachment of bushy vegetation is the main threat to the species. Urbanisation

also has some impact on some populations (Von Proschwitz & Neubert, 2013).

 # Helicopsis (*Xeropicta*) *vestalis* (Pfeiffer, 1841)

Helicopsis (*Xeropicta*) *vestalis*: Hudec & Vašátko, 1973: 16.

Published for the studied area (Table 1; Fig. 1): Hudec & Vašátko NG67(1), NG67-68, NG59(2);

Taxonomical data: According to Schütt (2001) and Hausdorf (2008) this species is synonymous with *Xeropicta krynickii* (Krynicki, 1833).

Helicopsis (*Helicopsis*) sp.

Pintér & Pintér (1970) reported this undetermined species for an area of Arkutino Coast.

88. ●● *Xeropicta krynickii* (Krynickii, 1833)

Helicella krynickii: Hesse, 1934: after Urbański, 1960b, 97.

Helicella (*Xeropicta*) *krynickii*: Urbański, 1960b: 96.

Helicopsis (*Xeropicta*) *krynickii*: Pintér & Pintér, 1970: 93.

Helicopsis (*Xeropicta*) *krynickii*: Hudec & Vašátko, 1971: 5.

Helicella (*Xeropicta*) *krynickii*: Damjanov & Likharev, 1975: 356.

Helicella krynickii: Körnig, 1983: 36.

Xeropicta krynickii: Dedov, 1998: 763.

Published for the studied area (Table 1; Fig. 1): Hesse (1934) ("from Burgas to Ahtopol"); Urbański (1960b) NG59(2,4), NG76(2); Pintér & Pintér (1970) ("right bank of the Ropotamo River"), NG66(1); Hudec & Vašátko (1971) NG58(3), NG59(2); Damjanov & Likharev (1975) ("the entire Black Sea coast – mouth of the Rezovska River to the Durankulak Village"); Körnig (1983) NG66(1), NG67(1);

New localities (Table 1; Fig. 1):

- Camping "Arapya" (tidewrack) (Bulgaria), NG67(4), 26.08.2004, 7.IX.2005, leg. A. Irikov.

- Camping "Zlatna Ribka", south of Chernomorets (Bulgaria), NG59(3), 30.06.2004, leg. A. Irikov.

- Beach at the mouth of the Silistar River (Bulgaria), NG85(1), 8.09.2005, leg. A. Irikov.

- Camping "Oazis", south of Lozenets resort (Bulgaria), NG67(6), 25,27.08.2007, A. Irikov.

- beach near Iğneada (Turkey), NG83(2), 10.05. 2006, A. Irikov.

Ecological data: Lives on leaves and stems of various herbaceous plants and rarely under the stones along the entire Black Sea coast, near the sea. Can withstand extreme drought (Damjanov & Likharev, 1975).

In the firth of river Silistar it occurs among psammophyte vegetation, especially *Sylene euxina* Rupr., *Eringium maritimum* L., etc.

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

89. ●● *Xeropicta derbentina* (Krynickii, 1836)

Published for the studied area in the present study.

New localities (Table 1; Fig. 1):

Camping "Zlatna Ribka", south of Chernomorets (Bulgaria), NG59(3), 30.06.2004, leg. A. Irikov.

Camping "Arapya" (tidewrack) (Bulgaria), NG67(4), 26.08.2004, leg. A. Irikov.

Ecological data: Lives on stems of herbaceous plants and close to the root system in steppe areas adjacent to waterways or around the beach (Damjanov & Likharev, 1975).

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

Subfamily Hygromiinae

90. *Cernuella virgata* (Da Costa, 1778)

Helicella (*Cernuella*) *virgata variabilis*: Petrbok, 1941, after Urbański, 1960b: 98.

Cernuella (*Cernuella*) *virgata*: Pintér & Pintér, 1970: 88, 93.

Cernuella (*C.*) *virgata variabilis*: Hudec & Vašátko, 1971: 5.

Cernuella (*Cernuella*) *virgata variabilis*: Hudec & Vašátko, 1973: 14.

Cernuella virgata variabilis: Damjanov & Likharev, 1975: 359.

Cernuella virgata variabilis: Körnig, 1983: 36.

Published for the studied area (Table 1; Fig. 1): Petrbok (1941) NG59(2), NG66(1); Pintér & Pintér (1970) ("right bank of the Ropotamo River"); Hudec & Vašátko (1971) NG58(3), NG59(2); Hudec & Vašátko (1973) ("Ropotamo River"); Damjanov & Likharev (1975) ("the entire Black Sea coast"); Körnig (1983) ("Ropotamo River"), NG58(3), NG67(1,2);

New localities (Table 1; Fig. 1):

Camping "Oazis", south of Lozenets resort (Bulgaria), NG67(6), 25, 27.08.2007 A. Irikov.

Ecological data: Lives on the stems of psammophyte vegetation in the coastal area.

Zoogeography: Atlantic element, European faunistic complex.

91. ▲ ●● *Cernuella cisalpina* (Rossmässler, 1837)

Cernuella profuga: Damjanov & Likharev, 1975: 359.

Published for the studied area (Table 1; Fig. 1): Damjanov & Likharev (1975) ("the entire Black Sea coast – estuary from Rezovska River to Kamchija River");

New localities (Table 1; Fig. 1):

- Arkutino marshes (Bulgaria), NG58(3), 26.06.2004, leg. A. Irikov.

- Firth of Rezovska River (Bulgaria), NG84, 5.06.2005, leg. A. Irikov.

- Firth of Silistar River (Bulgaria), NG85(1), 7.06.2005, leg. A. Irikov.

- Camping "Arapya" (tidewrack) (Bulgaria), NG67(4), 26.08.2004, 7.09.2005, leg. A. Irikov.

- Camping "Zlatna Ribka", south of Chernomorets (Bulgaria), NG59(3), 30.06.2004, leg. A. Irikov.

- Beach near Iğneada (Turkey), NG83(2), 10.05. 2006, A. Irikov.

Ecological data: Lives on vegetation near the Black Sea coast. Can withstand a long drought.

Zoogeography: Atlantic element, European faunistic complex.

Conservation status: Indexed as "Least Concern" (LC) under IUCN criteria. This species is not very sensitive to ecosystem modification and local events would affect only local populations to some extent (Páll-Gergely, 2013d).

Subfamily Euomphaliini

A thorough revision of the genus *Monacha* Fitzinger, 1833 in Bulgaria was made by Irikov (2008).

 # Monacha (*Monacha*) *cartusiana* (Müller, 1774)

M. cartusiana has been reported by many authors for Strandzha and the southern Black Sea coast, but according to Irikov (2008) material from this region belongs to *Monacha claustralis* (Menke, 1828) (see the species below).

92. *Monacha* (*Monacha*) *claustralis* (Menke, 1828)

Monacha (*Monacha*) *carthusiana*: Urbański, 1960b: 92, 93.

Monacha (*Monacha*) *carthusiana*: Urbański, 1960c: 140.

Monacha carthusiana: Urbański & Wiktor, 1968: 60.

Monacha (*Monacha*) *carthusiana*: Pintér & Pintér, 1970: 93.

Monacha (*Monacha*) *dissimulans*: Pintér & Pintér, 1970: 93.

Monacha carthusiana: Damjanov, 1971: 24, 25.

Monacha carthusiana: Hudec & Vašátko, 1971: 5.

Monacha carthusiana: Körnig, 1983: 36.

Monacha (*Monacha*) *claustralis*: Irikov, 2008: 789.

Published for the studied area (Table 1; Fig. 1): Urbański (1960b) NG66(1), NG67(2); Urbański (1960c) NG58-68; Urbański & Wiktor (1968) NG58(7); Pintér & Pintér (1970) NG66(1), NG58(3); Damjanov (1971) NG75, NG85(1); Hudec & Vašátko (1971) NG58(3), NG59(2); Körnig (1983) NG66(1), NG67(2); Irikov (2008) NG67(1,3), NG58(3), NG58-68, NG65(2), NG76(1), NG84, NG85(1),

New localities (Table 1; Fig. 1):

Camping "Oazis", south of Lozenets resort (Bulgaria), NG67(6), 25,27.08.2007, A. Irikov.

Popski Beach, Tsarevo NG67(5) (Bulgaria), 1.06.2004, leg. A. Irikov; 23.06.2004, A. Irikov & K. Kirov; 2.06.2005. leg. I. Mollov.

Camping "Arapya" (Bulgaria), NG67(4), 26.08.2004, 7.09.2005, leg. A. Irikov.

Taxonomical data: This species has longly been confused with the closely related *M. carthusiana* and therefore the distribution of both species in Bulgaria is still not well understood.

Ecological data: According to Irikov (2008), this species prefers open grass areas with high grass, but often occurs as a sinanthrope species among farmed lands, hay meadows and in gardens and yards in urban areas. In the towns it inhabits open spaces with high grass, in largest quantities of perennial plants near paths.

In the firth of river Silistar it is distributed among psammophyte vegetation, especially *Sylene euxina* Rupr., *Eringium maritimum* L., etc.

Mesohygrophilic, mesothermophilic, drought-resistant species (Irikov, 2008).

Zoogeography: East-Submediterranean subelement, Submediterranean element, European faunistic complex (Irikov, 2008).

Conservation status: Indexed as "Least Concern" (LC) under IUCN criteria. Local subpopulations might be threatened by the complete or severe destruction of the vegetation (Páll-Gergely, 2013e).

 # Monacha (*Monacha*) *carascaloides* (Bourguignat, 1855)

This species is reported by many authors for Strandzha and the southern Black Sea coast, but according to Irikov (2008), all material from this re-

gion belongs to *Monacha solidior* (Mousson, 1873) (see the species below).

93. ●● *Monacha* (*Monacha*) *solidior* (Mousson, 1873)

Monacha carascaloides: Urbański, 1960b: 93.

Monacha (*Monacha*) *carascaloides*: Urbański, 1960c: 140.

Monacha (*Monacha*) *carascaloides*: Urbański & Wiktor, 1968: 60.

Monacha carascaloides: Damjanov & Pintér, 1969: 39.

Monacha (*Monacha*) *carascaloides*: Pintér & Pintér, 1970: 88, 97.

Monacha (*M.*) *carascaloides*: Hudec & Vašátko, 1971: 5.

Monacha (*Monacha*) *carascaloides*: Hudec & Vašátko, 1973: 22.

Monacha carascaloides: Damjanov & Likharev, 1975: 364.

Monacha carascaloides: Körnig, 1983: 36.

Monacha (*Monacha*) *solidior*: Irikov, 2008: 795.

Published for the studied area (Table 1; Fig. 1): Urbański (1960b) NG66(1); Urbański (1960c) NG58-68; Urbański & Wiktor (1968) NG58-68; Damjanov & Pintér (1969) NG58 (1); Pintér & Pintér (1970) ("right bank of the Ropotamo River), NG58(3), NG66(1); Hudec & Vašátko (1971) NG58(3), NG59(2); Hudec & Vašátko (1973) ("Ropotamo River"), NG59(2), NG58(3), NG66(1), NG67(1), NG67-68; Damjanov & Likharev (1975) ("Black Sea coast"); Körnig (1983) ("Ropotamo River and Bosna ridge"), NG58(3), NG59(2), NG67(1); Irikov (2008) NG58(3), NG58-68, NG67(3).

New localities (Table 1; Fig. 1):

- Camping "Arapya" (Bulgaria), NG67(4), 6.09.2005, leg. A. Irikov.

- Camping "Zlatna Ribka", south of Chernomorets (Bulgaria), NG59(3), 30.06.2004, leg. A. Irikov.

- Firth of estuary Silistar River (Bulgaria), NG85(1), 25.08.2006, A. Irikov.

- About 5 km southwest of Demirköy (Turkey), in the valley of the river with riverbank vegetation of alder (*Alnus glutinosa*) and undergrowth of pontic rhododendron (*Rhododendron ponticum*), NG62, 10.05. 2006, leg. A. Irikov.

Taxonomical data: This species has longly been confused with the closely related *M. carascaloides* and therefore the distribution of both species in Bulgaria is still not well understood.

Ecological data: According to Irikov (2008) the species occurs on the Black Sea Coast among sand dunes. The ecological conditions during the summer season are extreme, with strongly expressed xerotermics around the sand surface, but sometimes there is a high aerial humidity over the dunes due to the proximity of the sea. The animals are found mostly among microhabitats of psamophityc and halophilyc grassy vegetation.

Xerophilic, thermophilic, drought-resistant species (Irikov, 2008).

Zoogeography: Asia Minor subelement, Subiranian element, Soutwestern Asiatic complex (Irikov, 2008).

Conservation status: Indexed as "Least Concern" (LC) under IUCN criteria. Local subpopulations might be threatened by the complete or severe destruction of the vegetation (Páll-Gergely, 2013f).

94. *Monacha* (*Monacha*) *ovularis* (Bourguignat, 1855)

Monacha pilosa: Pintér, 1969: 94.

Monacha (*Monacha* ?) *pilosa*: Pintér & Pintér, 1970: 88, 97.

Monacha (*Monacha*) *pilosa*: Hudec & Vašátko, 1973: 19.

Monacha pilosa: Körnig, 1983: 36.

Monacha pilosa: Hubenov (In: Delchev et al., 1993): 181.

Monacha pilosa: Dedov, 1998. 763.

Monacha (*Monacha*) *ovularis*: Hausdorf, 2000: 96.

Monacha pilosa: Hubenov, 2005: 241.

Monacha (*Monacha*) *ovularis*: Irikov, 2008: 793.

Published for the studied area (Table 1; Fig. 1): Pintér (1969) ("left bank of the Ropotamo River", NG58(2,4); Pintér & Pintér (1970) ("right bank of the Ropotamo River), NG58(2); Hudec & Vašátko (1973) ("Ropotamo River"); Körnig (1983) NG66(1), NG67(2); Hubenov (In: Delchev et al., 1993) ("Ropotamo River"), NG66(1), NG67(2); Dedov (1998) ("Ropotamo River"), NG67(1,2); Hausdorf (2000) ("border of Bulgaria with Turkey"); Hubenov (2005) ("South Black Sea coast and Strandzha Mountain"); Irikov (2008) ("left bank of the Ropotamo River"), NG26, NG58(2,4), NG59(3), NG85(1).

New localities (Table 1; Fig. 1):

Camping "Oazis", south of Lozenets resort (Bulgaria), NG67(6), 25,27.08.2007, leg. A. Irikov.

Camping "Arapya" (in tidewrack) (Bulgaria), NG67(4), 26.08.2004, leg. A. Irikov.

Firth of Silistar River (Bulgaria), NG85(1), 27.08.2004, leg. A. Irikov.

Taxonomical data: According to Damjanov & Likharev (1975) this species is only a population form of *M. cartusiana*. Körnig (1983) and Irikov (2008) support the independent status of this species.

Ecological data: Xerophilic (Hubenov, 2005).

According to Irikov (2008), the species occurs in xerothermal habitats in Strandzha and the southern Black Sea Coast. It prefers open habitats with grasses and bushes, but also in sands on the seacoast too, among psamophityc and halophilyc vegetation. During the summer period, due to the prolonged droughts and high temperatures in this habitat, *M. ovularis* is inactive, and is buried deep in the wet sand around the roots of plants.

Xerophilic, thermophilic, drought-resistant species (Irikov, 2008).

Zoogeography: Asia Minor subelement, Subiranian element, Soutwestern Asiatic complex (Irikov, 2008).

Conservation status: Indexed as "Near Threatened" (NT) under IUCN criteria. Local subpopulations might be threatened by the complete or severe destruction of the vegetation (Páll-Gergely, 2013g).

95. *Monacha* (*Monacha*) *venusta* Pintér L., 1968

Monacha venusta: Pintér, 1969: 93.

Monacha (*Monacha*) *venusta*: Pintér & Pintér, 1970: 88, 97.

Monacha (*Monacha*) *venusta*: Hudec & Vašátko, 1973: 20.

Monacha (*Monacha*) *venusta*: Hausdorf, 2000: 105.

Monacha (*Monacha*) *venusta*: Irikov, 2008: 796.

Published for the studied area (Table 1; Fig. 1): Pintér (1969) NG58-68; Pintér & Pintér (1970) ("right bank of the Ropotamo River), NG67-68; Hudec & Vašátko (1973) ("Ropotamo River"); Hausdorf (2000) ("area Ropotamo River"); Irikov (2008) NG58-68, NG85(1).

Taxonomical data: According to Damjanov & Likharev (1975) this species is only a population form of *M. cartusiana*. Irikov (2008) confirms the independent status of this species.

Ecological data: According to Irikov (2008) inhabits open grass spaces in xerothermic biotopes near the beach. In the summer the animals are hiding under rocks and are active only after rain or at night.

Xerophilic, thermophilic, drought-resistant species (Irikov, 2008).

Zoogeography: Asia Minor subelement, Subiranian element, Soutwestern Asiatic complex (Irikov, 2008).

Conservation status: Indexed as "Near Threatened" (NT) under IUCN criteria. Local subpopulations might be threatened by the complete or severe destruction of the vegetation (Páll-Gergely, 2013h).

96. *Monacha* (*Monacha*) *ocellata* (Roth, 1839)

Monacha (*Monacha*) *ocellata*: Irikov, 2008: 792.

Published for the studied area (Table 1; Fig. 1): Irikov (2008) NG58(3).

New localities (Table 1; Fig. 1):

Camping "Oazis" (Bulgaria), south of Lozenets resort, NG67(6), 25,27.08.2007, A. Irikov.

Ecological data: According to Irikov (2008) this species lives on the beach farther from the sand dunes where there is abundant psamophyte vegetation.

Xerophilic, thermophilic, drought-resistant species (Irikov, 2008).

Zoogeography: Asia Minor subelement, Subiranian element, Soutwestern Asiatic complex (Irikov, 2008).

Conservation status: Indexed as "Least Concern" (LC) under IUCN criteria (Triantis, 2013b).

Family Cochlicellidae

97. I *Cochlicella acuta* (Müller, 1774)

Cochlicella (*Cochlicella*) *acuta*: Hudec & Vašátko, 1973: 18.

Cochlicella acuta: Damjanov & Likharev, 1975: 407.

Cochlicella acuta: Dedov, 1998: 761.

Cochlicella acuta: Hubenov, 2005: 240.

Published for the studied area (Table 1; Fig. 1): Hudec & Vašátko (1973) NG58(3); Damjanov & Likharev (1975), Dedov (1998), NG58(3); Hubenov (2005) ("South Black Sea coast");

Notes: Hudec & Vašátko (1973) first reported this Atlanto-Mediterranean species for Bulgaria. According to Damjanov & Likharev (1975) the species was introduced in Bulgaria.

Ecological data: Mesophilic (Hubenov, (2005).

Zoogeography: Atlantic element, European faunistic complex.

Superfamily Helicoidea

Family Helicidae

Subfamily Helicinae

98. ●● *Helix* (*Helix*) *lucorum* Linnaeus, 1758

Helix (*Helix*) *lucorum*: Urbański, 1960b: 92, 93, 105.

Helix (*Helix*) *lucorum*: Pintér & Pintér, 1970: 88, 97.

Helix (*Helix*) *lucorum onixiomicra*: Damjanov & Likharev, 1975: 400.

Helix lucorum: Körnig, 1983: 37.

Helix lucorum onixiomicra: Hubenov (In: Delchev et al., 1993): 180.

Published for the studied area (Table 1; Fig. 1): Urbański (1960b) NG58(3), NG66(1), NG67(2); Pintér & Pintér (1970) ("right coast of the Ropotamo River"), NG66(1); Damjanov & Likharev (1975) ("Ropotamo River"), NG59(2), NG66(1), NG76(2); Körnig (1983) ("Bosna ridge"), NG66(1); Hubenov (In: Delchev et al., 1993) ("Ropotamo River"), NG59(2), NG66(1), NG76(2);

New localities (Table 1; Fig. 1):

Firth Silistar River (Bulgaria), 8.09.2005, NG85(1), leg. A. Irikov.

Camping "Zlatna Ribka", south of Chernomorets (Bulgaria), NG59(3), 30.06.2004, leg. A. Irikov.

Camping "Oazis", south of Lozenets resort (Bulgaria), NG67(6), 25,27.08.2007, A. Irikov.

3 km north-east of Yenice (Turkey), NG51, 10.05. 2006, leg. A. Irikov.

Taxonomical data: A study of specimens from Strandzha and the southern Black Sea coast showed that *H. l. onixiomitra* is only an ecological form.

Ecological data: Xeromesophilic, thermophilic, drought-resistant, capable of surviving temperature fluctuations (Irikov & Mollov, 2006).

Zoogeography: Irano-Turanian subelement, Sub-Iranian element, Southwestern Asiatic complex (Irikov & Mollov, 2006).

Conservation status: Included in Annex IV of the Bulgarian Biodiversity Act (State Gazette, 2002).

99. ●● *Helix* (*Pelasga*) *pomacella* Mousson, 1854

Helix (*Helix*) *pomacella*: Urbański, 1960b: 97, 105.

Helix pomacella: Damjanov & Pintér, 1969: 39.

Helix (*Helix*) *pomacella*: Pintér & Pintér, 1970: 88, 97.

Helix (*H.*) *pomacella*: Hudec & Vašátko, 1971: 5.

Helix (*Helix*) *pomacella*: Hudec & Vašátko, 1973: 26.

Helix (*Pelasga*) *pomacella*: Damjanov & Likharev, 1975: 403.

Helix pomacella: Körnig, 1983: 37.

Helix pomacella: Hubenov (In: Delchev et al., 1993): 186.

Helix pomacella: Zaprjanov, 1996-1997: 305.

Helix pomacella: Hubenov, 2005: 240.

Published for the studied area (Table 1; Fig. 1): Urbański (1960b) (Kristo Cape), NG58(3), NG59(1), NG76(2); Damjanov & Pintér (1969) NG58 (1); Pintér & Pintér (1970) ("right bank of the Ropotamo River), NG58(2,3); Hudec & Vašátko (1971) NG58(3), NG59(2); Hudec & Vašátko (1973) NG67(1), NG67-68; Damjanov & Likharev (1975) ("Ropotamo River"), NG44, NG58(3), NG59(1,2), NG66(1); Körnig (1983) ("Ropotamo River") NG67(1); Hubenov (In: Delchev et al., 1993) ("Ropotamo River"), NG44, NG58(3), NG59(1,2), NG66(1); Hubenov (2005) ("South Black Sea coast and Strandzha Mountain"); Zaprjanov (1996-1997) NG59(2);

New localities (Table 1; Fig. 1):

Firth of Silistar River (Bulgaria), NG85(1), 6.06. 2005, 8.06.2005., 25.08.2006, leg. A. Irikov.

- Camping "Zlatna Ribka", south of Chernomorets (Bulgaria), NG59(3), 30.06.2004., leg. A. Irikov.

- Dereköy village (Turkey), NG34, 11.05. 2006, leg. A. Irikov.

Ecological data: Lives in sunny southern slopes, in places overgrown with rare mixed forests and bushes, under leaf litter, with an average humidity (Damjanov & Likharev, 1975).

Mesophilic (Hubenov, 2005).

Zoogeography: Asia Minor subelement, Subiranian element, Soutwestern Asiatic complex.

Conservation status: Indexed as "Least Concern" (LC) under IUCN criteria. Local sub-populations might be threatened by the complete or severe destruction of the rocky habitat – quarrying, earthquakes, mining, etc. (Páll-Gergely, 2013i).

100. *Eobania vermiculata* (Müller, 1774)

Eobania vermiculata: Urbański, 1960b: 103.

Eobania vermiculata: Damjanov & Likharev, 1975: 389.

Eobania vermiculata: Körnig, 1983: 37.

Eobania vermiculata: Zaprjanov, 1993: 254.

Published for the studied area (Table 1; Fig. 1): Urbański (1960b) NG59(2), NG66(1), NG76(2); Damjanov & Likharev (1975) ("Black Sea coast"), NG66(1), NG76(2); Körnig (1983) NG66(1); Zaprjanov (1993) NG76(2);

Ecological data: Lives on herbaceous plants in places, strongly lit by the sun, in conditions of low humidity (Damjanov & Likharev, 1975).

Zoogeography: Holomediterranean element, Mediterranean faunistic complex.

101. *Cepaea vindobonensis* (Ferussac, 1821)

Cepaea vindobonensis: Urbański, 1960b: 92, 93, 105.

Cepaea vindobonensis: Damjanov & Pintér, 1969: 39.

Cepaea vindobonensis: Pintér & Pintér, 1970: 88, 97.

Cepaea vindobonensis: Körnig, 1983: 37.

Cepaea vindobonensis: Zaprjanov, 1991: 232.

Published for the studied area (Table 1; Fig. 1): Urbański (1960b) NG58(3), NG66(1), NG67(2); Damjanov & Pintér (1969) NG58 (1); Pintér & Pintér (1970) ("right bank of the Ropotamo River), NG58(3); Körnig (1983) ("Bosna ridge"), NG58(3); Zaprjanov (1991) NG67-68;

New localities (Table 1; Fig. 1):

Kiten resort (Bulgaria), NG67(1), 7.06.2002, leg. A. Irikov.

Malko Tarnovo (Bulgaria), NG44, 3.03.2003, leg. S. Uzunov.

- Camping "Zlatna Ribka", south of Chernomorets (Bulgaria), NG59(3), 30.06.2004, leg. A. Irikov.

Ecological data: Xeromesophilic, thermophilic, drought-resistant (Irikov, 2002). This species usually inhabits open warm shrub vegetation, preferably on sheltered southwards exposed slopes and valleys (Neubert, 2013).

Zoogeography: Ponto-sub-Mediterranean subelement, Steppe element, Steppe Euroasian faunistic complex (Irikov & Mollov, 2006).

Conservation status: Indexed as "Least Concern" (LC) under IUCN criteria (Neubert, 2013).

Discussion

Strandzha Mountain is located in the most southeastern part of the European continent and a very typical feature of the mountain is the great diversity of terrestrial molluscs. This is mainly due to its geographical location and specific climatic conditions, as well as the diverse landscapes, habitats and communities. The malacofauna of this physicogeographic region has been relatively well studied in Bulgaria and poorly explored in Turkey. Most of the data from Bulgaria refers to the coastal part of the mountain; however, the interior has been poorly explored.

Currently in Strandzha there are 101 species of terrestrial mollusks known, ranking the mountain second in Bulgaria in terms of diversity of terrestrial snails after the Western Rhodopes Mountains, where there are 111 species (see Irikov & Mollov, 2006). The species belong to the families Zoninitidae (16 taxa), Hygromiidae (14 taxa), Clausiliidae (12 taxa) and others. The lack of limestone has limited the presence of calcicolous species at the expense of forest mollusc species adapted to higher temperatures and humidity and the prevalence of mezohigrophylic and mezotherm species.

From zoogeographic point of view the malacofauna of Strandzha is very diverse, including various faunistic complexes and endemics: European (58 taxa), South-western Asian (17 taxa), Siberian (11 taxa), Mediterranean (1 taxon), Steppe Euro-Asian (1 taxon) faunistic complexes, Bulgarian endemics (3 taxa) and Balkan endemics (10 taxa). The predominating presence of the European fauistic complex is due to the high number of sub-Mediteranean species (15 taxa). This is due to the soft transitional Mediterranean climate in Strandzha as a result of its geographical location and the influence of the Black Sea. In addition to the specific humid and warm climate prevailing low altitude and the strong character of the wooded mountains are a prerequisite for the presence of a relatively large number of species separated as specific eastern-sub-Mediteranean subelement (11 taxa). The presence of only two taxa belonging to the holo-sub-Mediteranean element supports the notion that Strandzha is a separate eastern zone with specific characteristics within the sub-Mediterranean area. In support of this statement there is also the presence of a small number of Atlantic elements (5 taxa), as well as European element and only one taxon belonging to the Mediterranean element. On the other hand, the dominance of species of the Euxinian subelement (17 taxa), as a remnant of the rich fauna of the Pliocene forests of the Black Sea, has a unique character in Europe and underlines the link of the malacofauna of Strandzha with the Pontic part of Asia Minor and the Caucasus. In the south-Pontic region of Caucasus and from the northern part of coastal Asia Minor to Strandzha, in Europe there is a relatively mild and humid climate, which contributed to the preservation of the Pliocene relict flora and fauna that distinguish this area with a specific identity. The presence of a small number of European mountain species (9 taxa – 4 Middle European and 3 Southern European) is also a result from the specific climate and homogeneous appearance of wooded mountains, and also the absence of habitats from the vertical zones and characteristic for the European mountains. Unlike typical mountain species, the mountain is rich in mezophiles and thermophiles, European species (16 taxa), common in mixed and deciduous forests of Europe. This is the second largest group, which is widespread in the vast wooded areas of the mountain. The overwhelming presence of species from the European fauna

determines the appurtenance of the malacofauna of Strandzha to the sub-Mediterranean zoogeographic province in Bulgaria and highlights two trends in its formation. On one hand, the mountain is an island refugium in the European continent, with preserved stenobiontic relict fauna favouring mild and humid climate and on the other hand – for euribiontic species. In the fauna of Strandzha there are many species belonging to the South-western Asian complex and particularly to the Sub-Iranian element (17 taxa). Among them the species from the Asia Minor subelement dominate (15 taxa) and only two belong to the Irano-Turanian subelement. This is the basis of the mixed European-Asian character of the malacofauna of Strandzha, which due to its geographical position unites the Asia Minor and the European fauna. The other faunaistic complexes are with negligible presence, the number of species from the Siberian complex (11 taxa) is relatively large, as it includes the European-Asian (3 taxa), Transpalearctic (2 taxa) and Holarctic (5 taxa) elements, which are generally widespread in temperate latitudes, and Mediterranean and Eurasian steppe fauna complexes are represented with only one taxon. Endemism in Strandzha Mountain has stressed east Balkan character mostly due to the specific location of the mountain. The lack of regional endemic species and the small number of Bulgarian (3 taxa) and more Balkan endemics (10 taxa), compared to other mountain areas in Bulgaria, for example Western Rhodopes (see Irikov & Mollov, 2006) is the result of the generic nature of the conditions and habitats. So in terms of endemism, Strandzha cannot be considered a speciation region, but rather a storage area for East Balkan endemic fauna.

Conservation status and contemporary threats for the malacofauna of Strandzha.

According to the Bulgarian nature conservation legislation, the European conventions and directives and the IUCN criteria, 17 species of the recorded terrestrial snails have a conservation status. Eleven are classified as "least concern", three as "near threatened" and one is "vulnerable", according to the IUSN criteria. One species is included in Annex II of the Bulgarian Biodiversity Act and Annex II of Directive 92/43 and another one is included in Annex IV of the Bulgarian Biodiversity Act. Currently, in our opinion there are no major threats to the terrestrial malacofauna of Strandzha. The deforestation and habitat destructions are two potential threats for the populations of terrestrial snails. A positive effect on the conservation of the terrestrial malacofauna of the mountain have the many protected territories (almost all of the territory of the mountain in the Bulgarian part is included in Nature Park "Strandzha", 5 reserves and several protected areas), as well as the border area between Turkey and Bulgaria, where human activities are greatly restricted.

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Сухоземните охлюви (Mollusca, Gastropoda) на Странджа планина и черноморското крайбрежие (България и Турция)

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(Резюме)

За първи път в настоящата статия се представя пълен преглед на сухоземната малакофауна на Странджа планина (в България и Турция), на базата на всички досега публикувани данни и нови изследвания. В резултат на изследването са установени 101 вида и подвида сухоземни мекотели, които принадлежат на 27 семейства. Данните за малакофауната на Странджа планина в Турция са нови и се представят за първи път в тази статия. В статията са включени синонимите на видовете и подвидовете, които са използвани за сухоземните охлюви на изследвания район, всички известни находища, нови находища за 50 таксона, систематични и екологични данни. За първи път е направен зоогеографски анализ и е представен консервационния статут на видовете. Статията е с обзорен характер и заедно с новите данни представлява добра основа, върху която да бъдат надграждани резултатите от бъдещи изследвания.