



AN UPDATED AND ANNOTATED CHECKLIST OF BULGARIAN TERRESTRIAL GASTROPODS (MOLLUSCA: GASTROPODA)

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ABSTRACT: According to the current state of knowledge the terrestrial gastropod fauna of Bulgaria includes 226 species and 33 subspecies (excluding nominate ones), making altogether 259 taxa. The following new data are presented: updated nomenclature of 50 taxa, synonymisation of 17 taxa; taxa whose presence in Bulgaria was discovered and those which were described as new to the science after the publication of the last checklist (1998) are now included, six taxa are evaluated as introduced; the taxonomic status of 13 taxa is regarded as unclear. Fifty seven taxa are regarded as endemic to Bulgaria, and 33 as endemic to the Balkan Peninsula; 60 taxa are regarded as rare.

KEY WORDS: terrestrial gastropods, Bulgaria, checklist

INTRODUCTION

In the past mostly foreign and recently native specialists investigated the land gastropods in Bulgaria. The first and only comprehensive work on the Bulgarian terrestrial malacofauna was the monograph of DAMJANOV & LIKHAREV (1975) – Fauna Bulgarica, Gastropoda terrestria. The authors (DAMJANOV & LIKHAREV 1975) summarised all the then available data, except a few papers (URBAŃSKI 1969, HUDEC & VAŠATKO 1973, NORDSIECK 1973, 1974). DAMJANOV & LIKHAREV (1975) expressed an opinion that “in the near future it is difficult to expect finding any considerable number of new species in our country”. After the publication of this monograph the malacofaunistic research in Bulgaria decreased in intensity. In 1975–1998 only three articles concerning Bulgarian mollusc fauna appeared: CLAUS (1977), JACKIEWICZ (1979) and KÖRNIG (1983). Later DEDOV (1998) presented the first checklist of Bulgarian terrestrial gastropods, updating the systematic status of some taxa. However, some papers were omitted when preparing this list: SAJÓ (1968), URBAŃSKI (1969),

PINTÉR L. (1972), RIEDEL (1975, 1980, 1998), NORDSIECK (1970, 1973, 1974, 1977), JACKIEWICZ (1979), RIEDEL & MAASSEN (1993), GITTENBERGER & BANK 1996 etc.; as a result some taxa were left out while the nomenclature of others was out-dated. In 1998–2008 the research on Bulgarian terrestrial malacofauna was carried out mostly by Bulgarian specialists. As a result, much information about taxonomy, distribution and ecology accumulated during the ten year period. Seven new taxa were described as new to the science (IRIKOV 2003, 2006, IRIKOV et al. 2004, DEDOV 2007); eight taxa were recorded as new to the fauna of Bulgaria (IRIKOV et al. 2004, IRIKOV 2006, 2008 in press, GEORGIEV in press), and one species was synonymised (IRIKOV 2001). The aim of this paper is to present a new, up-dated checklist, incorporating the new data accumulated since 1998. Notwithstanding the updating of the species list, recently many new forms (*Macedonica*, *Agardhiella*, *Balea* etc.) have been found in Bulgaria by various collectors; they are not included and are currently being described.

The systematic arrangement and nomenclature follow DEDOV (1998). The following symbols are used in the list:

● species and subspecies with nomenclatural changes after publication of DEDOV'S (1998) list: taxa transferred to another genus or with changed specific/subspecific status;

S taxa synonymised after publication of DEDOV'S (1998) list;

I taxa introduced in Bulgaria;

■ taxa omitted in DEDOV (1998);

! taxa recorded as new to Bulgarian fauna after publication of DEDOV'S (1998) list;

!! taxa described as new to the science after publication of DEDOV'S (1998) list;

taxa not valid, or not occurring in Bulgaria, or taxa whose occurrence in the country is uncertain;

? taxa with unclear systematic status;

≈ taxa recorded from the Bulgarian Black Sea coast but not being a part of the native fauna (flood debris of the sea);

BGE – taxa endemic to Bulgaria;

BLE – taxa endemic to the Balkan Peninsula;

RARE – taxa with only one or few records.

CHECKLIST

Subclass Prosobranchia

Order Caenogastropoda

Superfamily Littorinoidea

Family Pomatiasidae

1. *Pomatias rivulare* (Eichwald, 1829)

2. *Pomatias elegans* (O. F. Müller, 1774)

Superfamily Cyclophoroidea

Family Aciculidae

3. *Platyla polita* (Hartmann, 1840) ●

4. *Platyla similis* (Reinhardt, 1880) ●

5. *Platyla orthostoma* (Jackiewicz, 1979) ■ RARE

Subclass Pulmonata

Order Bassomatophora

Superfamily Ellobioidea

Family Ellobiidae

6. *Carychium minimum* O. F. Müller, 1774

7. *Carychium tridentatum* (Risso, 1826)

8. *Myosotella myosotis* (Draparnaud, 1801) ●

Order Stylommatophora

Superfamily Pupilloidea

Family Pyramidulidae

9. *Pyramidula pusilla* (Vallot, 1801) ● !

Pyramidula rupestris rupestris (Draparnaud, 1801) # S

Pyramidula rupestris saxatilis Hartmann, 1840 # S

The above two subspecies are listed in DEDOV (1998), but the specimens from the Rhodopes and the Pirin

Mts. examined by us turned out to be *P. pusilla*. Till finding specimens of *P. rupestris* we assume that only *P. pusilla* is present in Bulgaria.

Family Vertiginidae

I. Subfamily Vertigininae

10. *Vertigo (Vertigo) pusilla* O. F. Müller, 1774

11. *Vertigo (Vertigo) substriata* (Jeffreys, 1830) RARE

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

13. *Vertigo (Vertigo) moulinsiana* (Dupuy, 1849) RARE

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

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

16. *Vertigo (Vertilla) angustior* (Jeffreys, 1830)

II. Subfamily Truncatellinae

17. *Truncatellina claustralis* (Gredler, 1856)

18. *Truncatellina cylindrica* (Férussac, 1807)

19. *Truncatellina costulata* (Nilsson, 1822)

20. *Truncatellina rothi* (Reinhardt, 1916) ! RARE

This species, from the Western Rhodopes, is new to the Bulgarian fauna (IRIKOV 2008 in press).

Truncatellina callicratis (Scacchi, 1833) #

In DEDOV (1998) *Truncatellina callicratis* (Scacchi, 1833) is listed as a synonym of *Truncatellina strobili* (Gredler, 1853), but according to IRIKOV & MOLLOV (2006) and IRIKOV (2008 in press) till now there is no evidence for the presence of this species in Bulgaria.

21. *Columella edentula* (Martens, 1830)

Family Pupillidae

Subfamily Pupillinae

22. *Pupilla muscorum* (Linnaeus, 1758)

23. *Pupilla triplicata* (Studer, 1820)

24. *Pupilla sterri* (Voith, 1838)

Pupilla bogdanovi Urbański, 1960 # ≈

Pupilla valkanovi Urbański, 1960 # ≈

The last two species: *P. bogdanovi* and *P. valkanovi* are included in DEDOV (1998) based on the material from the region of Bourgas, described by URBAŃSKI (1960). The species were described on the basis of a single shell each. After the original description there were no records of any of them either in Bulgaria or outside the country. It is very likely that the shells were brought by sea currents from other regions (not Bulgarian Black Sea coast). The origin and distribution of these species still remain unknown.

Family Lauridae

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

26. *Euxinolauria schweigeri* (Götting, 1963) ● !

This species is erroneously reported in DAMAJANOV & LIKHAREV (1975) as *Lauria (Leiostyla) anglica* (Wood, 1828) and in DEDOV (1998) as *Leiostyla anglica*.

Family Argynidae

For information on *Agardhiella* in Bulgaria see IRIKOV & GEORGIEV (2008 in press). The genus is still insufficiently studied and the existing material is too scanty



for a comprehensive and reliable conchological and anatomical analysis. It is very likely that conchologically indistinguishable species may occur in Bulgaria, and more detailed research is needed.

27. *Agardhiella truncatella* (L. Pfeiffer, 1841) ● **RARE**

28. *Agardhiella macrodonta* (Hesse, 1916) ● **BGE RARE**
In DEDOV (1998) recorded as the nominate subspecies *Argna macrodonta macrodonta* (Hesse, 1916).

29. *Agardhiella rumelica* (Hesse, 1916) ●

In DEDOV (1998) listed as *Argna macrodonta rumelica* (Hesse, 1916).

30. *Agardhiella parreyssii* (L. Pfeiffer, 1848) ● **BLE RARE**

Family Orculidae

31. *Orculella bulgarica* (Hesse, 1915) **RARE**

In DEDOV (1998) listed as *Orculella bulgarica bulgarica* (Hesse, 1915).

32. *Orcula zilchi* Urbański, 1960

33. *Sphyradium doliolum* (Bruguière, 1792) ●

34. *Pagodulina subdola brabeneci* Hudec et Vašatko, 1971 **BGE**

Family Chondrinidae

35. *Granaria frumentum* (Draparnaud, 1801)

36. *Chondrina avenacea* (Bruguière, 1792)

37. *Chondrina arcadica bulgarica* (Nordsieck, 1970) ●

In DEDOV (1998) the species is listed as *Chondrina clienta* (Westerlund, 1883), though according to NORDSIECK (1970) the Bulgarian records actually pertain to *Chondrina arcadica bulgarica*.

Chondrina spelta (Beck, 1837) #

Family Valloniidae

Subfamily Valloniinae

38. *Vallonia costata* (O. F. Müller, 1774)

39. *Vallonia pulchella* (O. F. Müller, 1774)

40. *Vallonia enniensis* (Gredler, 1856)

41. *Vallonia excentrica* Sterki, 1892

Family Strobilopsidae

I. Subfamily Acanthinulinae

42. *Acanthinula aculeata* (O. F. Müller, 1774)

II. Subfamily Speleodiscinae

43. *Aspasita triaria triaria* (Rossmässler, 1839) ● **RARE**

Superfamily Cochlicopoidea

Family Cochlicopidae

44. *Cochlicopa lubrica* (O. F. Müller, 1774)

45. *Cochlicopa lubricella* (Porro, 1838)

46. *Cochlicopa nitens* (Gallenstein, 1852) **RARE**

Superfamily Buliminoidea

Family Enidae

I. Subfamily Eninae

47. *Merdigera obscura* (O. F. Müller, 1774) ●

48. *Ena montana* (Draparnaud, 1801)

49. *Zebrina detrita* (O. F. Müller, 1774)

Zebrina detrita inflata (Kobelt, 1877) #

DAMJANOV & LIKHAREV (1975) and DEDOV (1998) list *Zebrina detrita inflata* as a component of the Bulgarian fauna. The material examined by us is very variable conchologically, but differences in the genital anatomy do not justify a subspecific status. Several ecotypes of no taxonomic significance occur in Bulgaria.

50. *Zebrina kindermanni kindermanni* (L. Pfeiffer, 1853) **BGE**

51. *Zebrina varnensis* (L. Pfeiffer, 1847) **BLE**

52. *Chondrus zebra tantalus* (L. Pfeiffer, 1868)

53. *Multidentula ovularis* (Olivier, 1801) ●

54. *Multidentula squalina* (Rossmässler, 1848) ●

55. *Pseudochondrula seductilis* (Rossmässler, 1846) ●

Chondrus tournefortianus (Férussac, 1821) #

The shells found on the Bulgarian Black Sea coast in all likelihood were brought by sea currents from other regions (possibly coasts of northern Turkey).

II. Subfamily Chondrulinae

56. *Chondrula* (*Chondrula*) *tridens tridens* (O. F. Müller, 1774)

Chondrula (*Chondrula*) *tridens albolimbata* (L. Pfeiffer, 1859) #

Chondrula (*Chondrula*) *tridens bayeri* (L. Pfeiffer, 1858) #?

Besides the nominate subspecies DEDOV (1998) lists the above two subspecies which, in our opinion, do not occur in Bulgaria.

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

In DEDOV (1998) listed as *Chondrula microtraga microtraga* (Rossmässler, 1839) (see also comments to species 58 and 59 below).

58. *Chondrula* (*Chondrula*) *tricuspidata* (Küster, 1841)

In DEDOV (1998) listed as *Chondrula microtraga tricuspidata* (Küster, 1841). The systematic status was changed as a result of finding several localities where the two forms live syntopically.

59. *Chondrula* (*Chondrula*) *macedonica* A. J. Wagner, 1915

In DEDOV (1998) listed as *Chondrula macedonica macedonica*.

60. *Eubrepheulus bicallosus* (L. Pfeiffer, 1847)

61. *Mastus rosmaessleri* (L. Pfeiffer, 1846)

62. *Mastus carneolus* (Mousson, 1863)

In DEDOV (1998) listed as *Mastus carneola carneola* (Mousson, 1863)

63. *Mastus etuberculatus* (Frauenfeld, 1867) ● !

In DEDOV (1998) listed as *Mastus pupa* (Linnaeus, 1758). Examination of material from various parts of Bulgaria showed that the species concerned was actually *Mastus etuberculatus*.

Mastus ponticus (Retowski, 1887) ≈ #

HUDEC & VAŠATKO (1971) found one empty shell of this species in a tributary of the Ropotamo River and

expressed an opinion that it had been brought by sea currents from the northern coast of Turkey, and the species was not a member of Bulgarian fauna. Our view is the same.

Mastus pupa (Linnaeus, 1758) # S

Superfamily Clausilioidea

Family Clausiliidae

Subfamily-group of the Phaedusinae

I. Subfamily Serrulininae

Tribe Serrulinini

64. *Serrulina* (*Serrulina*) *serrulata* (L. Pfeiffer, 1847)

65. *Dobatia goettingi goettingi* (Brandt, 1961)

In DEDOV (1998) listed as *Dobatia goettingi* (Brandt, 1961). The occurrence of the species in Bulgaria was confirmed by finding it in the Strandza Mts., far from the Black Sea coast (see also ERÖSS & FEHÉR 2001).

Subfamily-group of the Aloiinae

II. Subfamily Aloiinae

A. Tribe Medorini

66. *Carinigera* (*Carinigera*) *schuetti schuetti* Brandt, 1962 **BLE**

In DEDOV (1998) listed as *Carinigera* (*Carinigera*) *schuetti* Brandt, 1962.

67. *Carinigera* (*Carinigera*) *buressi buressi* (A. J. Wagner, 1927) **BLE**

67.1. *Carinigera* (*Carinigera*) *buressi buressi* (A. J. Wagner, 1927) ! **BLE RARE**

The nominate subspecies was found for the first time in the western Rhodopes and reported by IRIKOV & MOLLOV (2006) as new to the Bulgarian fauna.

67.2. *Carinigera* (*Carinigera*) *buressi damjanovi* (Likharev, 1972) ● **BGE RARE**

67.3. *Carinigera* (*Carinigera*) *buressi dramaensis* (Nordsieck, 1977) ! **BLE RARE**

This subspecies was found for the first time in the western Rhodopes and reported by IRIKOV & MOLLOV (2006) as new to the Bulgarian fauna.

B. Tribe Cochlodinini

68. *Cochlodina laminata* (Montagu, 1803)

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

68.2. *Cochlodina laminata partita* (Westerlund, 1892)

marginata species group

Bulgaria is especially rich in members of *Macedonica*, and the western Rhodopes seem to be a major centre of their origin.

69. *Macedonica marginata* (Rossmässler, 1835)

69.1. *Macedonica marginata marginata* (Rossmässler, 1835)

69.2. *Macedonica marginata frivaldskyana* (Rossmässler, 1839) **BGE RARE**

In our opinion clarifying the taxonomic status of *M. m. frivaldskyana* requires a detailed conchological and anatomical examination.

Macedonica marginata major (Rossmässler, 1856) # ?

Macedonica marginata balcanica (A. J. Wagner, 1927) # ?

DAMJANOV & LIKHAREV (1975) and DEDOV (1998) list another two forms: *M. marginata major* (Rossmässler, 1835) and *M. marginata balkanica* (Rossmässler, 1835). According to IRIKOV & MOLLOV (2006) *major* is a synonym of the nominate subspecies. The same probably pertains to *balcanica*. Nevertheless, a detailed anatomical examination of all the material of *M. marginata* is needed in the future, because the recently discovered conchological counterparts of the nominate form differ in the structure of genitalia.

Macedonica macedonica macedonica (Rossmässler, 1839) # This species is known from some regions of Greece and erroneously reported by DEDOV (1998) for Bulgaria, where it does not occur.

70. *Macedonica brabeneci* Nordsieck, 1977 **BGE**

71. *Macedonica hartmuti* Irikov, 2003 !! **BGE RARE**

72. *Macedonica teodorae* Irikov, 2006 !! **BGE RARE**

frauenfeldi species group

73. *Macedonica frauenfeldi* (Rossmässler, 1839)

Macedonica frauenfeldi frauenfeldi (Rossmässler, 1839) # The nominate subspecies is listed in DEDOV (1998), but does not occur in Bulgaria.

73.1. *Macedonica frauenfeldi riedeli* Urbański, 1977 **BGE RARE**

73.2. *Macedonica frauenfeldi regia* Nordsieck, 1974 ■ **BGE RARE**

73.3. *Macedonica frauenfeldi tau* Nordsieck, 1977 **BLE RARE**

73.4. *Macedonica frauenfeldi sigma* (Westerlund, 1884) ■ **BLE RARE**

The subspecies *regia*, *tau*, and *sigma* are not listed in DEDOV (1998), although they occur in and were previously reported from Bulgaria.

74. *Macedonica pinteri* Sajó, 1968 **BGE** ■

This species is not listed in DEDOV (1998) although it was described by SAJÓ (1968) from the region of Vratca in the western Stara Planina Mts.

75. *Macedonica marthae* Sajó, 1968 **BGE**

macedonica species group

76. *Macedonica pirinensis* Jaekel, 1954 ● **BLE**

In DEDOV (1998) listed as *Macedonica macedonica pirinensis* Jaekel, 1954.

77. *Macedonica zilchi* Urbański, 1972 **BGE RARE**

Subfamily group Clausiliinae

III. Subfamily Mentissoideinae

A. Tribe Filosini

78. *Idyla* (*Idyla*) *castalia boschi* Nordsieck, 1973 **BGE**

Idyla (*Idyla*) *castalia pirostoma* (Boettger, 1880) #

B. Tribe Mentissoideini

79. *Euxina* (*Euxina*) *circumdata* (L. Pfeiffer, 1848)

80. *Euxina* (*Euxina*) *persica paulhessei* (Lindholm, 1925) **BGE**



81. *Euxina (Euxina) pontica borisi* (Hesse, 1912) ● **BGE**
82. *Galeata schwerzenbachi* (L. Pfeiffer, 1848)
- IV. Subfamily Clausiliinae
83. *Ruthenica filograna filograna* (Rossmässler, 1836)
In DEDOV (1998) listed as *Ruthenica filograna* (Rossmässler, 1836).
84. *Micridyla pinteri* (Nordsieck, 1973) **BGE**
Clausilia pumila C. Pfeiffer, 1828 #
Till now there is no evidence material for the occurrence of this species in Bulgaria.
- V. Subfamily Baleinae
85. *Mentissella rebeli* (Sturany, 1897) **BGE**
86. *Laciniaria plicata* (Draparnaud, 1801)
86.1. *Laciniaria plicata plicata* (Draparnaud, 1801)
86.2. *Laciniaria plicata kueprijae* Nordsieck, 1973 **BGE RARE**
86.3. *Laciniaria plicata valkanovi* Urbański, 1964 **BGE RARE**
Laciniaria plicata laticosta (Boettger, 1884) #
Laciniaria plicata excepta (Schmidt, 1868) # ?
Laciniaria plicata implicata (Bielz, 1851) # ?
The last three subspecies, listed by DEDOV (1998), are not parts of the Bulgarian fauna.
87. *Laciniaria macilenta* (Rossmässler, 1842) **BGE**
88. *Laciniaria bajula* (Schmidt, 1968) **BGE**
88.1. *Laciniaria bajula bajula* (Schmidt, 1968) **BGE**
88.2. *Laciniaria bajula lunella* Nordsieck, 1973 **BGE**
88.3. *Laciniaria bajula mursalicae* (Urbański, 1969) ■ **BGE RARE**
88.4. *Laciniaria bajula ditrichi* Nordsieck, 1973 ■ **BGE RARE**
Subspecies *bajula* and *lunella* are not listed in DEDOV (1998), although URBAŃSKI (1969) and NORDSIECK (1973) describe them from the regions of the Rhodopes and Rila Mts., respectively.
89. *Alinda (Alinda) biplicata* (Montagu, 1803) ●
89.1. *Alinda (Alinda) biplicata biplicata* (Montagu, 1803) ●
89.2. *Alinda (Alinda) biplicata michaudiana* (L. Pfeiffer, 1948) ● **BLE**
Alinda biplicata eupleuris (Moellendorff, 1899) #
Alinda biplicata euptychia (Ehrmann, 1960) #
Alinda biplicata distinctior (A. J. Wagner, 1915) # **S**
According to NORDSIECK (personal communication) the specimens from Bulgaria recorded as *A. b. distinctior* actually represent *Alinda biplicata michaudiana*.
90. *Alinda (Alinda) atanasovi* (Urbański, 1964) ●
This species was described for the second time by URBAŃSKI (1969) as *Laciniaria biplicata tenuispira* and on another occasion by DEDOV & NEUBERT (2006) as *Laciniaria potochensis*. According to NORDSIECK (2008) both these names are synonyms of *Alinda atanasovi*.
91. *Alinda (Alinda) vratzatica* (Likharev, 1972) ● **BGE**
92. *Alinda (Alinda) wagneri* (A. J. Wagner, 1911) ● **BGE**
92.1. *Alinda (Alinda) wagneri wagneri* (A. J. Wagner, 1911) ● **BGE RARE**
92.2. *Alinda (Alinda) wagneri petrohanica* Urbański, 1969 ● **BGE RARE**
93. *Alinda (Pseudalinda) serbica serbica* (Moellendorf, 1873) ● **BLE**
94. *Balea kaeufeli* (Brandt, 1962) **BGE RARE**
95. *Balea eninskoensis* Irikov, 2006 !! **BGE RARE**
Balea perversa (Linnaeus, 1758) #
This species is not easy to distinguish from other *Balea* species in Bulgaria and in all likelihood all of its records refer to *Balea kaeufeli*.
96. *Vestia (Brabenecia) ranojevici ranojevici* (Pavlovic, 1912) **BGE**
Vestia riloensis (A. J. Wagner, 1915) **S**
97.1. *Vestia (Vestiella) roschitzi trigonostoma* (Pavlovic, 1912) **BLE**
97.2. *Vestia (Vestiella) roschitzi nordsieckiana* (Urbański, 1979) **BLE**
Vestia petrovici (Pavlovic, 1912) # ?
98. *Bulgarica (Strigilecula) vetusta vetusta* (Rossmässler, 1836) **RARE**
DEDOV (1998) listed it as *Bulgarica (Strigilecula) vetusta*.
99. *Bulgarica (Bulgarica) varnensis* (L. Pfeiffer, 1848) **BLE**
99.1. *Bulgarica (Bulgarica) varnensis varnensis* (L. Pfeiffer, 1848) **BLE**
99.2. *Bulgarica (Bulgarica) varnensis gabrovnitsana* Irikov, 2006 !! **BGE RARE**
99.3. *Bulgarica (Bulgarica) varnensis trimontsiana* Irikov, 2006 !! **BGE RARE**
100. *Bulgarica (Bulgarica) fritillaria* (Frivaldsky, 1835) **BGE**
101. *Bulgarica (Bulgarica) fraudigera* (Rossmässler, 1839) **BGE**
102. *Bulgarica (Bulgarica) pseudofraudigera* Nordsieck, 1973 ● **BGE RARE**
103. *Bulgarica (Bulgarica) hiltrudae* Nordsieck, 1974 **BGE**
104. *Bulgarica (Bulgarica) urbanskii* Nordsieck, 1973 **BGE**
104.1. *Bulgarica (Bulgarica) urbanskii urbanskii* Nordsieck, 1973 ● **BGE**
104.2. *Bulgarica (Bulgarica) urbanskii paganella* Nordsieck, 1974 ■ **BGE**
105. *Bulgarica (Bulgarica) bulgariensis* (L. Pfeiffer, 1848) ● **BGE**
105.1. *Bulgarica (Bulgarica) bulgariensis bulgariensis* (L. Pfeiffer, 1848) ● **BGE RARE**
105.2. *Bulgarica (Bulgarica) bulgariensis intricata* (Mousson, 1859) ● **BGE RARE**
105.3. *Bulgarica (Bulgarica) bulgariensis osmanica* (Westerlund, 1884) ● **BGE RARE**
106. *Bulgarica (Bulgarica) denticulata thessalonica* (Rossmässler, 1839) ● **BLE**

Bulgarica (Bulgarica) rugicollis (Rossmässler, 1836) #
This species occurs in Romania but in Bulgaria it is probably confused with *B. pseudofraudigera*.

Superfamily Succineoidea

Family Succineidae

107. *Succinea putris* (Linnaeus, 1758) **RARE**
108. *Succinea oblonga* Draparnaud, 1801
109. *Oxyloma elegans* (Risso, 1826)
110. *Oxyloma sarsii* (Esmark et Hoyrr, 1886) !
111. *Oxyloma dunkeri* (L. Pfeiffer, 1865) !
The last two species are recorded by GEORGIEV (in press) as new to the Bulgarian fauna.

Superfamily Achatinoidea

Family Ferussaciidae

112. *Cecilioides acicula* (O. F. Müller, 1774)
113. *Cecilioides jani* (De Betta et Martinati, 1855)
114. *Cecilioides spelaeus* (A. J. Wagner, 1914) **BLE**

Family Subulinidae

115. *Rumina decollata* (Linnaeus, 1758) **RARE**

Superfamily Testacelloidea

Family Oleacinidae

Poiretia algira (Bruguiere, 1972) #
Till now there is no unambiguous evidence material for the presence of this species in Bulgaria.

Superfamily Punctacea

Family Punctidae

I. Subfamily Punctinae

116. *Punctum pygmaeum* (Draparnaud, 1801)

II. Subfamily Goniodyscinae

117. *Discus ruderatus* (Férussac, 1821) **RARE**
118. *Discus perspectivus* (Megerle von Mühlfeld, 1816) **RARE**

Family Gastrodontidae

119. *Zonitoides nitidus* (O. F. Müller, 1774)

Superfamily Helicarionoidea

Family Euconulidae

120. *Euconulus fulvus* (O. F. Müller, 1774)

Superfamily Vitriinoidea

Family Vitrinidae

121. *Vitriina pellucida* (O. F. Müller, 1774)
122. *Eucobresia diaphana* (Draparnaud, 1805)
123. *Gallandia annularis* (Studer, 1820) ●
124. *Oligolimax reitteri* (Boettger, 1880) ● **BGE RARE**

Family Zonitidae

I. Subfamily Vitreolinae

125. *Vitrea diaphana* (Studer, 1829)
In DEDOV (1998) listed as *Vitrea diaphana diaphana*.
126. *Vitrea transsylvanica* (Clessin, 1877) **RARE**

127. *Vitrea subrimata* (Reinhardt, 1871)

128. *Vitrea neglecta* Damjanov et L. Pintér 1969
Vitrea bulgarica Damjanov et L. Pintér 1969 **S #**
The species is synonymised (*Vitrea bulgarica* is a synonym of *Vitrea neglecta*) as a result of detailed anatomical investigations of the genital system (IRIKOV 2001). Nevertheless some authors (DEDOV 2008) still use the name as valid without refutation of the synonymisation or another justification.

129. *Vitrea contracta* (Westerlund, 1871)

130. *Vitrea riedeli* Damjanov et L. Pintér 1969

131. *Vitrea pygmaea* (Boettger, 1880)

132. *Vitrea vereae* Irikov, Georgiev et Riedel, 2004 **BGE RARE**

Vitrea sturanyi (A. J. Wagner, 1907) #

This species is included in DEDOV (1998) although RIEDEL (1975, 1980, 1998) and PINTÉR (1972) point out that it does not occur in Bulgaria.

133. *Spinophallus uminskii* Riedel, 1960 ● **BGE RARE**

II. Subfamily Zonitinae

134. *Aegopinella pura* (Alder, 1830)

135. *Aegopinella minor* (Stabile, 1864)

136. *Aegopinella nitens* (Michaud, 1831) **I**

137. *Oxychilus (Oxychilus) draparnaldi* (Beck, 1837) **I**

138. *Oxychilus (Ortizius) translucidus* (Mortilet, 1854)

139. *Oxychilus (Mediterranea) hydatinus* (Rossmässler, 1838)

140. *Oxychilus (Longiphallus) deilus rumelicus* (Hesse, 1913)

141. *Oxychilus (Spinophallus) investigatus* Riedel, 1993 ●

142. *Oxychilus (Morlina) glaber striarius* (Westerlund, 1881)

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

144. *Oxychilus (Riedelius) inopinatus* (Uličný, 1887)

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

Oxychilus moussoni (Kobelt, 1878) **S #**

This species is listed in DEDOV (1998) as *Oxychilus moussoni* though the material from Bulgaria examined by RIEDEL & MAASSEN (1993) was classified as representing *O. investigatus*.

Oxychilus camelinus tracicus (Hesse, 1913) #

146. *Balcanodiscus frivaldskyanus* (Rossmässler, 1848) ● **BLE**

147. *Nesovitrea hammonis* (Ström, 1765)

III. Subfamily Daudebardiinae

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

149. *Daudebardia (Daudebardia) rufa cycladum* Martens, 1889

150. *Daudebardia (Libania) wiktoria* Riedel, 1967

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

152. *Carpathica (Illyrica) stussineri* (A. J. Wagner, 1895)

153. *Carpathica ?wirthi* (Forcart, 1971) ! ?

This species was recorded from the Rhodopes only based on shells, by IRIKOV & MOLLOV (2006), but the



authors realise the necessity for anatomical examination in order to clarify its taxonomic status.

Superfamily Arionoidea

Family Arionidae

- 154. *Arion lusitanicus* Mabille, 1868 **I**
- 155. *Arion subfuscus* (Draparnaud, 1805)
- 156. *Arion silvaticus* Lohmander, 1937
- 157. *Arion hortensis* Férussac, 1819 **I**
- 158. *Arion fasciatus* (Nilsson, 1822) **I**

Family Milacidae

- 159. *Milax parvulus* Wiktor, 1968 **BGE**
- 160. *Milax verrucosus* Wiktor, 1969 **BGE**
- 161. *Tandonia kusceri* (H. Wagner, 1931) **BLE**
- 162. *Tandonia serbica* (H. Wagner, 1931) **BLE**
- 163. *Tandonia budapestensis* (Hazay, 1881)
- 164. *Tandonia piriniana* Wiktor, 1983 **BGE RARE**
- 165. *Tandonia cristata* (Kaleniczenko, 1851)
- 166. *Tandonia pinteri* (Wiktor, 1975) **BGE RARE**
- 167. *Tandonia totevi* (Wiktor, 1975) **BGE RARE**
- Tandonia rustica* (Millet, 1843) #

Superfamily Limacoidea

Family Limacidae

- 168. *Limax (Limax) maximus* Linnaeus, 1758
 - 169. *Limax (Limax) subalpinus* Lessona, 1880 **RARE**
- This species, found in two localities in the Western Rhodopes (IRIKOV & MOLLOV 2006), has a very characteristic genital structure.
- 170. *Limax (Limax) cinereoniger* Wolf, 1803
 - 171. *Limax (Limax) punctulatus* Sordelli, 1870
 - 172. *Limax (Limax) macedonicus* Hesse, 1928 **BLE**
 - 173. *Limax (Limax) conemenosi* Boettger, 1882 **BLE**
 - 174. *Limax (Limacus) flavus* Linnaeus, 1758
 - 175. *Limax (Limacus) maculatus* (Kaleniczenko, 1851) ●
- In DEDOV (1998) the species is listed as *Limax (Limacus) ecarinatus* (Kaleniczenko, 1851).
- 176. *Lehmania nycetelia* (Bourguignat, 1861)
 - 177. *Lehmania brunneri* (H. Wagner, 1931) **BLE**
 - 178. *Lehmania horezia* Grosu et Lupu, 1962 **RARE**
- Lehmania sarmizegetusae* Grossu, 1970 **S #**
- This species is a synonym of *Lehmania horezia*.
- 179. *Malacolimax tenellus* (O. F. Müller, 1774) **RARE**

Family Agriolimacidae

- 180. *Deroceras (Deroceras) laeve* (O. F. Müller, 1774)
- 181. *Deroceras (Deroceras) sturanyi* (Simroth, 1894)
- 182. *Deroceras (Deroceras) panormitanum* (Lessona et Pollonera, 1882)
- 183. *Deroceras (Agriolimax) turcicum* (Simroth, 1894)
- 184. *Deroceras (Agriolimax) reticulatum* (O. F. Müller, 1774)
- 185. *Deroceras (Agriolimax) thersites* (Simroth, 1886) **BLE RARE**
- 186. *Deroceras (Agriolimax) agreste* (Linnaeus, 1758)

Deroceras agreste transcaucasicum Hudec et Vašatko, 1971 # ?

The species was listed in DEDOV (1998) with the nominate subspecies *Deroceras agreste agreste* and another subspecies, *Deroceras agreste transcaucasicum*, whose systematic status is unclear.

- 187. *Deroceras (Agriolimax) pageti* Grossu, 1972
- 188. *Deroceras (Plathystimulus) zilchi* Grossu, 1969 **BLE RARE**

This species was found in two localities in the eastern Stara Planina Mts (village Neikovo, 18.05.2002, leg. Ê. ÊIROV) and is easily distinguishable due to its anatomical characters.

- 189. *Deroceras (Plathystimulus) bulgaricum* Grossu, 1969 **BGE RARE**
- 190. *Deroceras (Liolytopelte) bureschi* (H. Wagner, 1934) **BLE**
- 191. *Krynickillus urbanskii* (Wiktor, 1971) **BLE**

Superfamily group Helicoidea

Superfamily Hygromioidea

Family Helicodontidae

I. Subfamily Lindholmiolinae

- 192. *Lindholmiola girva* (Frivaldsky, 1835) **BLE**
- This species is listed in DEDOV (1998) as the nominate subspecies *Lindholmiola girva girva* (see the next species).
- 193. *Lindholmiola pirinensis* Jaekel, 1954 **BLE**
- This species is listed in DEDOV (1998) as *Lindholmiola pirinensis pirinensis*. The two species were earlier regarded as subspecies, but they are sympatric in the western Rhodopes and thus are most likely to be distinct species.

II. Subfamily Helicodontinae

- 194. *Soosia diodonta* (Férussac, 1821) **RARE**
- GEORGIEV & STOYCHEVA (2007) provide a new Bulgarian record of this rare species.

Family Hygromiidae

I. Subfamily Trichiinae

Tribe Trichiini

- 195. *Trichia hispida* (Linnaeus, 1758) **RARE**
- 196. *Trichia erjavecii* (Brusina, 1870)

Tribe Helicellini

- 197. *Xerolenta obvia* (Menke, 1828) ●
- Xerolenta obvia razlogi* (L. Pintér, 1969) ? **S #**
- Xerolenta obvia dobrudschae* (Kobelt, 1877) ? **S #**
- Xerolenta obvia depulsa* (L. Pintér, 1969) ? **S #**
- Xerolenta obvia pappi* (Schütt, 1962) ? **S #**
- DEDOV (1998) listed *X. obvia razlogi* and *X. obvia dobrudschae*, but in our opinion they are only variations of the very polymorphic nominate subspecies. The same pertains to *X. obvia depulsa* and *X. obvia pappi*.
- 198. *Xerolenta macedonica* Hesse, 1928 ● **BLE**
 - 199. *Xerolenta spiruloides* (A. J. Wagner, 1916) ● **BGE**

200. *Helicopsis striata* (O. F. Müller, 1774)
 201. *Helicopsis dejecta* (Jan, 1832) **RARE**
 202. *Helicopsis instabilis* (Rossmässler, 1838) **RARE**
 203. *Candidula rhabdotoides* (A. J. Wagner, 1927) **BLE**
 204. *Xeropicta krynickii* (Krynicky, 1833)
 205. *Xeropicta derbentina* (Krynicky, 1836)

II. Subfamily Hygromiinae

206. *Pseudotrichia rubiginosa* (Schmidt, 1853)
 207. *Perforatella incarnata* (O. F. Müller, 1774)
 208. *Ceruellia virgata variabilis* (Draparnaud, 1801)
 209. *Ceruellia cisalpina* (Rossmässler, 1837) ●

III. Subfamily Euomphaliini

210. *Monacha (Monacha) claustralis* (Menke, 1828) !
 211. *Monacha (Monacha) cartusiana* (O. F. Müller, 1774)
 212. *Monacha (Monacha) carascaloides* (Bourguignat, 1855)
 213. *Monacha (Monacha) solidior* (Mousson, 1873) !
 214. *Monacha (Monacha) ovularis* (Bourguignat, 1855) ● !
 215. *Monacha (Monacha) venusta* (L. Pintér, 1968)
 216. *Monacha (Monacha) ocellata* (L. Pintér, 1968) !
 217. *Monacha (Monacha) oshanovae* I. Pintér et L. Pintér, 1970 ?

According to IRIKOV (2008) the taxonomic separation of this species is very uncertain and here it is only provisionally listed as a member of the Bulgarian fauna.

218. *Euomphalia strigella* (Draparnaud, 1801)
Euomphalia strigella mehadiaae (Bourguignat, 1881) #
 Besides the nominate subspecies, DEDOV (1998) lists also *Euomphalia strigella mehadiaae*; in our opinion the distinction between the two forms is doubtful.

Family Cochlicellidae

219. *Cochlicella acuta* (O. F. Müller, 1774) I

Superfamily Xanthonychoidea

Family Bradybaenidae

220. *Bradybaena fruticum* (O. F. Müller, 1774)

Superfamily Helicoidea

Family Helicidae

I. Subfamily Ariantinae

221. *Arianta arbustorum* (Linnaeus, 1758) **RARE**
 222. *Arianta pelia* (Hesse, 1912) **BGE**
 223. *Cattania trizona* (Rossmässler, 1835) ●
 224. *Cattania balcanica* (Kobelt, 1876) ● **BLE**
 225. *Cattania rumelica* (Rossmässler, 1835) ● **BLE**
 226. *Cattania haberhaueri* (Sturany, 1897) ● **BGE**
 227. *Cattania kattingeri* (Knipper, 1941) ● **BLE RARE**
 228. *Cattania arctica* Dedov et Subai, 2006 ● **BGE ! !**
 229. *Wladislavia polinskii* (A. J. Wagner, 1927) **BGE**
 230. *Wladislavia sztolemani* (A. J. Wagner, 1927) **BGE**

II. Subfamily Helicinae

231. *Helix (Helix) lucorum* Linnaeus, 1758
Helix lucorum onixiomitra Bourguignat, 1860 S #
Helix lucorum castanea Olivier, 1801 S #
 DEDOV (1998) lists these two subspecies, which in our opinion are synonyms of the nominate form.
 232. *Helix (Helix) pomatia* Linnaeus, 1758
Helix pomatia rhodopensis Kobelt, 1906 S #
Helix pomatia serbica Kobelt, 1906 S #
 The two subspecies, recorded by DEDOV (1998), are in our opinion synonyms of the nominate form.
 233. *Helix (Helix) albescens* Rossmässler, 1839 ●
Helix vulgaris Rossmässler, 1839 S #
 See comment on the next species.
 234. *Helix (Helix) philibinensis* Rossmässler, 1839 ■
Helix vulgaris Rossmässler, 1839 S #
 The last two species – *albescens* and *philibinensis* – till now in Bulgaria were considered collectively under the name *Helix vulgaris*.
 235. *Helix (Pelasga) pomacella* Mousson, 1854
 236. *Helix (Pelasga) figulina* Rossmässler, 1839
 237. *Helix (Cornu) aspersa* (O. F. Müller, 1774) **RARE**
 238. *Eobania vermiculata* (O. F. Müller, 1774)
 239. *Cepaea vindobonensis* (Férussac, 1821)

REFERENCES

- CLAUS E. 1977. Beitrag zur Molluskenfauna der Rhodopen Bulgariens. Malak. Abh. 5: 307–312.
- DAMJANOV S., LIKHAREV I. 1975. Fauna Bulgarica, Gastropoda terrestria. IV. Bulgarian Academy of Sciences, Sofia.
- DEDOV I. 1998. Annotated check-list of the Bulgarian terrestrial snails (Mollusca, Gastropoda). Linzer biol. Beitr. 30: 745–765.
- DEDOV I. 2007. On the status of the Bulgarian *Pyramidula* (Gastropoda: Pulmonata: Pyramidulidae). Acta Zool. Bulgar. 59: 221–224.
- DEDOV I. 2008. Terrestrial gastropods (Mollusca, Gastropoda) of the Bulgarian part of the Alibotush Mts. Malac. Bohemoslov. 7: 17–20.
- DEDOV I., NEUBERT E. 2006. Description of a new species of Clausiliidae from the Eastern Rhodopes Mountains, Bulgaria (Mollusca: Gastropoda: Clausiliidae). Arch. Moll. 135: 73–79.
- ERÖSS Z., FEHÉR Z. 2001. *Dobatia goettingi* Brandt, 1961 (Gastropoda: Clausiliidae) in Bulgaria. Opusc. Zool. 33: 139–142.
- GEORGIEV D. in press. Two new species from the family Succineidae (Beck, 1837) (Gastropoda: Pulmonata) for the Bulgarian fauna. Trav. Sci. Univ. Plovdiv. Animalia 42.
- GEORGIEV D., STOICHEVA S. 2007. A new record of *Soosia diodonta* (Férussac, 1821) (Gastropoda: Pulmonata:



- Helicodontidae) in Bulgaria. *Malac. Bohemoslov.* 6: 35–37.
- GITTENBERGER E., BANK R. 1996. A new start in *Pyramidula* (Gastropoda: Pulmonata: Pyramidulidae). *Basteria* 60: 71–78.
- HUDEEC V., VAŠATKO J. 1971. Beitrag zur Molluskenfauna Bulgariens. *Acta Sc. Nat. Brno* 5: 1–38.
- HUDEEC V., VAŠATKO J. 1973. Zur Kenntnis Molluskenfauna Bulgariens. *Acta Sc. Nat. Brno* 7: 1–33.
- IRIKOV A. 2001. To the knowledge of the anatomy and taxonomy of two species from genus *Vitrea* Fitzinger, 1833 (Gastropoda, Zonitidae). *Trav. Sci. Univ. Plovdiv. Animalia* 37: 35–38.
- IRIKOV A. 2003. A new species of *Macedonica* O. Boettger, 1877 from Bulgaria (Gastropoda: Pulmonata: Clausiliidae). *Arch. Moll.* 132: 143–145.
- IRIKOV A. 2006. New taxa of Clausiliidae from Bulgaria (Gastropoda: Pulmonata: Clausiliidae). *Arch. Moll.* 135: 81–89.
- IRIKOV A. in press [2008]. *Truncatellina rothi* (Reinhardt, 1916) (Gastropoda: Vertiginidae: Truncatellinae) – a new species for the Bulgarian malacofauna. *Acta Zool. Bulgar.*
- IRIKOV A., GEORGIEV D. in press [2008]. A review of the *Agardhiella* species in Bulgaria (Gastropoda: Pulmonata: Argnidae). *Acta Zool. Bulgar.*
- IRIKOV A., GEORGIEV D., RIEDEL A. 2004. A new species of the genus *Vitrea* Fitzinger, 1833 from Bulgaria (Gastropoda: Pulmonata: Zonitidae). *Folia Malacol.* 12: 79–81.
- IRIKOV A., MOLLOV I. 2006. Terrestrial gastropods (Mollusca: Gastropoda) of the Western Rhodopes (Bulgaria). In: *Biodiversity of Bulgaria* (BERON P., ed). vol. 3. *Biodiversity of Western Rhodopes (Bulgaria and Greece)* I. Pensoft et Nat. Mus. Natur. Hist., Sofia, pp. 753–832.
- JACKIEWICZ M. 1979. Materials to Aciculidae fauna of Balkan peninsula (Mollusca, Prosobranchia). *Bull. Soc. Amis Sci. Lettr. Poznań, D 18* [1978]: 135–138.
- KÖRNIG G. 1983. Beitrag zur Ökologie und Zoogeographie bulgarischer Landgastropoden. *Malak. Abh.* 9: 31–52.
- NORDSIECK H. 1970. Die *Chondrina*-Arten der dinarischen Länder. *Arch. Moll.* 100: 243–261.
- NORDSIECK H. 1973. Neue Balkanformen der Menissoideinae und Baleinae. Zur Anatomie und Systematik der Clausilien. XIII. *Arch. Moll.* 103: 179–208.
- NORDSIECK H. 1974. Neue Clausilien der Balkanhalbinsel. Zur Anatomie und Systematik der Clausilien. XV. *Arch. Moll.* 104: 123–170.
- NORDSIECK H. 1977. Zur Anatomie und Systematik der Clausilien. XVIII. Neue Taxa rezenter Clausilien. *Arch. Moll.* 108: 73–107.
- NORDSIECK H. 2008. *Alinda biplicata* and *Laciniaria plicata*, diversity in comparison. <http://www.clausilia.de>
- PINTÉR L. 1972. Die Gattung *Vitrea* Fitzinger, 1833 in den Balkanländer (Gastropoda: Zonitidae). *Ann. Zool.* 29: 209–315.
- RIEDEL A. 1975. Die Zonitiden-Fauna Bulgariens (Gastropoda), ihre Herkunft und Verbreitung. *Fragm. Faun.* 20: 157–177.
- RIEDEL A. 1980. Eine weitere Zonitiden-Art (*Gastropoda*) mit vaginalen Anhangsorgan. *Ann. Zool.* 35: 486–495.
- RIEDEL A. 1998. Genera Zonitidarum – Addenda et corrigenda. (Gastropoda, Stylommatophora). Museum and Institute of Zoology, Polish Academy of Sciences, Warsaw.
- RIEDEL A., MAASSEN M. J. W. 1993. Berichtigung zur Frage von *Hyalina moussoni* Kobelt, 1878 (Gastropoda, Pulmonata, Zonitidae). *Basteria* 57: 139–146.
- SAJÓ I. 1968. Zur Clausiliidenfauna Bulgariens (Gastropoda). *Acta Zool. Acad. Sci. Hungar.* 14: 447–454.
- URBAŃSKI J. 1960. Neue Landschnecken aus Bulgarien (Orculidae u. Pupiliidae, Moll. Pulm.). (Systematische, zoogeographische und ökologische Studien über die Mollusken der Balkan-Halbinsel. IV). *Bull. Soc. Amis Sci. Lettr. Poznań, D 1*: 57–67.
- URBAŃSKI J. 1969. Bemerkenswerte Balkanische Stylommatophoren (Systematische, Zoogeographische und Ökologische Studien über die Mollusken der Balkan-Halbinsel. IX). *Bull. Soc. Amis Sci. Lettr. Poznań, D 9*: 225–262.

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