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Ground beetles (Coleoptera: Carabidae) from the Sarnena Sredna Gora Mts

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Abstract. The present study compiles a list of Carabidae species from the Sarnena Sredna Gora Mts. The species list is completed on the basis of the material collected during field trips in 2018 – 2020, and the available bibliographic data. A total of 175 species are found, including 14 endemic species and subspecies, three relicts, and some rare and stenotopic species. They belong to 59 genera and 21 tribes. This represents, respectively, 23% of all established for Bulgarian carabid fauna species, 47% of the genera and 57% of the tribes. The richest tribes are Harpalini (50 species), Pterostichini (25 species), Amarini (18 species), Lebiini (15 species), and Carabini (12 species). Remarkably, 139 of the collected species are new for this part of the mountain. The insufficient research in the area and the large carabid species richness suggest that future targeted studies would contribute to the enrichment of the species list presented here. Zoogeographical analysis shows that the European and the Mediterranean complexes prevail.

Key words: carabids, Sarnena Gora, check list.

Introduction

Sarnena Sredna Gora Mts (Sarnena Gora) is the easternmost part of the Sredna Gora Mts. It falls on the border of two biogeographical regions and three subregions (Gruev 1988). The higher ridges of the Sarnena Gora refer to the low-mountain belt of the Stara Planina Subregion of the Mountain Biogeographical Region. The low and peripheral parts of the Sarnena Gora refer to the subregions of the Upper Thracian and Tundzha Hilly Lowlands from the Middle Bulgarian Biogeographical Region. The rivers of Blatnitsa and Sazliyka are the border between these two subregions. The southern pre-mountain hills of the Sarnena Gora, the Chirpan Heights and the Korten ridge are included in the first subregion, and the easternmost lower parts of the mountain, on the east of the Zlati Voyvoda vill., and to the turn of the Tundzha River at Zaychi Vrah Peak, and all northern slopes bordering Slivensko Pole, Tvardishko Pole and Kazanlashko Pole Podbalkan fields, fall under the Tundzha Subregion.

Geographical location, relief, edaphic conditions and specific climatic factors in the Sarnena Sredna Gora Mts suggest an exceptional variety of habitats (oak forests, beech forests, coniferous plantations, broadleaf plantations, bushes, riparian woods and bushes, dry, mesophilous and hygrophilous grasslands, pastures, inland standing and running surface waters, as well as some artificial landscapes – villages, chalets, agrocoenoses, etc. All this suggests the occurrence of diverse ground beetle (Coleoptera: Carabidae) forms and complexes. The relative proximity of the region to the Black Sea, Asia Minor and the Mediterranean, combined with the migration corridors and peculiar refugia of the river systems of the Maritsa and Tundzha Rivers, are a prerequisite for a strongly increased

presence of southern Pontic, Anatolian and Mediterranean species. The proximity of the Central Balkan Mts and Sashtinska Sredna Gora Mts probably influenced the formation of a specific mountainous faunistic complex, including elements of the middle-mountain mesophilous carabid fauna with an increased presence of northern psychrophilic and freeze-tolerant forms, as well as many endemics.

Ground beetles are relatively well studied in Bulgaria, and from the beginning of the 20th century until now, many authors have published data concerning the carabid fauna of the region of the whole Sredna Gora Mts. So far, 160 species (26% of all Bulgarian Carabidae species) are to be found there (Teofilova & Guéorguiev *in prep.*). Unfortunately, the data about the ground beetles of its eastern part – Sarnena Sredna Gora Mts, are scarce and include records of only 36 species (Yoakimov 1904, Nedelkov 1909, Buresh & Kantardzhieva 1928, Hieke & Wrase 1988, Guéorguiev *et al.* 1997).

The aim of the present study is to compile a list of Carabidae species from the Sarnena Sredna Gora Mts, a region that has never been subjected to detailed faunal investigations.

Material and Methods

The species list is completed on the basis of the material collected during field trips and the available bibliographic data. Field work was carried out in 2017 – 2020. Ground beetles were collected with pitfall traps, hand picking and light attraction. The pitfall traps were of two types: small (made of 500 ml beakers) and big (cut plastic bottles with 2 l volume and diameter of the enter hole about 12 cm), buried at the level of the substrate.

The sampling sites, collectors, number of the traps and fixation fluids are given in Table 1 and sampling sites localities are presented on Figure 1. Additional single collections are given in the species list.

The systematic list follows Kryzhanovskij *et al.* (1995).

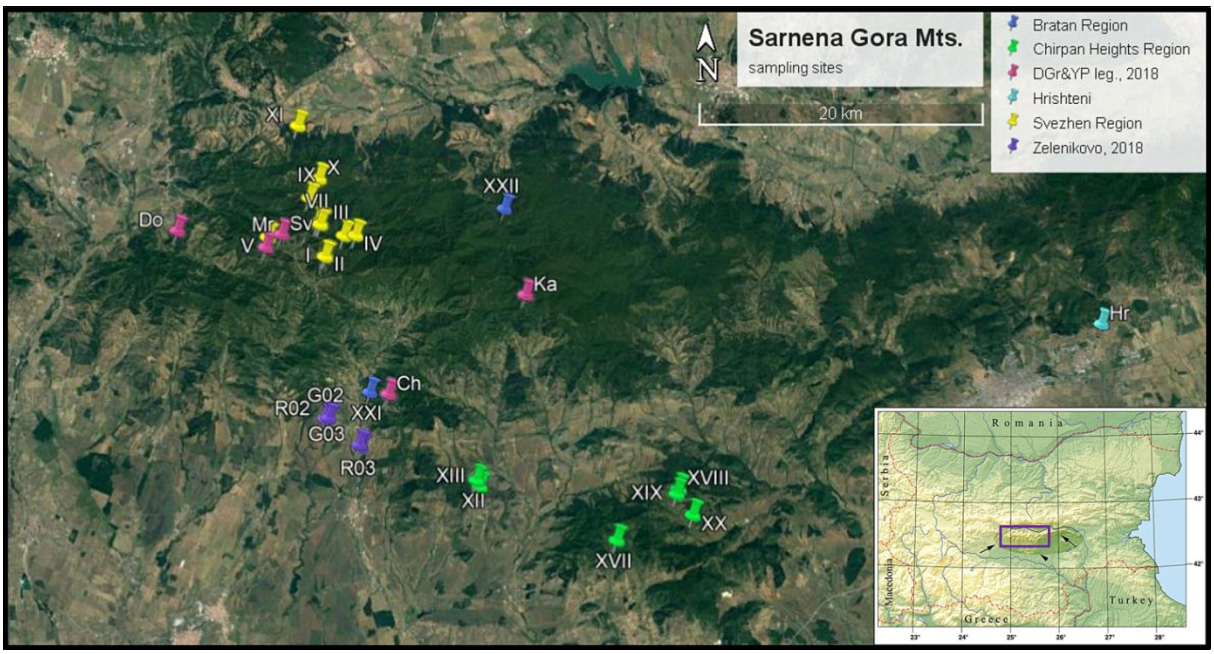

Fig. 1. Map of the locations of the main sampling sites in Sarnena Gora (handpicking localities are not included).

Table 1. List of the sampling sites, with their code, average altitude, coordinates (GPS), description, collectors, methods and dates of visiting.

Code	Locality and altitude a.s.l.	GPS	Habitat	Sampling dates and methods [number of traps, fixative]
2019–2020, leg. Teodora Teofilova (TT) & Nikolay Kodzabashev (NK)				
Svezhen Region				
I	E Svezhen vill. 865 m	42°29'48''N 25°02'54''E	Actively grazed **pasture** at the southern foot of the Chatal Darvo Peak, with single bushes and trees	22.III–7.VII *[1]*, 7.VII–11.XI.2019 *[2]*, 11.XI.2019–9.V.2020 *[3]* [5 traps, formaldehyde]
II	E Svezhen vill. 863 m	42°29'50''N 25°02'57''E	Old **coniferous** Scots pine and Norway spruce **plantation** at the southern foot of the Chatal Darvo Peak, with single trees of beech, birch and black locust	22.III–7.VII *[1]*, 7.VII–11.XI.2019 *[2]*, 11.XI.2019–9.V.2020 *[3]* [6 traps, formaldehyde]
III	E Hut Svezhen 1100 m	42°30'35''N 25°03'51''E	Mesophilous **ridge beech forest** with many old trees	22.III–7.VII *[1]*, 7.VII–11.XI.2019 *[2]*, 11.XI.2019–9.V.2020 *[3]* [6 traps, formaldehyde]
IV	E Hut Svezhen 975 m	42°30'36''N 25°04'26''E	**Old beech forest**, near large non-drying up puddle on the mountain road	22.III–7.VII *[1]*, 7.VII–11.XI.2019 *[2]*, 11.XI.2019–9.V.2020 *[3]* [6 traps, formaldehyde]
V	W Svezhen vill. 860 m	42°30'31''N 24°59'59''E	Mesoxerothermic **oak forest** on the road to Hadzhi Dimitar's Grave Place	22.III–7.VII *[1]*, 7.VII–11.XI.2019 *[2]*, 11.XI.2019–9.V.2020 *[3]* [6 traps, formaldehyde]
VI	1 km NW Hut Svezhen, 1022 m	42°31'03''N 25°02'40''E	**Ridge beech forest** with many old trees	22.III–7.VII *[1]*, 7.VII–11.XI.2019 *[2]*, 11.XI.2019–9.V.2020 *[3]* [6 traps, formaldehyde]
VII	1 km NW Hut Svezhen 1015 m	42°30'60''N 25°02'38''E	Ridge **coniferous plantation** of Scots pine, spruce and Douglas-fir, with single trees of beech, overgrown with eagle fern	22.III–7.VII *[1]*, 7.VII–11.XI.2019 *[2]*, 11.XI.2019–9.V.2020 *[3]* [6 traps, formaldehyde]
VIII	NW Hut Svezhen 1008 m	42°31'03''N 25°02'31''E	Actively grazed **ridge pasture**, surrounded by forests	22.III–7.VII *[1]*, 7.VII–11.XI.2019 *[2]*, 11.XI.2019–9.V.2020 *[3]* [6 traps, formaldehyde]
IX	5 km NW Hut Svezhen 898 m	42°31'59''N 25°02'05''E	**Mixed forest** of oak, beech and hornbeam, at the upper limit of the oak and the lower limit of the beech	22.III–7.VII *[1]*, 7.VII–11.XI.2019 *[2]*, 11.XI.2019–9.V.2020 *[3]* [6 traps, formaldehyde]
X	S Osetenovo vill. 670 m	42°32'43''N 25°02'32''E	**River bank** of Turiyska Reka River near dank glade with oaks, cornels and white willows	22.III–7.VII *[1]*, 7.VII–11.XI.2019 *[2]*, 11.XI.2019–9.V.2020 *[3]* [6 traps, formaldehyde]
XI	S Osetenovo vill. 633 m	42°34'12''N 25°01'36''E	**Oak forest** with numbers of large tufts of butcher's-broom (*Ruscus aculeatus*)	22.III–7.VII *[1]*, 7.VII–11.XI.2019 *[2]*, 11.XI.2019–9.V.2020 *[3]* [6 traps, formaldehyde]
Chirpan Heights Region				
XII	NW Veren vill. 366 m	42°21'33''N 25°10'37''E	**Black locust plantation** on sandy soil	23.III–8.VII *[1]*, 8.VII–10.XI.2019 *[2]*, 10.XI.2019–12.IV.2020 *[3]* [6 traps, formaldehyde]
XIII	NW Veren vill. 353 m	42°21'19''N 25°10'47''E	**Pasture with Jerusalem thorn** (*Paliurus spina-christi*) and many tufts of prickly pear (*Opuntia* sp.), near cedar (*Cedrus* sp.) plantation	23.III–8.VII *[1]*, 8.VII–10.XI.2019 *[2]*, 10.XI.2019–12.IV.2020 *[3]* [7 traps, formaldehyde]
XIV	S Saedinenie vill. 386 m	42°21'01''N 25°17'47''E	**Mixed riverine forest** of poplars, elms, black pine and black locust, with *Ruscus*, *Viburnum* sp., wild vine and ivy	23.III–8.VII *[1]*, 8.VII–10.XI.2019 *[2]*, 10.XI.2019–12.IV.2020 *[3]* [6 traps, formaldehyde]
XV	S Saedinenie vill. 487 m	42°20'39''N 25°17'44''E	**Linden forest** with tufts of butcher's-broom	23.III–8.VII *[1]*, 8.VII–10.XI.2019 *[2]*, 10.XI.2019–12.IV.2020 *[3]* [6 traps, formaldehyde]
XVI	S Saedinenie vill. 449 m	42°20'44''N 25°17'41''E	**Mixed forest** of oak, linden, and maple, with *Ruscus*, *Viburnum* sp. and ivy	23.III–8.VII *[1]*, 8.VII–10.XI.2019 *[2]*, 10.XI.2019–12.IV.2020 *[3]* [6 traps, formaldehyde]
XVII	N Sredno Gradishte vill. 418 m	42°19'21''N 25°17'39''E	**Dry forest** on shallow stony soil with oaks, Oriental hornbeam, Jerusalem thorn, cornel, hawthorn and *Ruscus*	23.III–8.VII *[1]*, 8.VII–10.XI.2019 *[2]*, 10.XI.2019–12.IV.2020 *[3]* [6 traps, formaldehyde]
XVIII	NW Stoyan Zaimovo vill. 435 m	42°21'13''N 25°20'46''E	**Abandoned pasture** with single bushes and trees – pear, apple, cherry plum, oaks, blackthorn and blackberry	23.III–8.VII *[1]*, 8.VII–10.XI.2019 *[2]*, 10.XI.2019–12.IV.2020 *[3]* [6 traps, formaldehyde]
XIX	NW Stoyan Zaimovo vill. 406 m	42°21'02''N 25°20'40''E	On the edge of **alfalfa field**, bordering with belt of bushes and trees	23.III–8.VII *[1]*, 8.VII–10.XI.2019 *[2]*, 10.XI.2019–12.IV.2020 *[3]* [6 traps, formaldehyde]
XX	S Stoyan Zaimovo vill. 363 m	42°20'16''N 25°21'28''E	**Ecotone** between wheat field and small river, overgrown with walnuts and blackberry	23.III–8.VII *[1]*, 8.VII–10.XI.2019 *[2]*, 10.XI.2019–12.IV.2020 *[3]* [6 traps, formaldehyde]
Bratan Region				
XXI	E Zelenikovo vill.	42°24'46''N 25°05'13''E	**Scots pine plantation** with lush undergrowth of hawthorn, rosehip,	24.III–9.VII *[1]*, 9.VII–9.XI.2019 *[2]*, 9.XI.2019–12.IV.2020 *[3]* [6 traps,

	344 m		blackberry and butcher's-broom, near walnut and linden plantations	formaldehyde]
XXII	S Turiya vill. 583 m	42°31'35''N 25°11'59''E	**Riverine forest** at the lower limits of the beech, with alder, hazel and hornbeam	24.III–9.VII *[1]*, 9.VII–9.XI.2019 *[2]*, 9.XI.2019–12.IV.2020 *[3]* [6 traps, formaldehyde]
2018, leg. Denis Gradinarov (DGr) & Yana Petrova (YP)				
Do	2,5 km SE Domlyan vill. 445 m	42°30'47"N 24°55'17"E	**Meadows** and shrubs near to an oak forest	23.IV–23.V *[1]*, 23.V–23.VI *[2]*, 23.VI–21.VII.2018 *[3]* [3 small traps, propylene glycol]
Mr	3 km NE Mrachenik vill. 810 m	42°30'08"N 24°59'53"E	**Edge** of an oak forest	23.IV–24.V *[1]*, 24.V–23.VI *[2]*, 23.VI–21.VII *[3]*, 21.VII–24.VIII *[4]*, 24.VIII–23.IX *[5]*, 23.IX–20.X.2018 *[6]* [6 small traps, propylene glycol]
Sv	NW Svezhen vill. 750 m	42°30'37"N 25°00'41"E	**Edge** of a beech forest with oak	23.IV–25.V *[1]*, 25.V–23.VI *[2]*, 23.VI–21.VII.2018 *[3]* [7 small traps, propylene glycol; light]
Ch	5 km SW Chehlare vill. 430 m	42°24'42"N 25°06'10"E	**Oak-hornbeam forest**	22.IV–24.V *[1]*, 24.V–23.VI *[2]*, 23.VI–21.VII *[3]*, 21.VII–25.VIII *[4]*, 25.VIII–23.IX *[5]*, 23.IX–21.X.2018 *[6]* [3 small, propylene glycol]
Ka	NW Gorno Novo Selo vill. 800 m	42°28'22"N 25°13'04"E	**Oak forest** between Kavakliyka Hut and Kaleto Place	22.VII–26.VIII *[1]*, 26.VIII–24.IX *[2]*, 24.IX–21.X.2018 *[3]* [8 small traps, propylene glycol]
2018, leg. Teodora Teofilova (TT)				
R02	W Zelenikovo vill. 280 m	42°23'47''N 25°02'57''E	Oilseed rape **field**	19.IV–15.V *[1]*, 15.V–11.VI *[2]*, 26.VII–25.VIII.2018 *[3]* [5 small traps, salt-vinegar solution]
G02	W Zelenikovo vill. 290 m	42°23'49''N 25°03'09''E	Actively grazed **pasture** in agrolandscape	19.IV–15.V *[1]*, 15.V–11.VI *[2]*, 26.VII–25.VIII.2018 *[3]* [5 small traps, salt-vinegar solution]
R03	S Zelenikovo vill. 288 m	42°22'45''N 25°04'48''E	Oilseed rape **field**	19.IV–15.V *[1]*, 15.V–11.VI *[2]*, 26.VII–25.VIII.2018 *[3]* [5 small traps, salt-vinegar solution]
G03	S Zelenikovo vill. 290 m	42°22'50''N 25°04'43''E	Actively grazed **pasture** in agrolandscape	19.IV–15.V *[1]*, 15.V–11.VI *[2]*, 26.VII–25.VIII.2018 *[3]* [5 small traps, salt-vinegar solution]
2018, leg. Dilian Georgiev (DG)				
Hr	Hrishteni vill. 230 m	42°27'13''N 25°42'19''E	House **yard**	Hand picking, small traps with soapy water, and light attraction

Captured animals are deposited in the first author's collection in the Institute of Biodiversity and Ecosystem Research (Bulgarian Academy of Sciences, Sofia).

According to their zoogeographical belonging, the ground beetle species are classified in zoogeographical categories and complexes according to Kryzhanovskij (1965, 1983, 2002), Vigna Taglianti *et al.* (1999) and Kodzhabashev & Penev (2006), with modifications, done by the authors of the present study. The used Zoogeographical complexes are: Northern Holarctic and European-Siberian complex, including species distributed mainly in the northern regions of the Holarctic, mostly in Europe and Siberia; European complex, including mostly forest dwelling species connected to the middle and southern parts of Europe; European-Asiatic complex, including species which ranges lie between the Eurosiberian and Mediterranean zones; Mediterranean (*sensu lato*) complex, including species distributed in the region of the so-called 'Ancient Mediterraneum' (Popov 1927; Kryzhanovskij 1965, 1983, 2002); Endemic complex, including species with limited ranges.

Results and Discussion

The results from the study revealed that in Sarnena Sredna Gora Mts 175 species of ground beetles occur. They belong to 59 genera and 21 tribes. This represents, respectively, 23% of all established for Bulgarian carabid fauna species, 47% of the genera and 57% of the tribes (Teofilova & Guéorguiev *in prep.*).

Species list:

1. ***Cylindera (Cylindera) germanica germanica*** (Linnaeus, 1758)
   New material: SW Srednogorovo vill., 42°30'22''N, 25°15'32''E, 913 m, 1ex., 31.V.2019, obs. NK.
2. ***Cicindela (Cicindela) sylvicola*** Dejean, 1822
   "Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904). New material: SW Srednogorovo vill., 42°30'22''N, 25°15'32''E, 913 m, 1♀, 31.V.2019, TT.
3. ***Cicindela (Cicindela) campestris campestris*** Linnaeus, 1758
   New material: ***IV***: 1ex., 09.V.2019, TT; NE Rozovets vill., 42°29'19"N, 25°08'57"E, 825 m, beech forest, 1♀, 20.VI.2020, TT; SW Srednogorovo vill., 42°30'22''N, 25°15'32''E, 913 m, 1♂, 31.V.2019, TT&NK.
4. ***Leistus (Pogonophorus) rufomarginatus*** (Duftschmid, 1812)
   New material: ***II***: 4♀6♂ *[3]*; ***V***: 1♂ *[3]*; ***VIII***: 1♂ *[3]*; ***X***: 2♀3♂ *[3]*; ***XI***: 1♀ *[1]*, 1♂ *[3]*; S Shanovo vill., near river, 42°31'58.4''N, 25°38'36.0''E, 432 m, 1♂, 26.V.2018, DG.
5. ***Nebria (Nebria) brevicollis brevicollis*** (Fabricius, 1792)
   New material: ***X***: 2♀3♂ *[1]*, 1♂ *[2]*; ***Ch***: 1♀3♂ *[1]*, 1♀ *[2]*, 2♀1♂ *[6]*; ***R03***: 1♀ *[1]*, 3♀3♂ *[2]*; ***G02***: 2♀ *[1]*.
6. ***Notiophilus aestuans*** Dejean, 1826
   New material: ***R03***: 1♀ *[1]*.
7. ***Notiophilus biguttatus*** (Fabricius, 1779)
   New material: ***VII***: 1♀1♂ *[1]*, 2♂ *[2]*, 3♀2♂ *[3]*; ***XI***: 1♂ *[2]*.
8. ***Notiophilus rufipes*** Curtis, 1829
   New material: ***II***: 1♀ *[3]*; ***III***: 1♂ *[2]*; ***V***: 1♀2♂ *[1]*, 1♀1♂ *[3]*; ***VII***: 1♀ *[1]*; ***VIII***: 1♂ *[2]*; ***IX***: 2♂ *[1]*, 1♀ *[2]*, 1♀2♂ *[3]*; ***X***: 5♀6♂ *[1]*, 1♀1♂ *[2]*, 2♀6♂ *[3]*; ***XI***: 4♀8♂ *[1]*, 5♀5♂ *[3]*; ***XX***: 1♀1♂ *[3]*; ***XXI***: 1♀ *[3]*; ***Do***: 2♂ *[1]*, 1♀ *[2]*; ***Mr***: 1♀ *[1]*; ***Sv***: 2♀5♂ *[1]*; ***Ch***: 2♂ *[1]*.
9. ***Calosoma (Calosoma) inquisitor inquisitor*** (Linnaeus, 1758)
   New material: ***II***: 1ex. *[1]*; ***IV***: 1♀2♂ *[1]*; ***V***: 9♀8♂ *[1]*; ***VII***: 1♀1♂ *[1]*; ***IX***: 1♀ *[1]*; ***XI***: 4♀8♂ *[1]*, 1♀ *[3]*, many beetles on the trees, feeding on caterpillars, 09.V.2020, obs. TT&NK; ***XII***: 1♀ *[1]*, 1ex., 23.III.2019, obs. TT&NK; ***XVI***: 1♀ *[1]*; ***XVII***: 6♀8♂ *[1]*; ***XVIII***: 1♀ *[1]*; ***XXI***: 1♂ *[1]*; ***XXII***: 3♀32♂ *[1]*; ***Do***: 1♀1♂ *[1]*; ***Mr***: 13♀168♂ *[1]*, 1♀1♂ *[2]*; ***Sv***: 8♀42♂ *[1]*; ***Ch***: 1♂ *[1]*; NE Kavakliyka Hut, 42°29'12''N, 25°13'50''E, 1055 m, 3 ex, 31.V.2019, obs. TT; near the Moruley Peak, oak-hornbeam forest with small glades,42°31'27.7''N, 25°45'31.8''E, 586 m, 1♀, 7.VI.2018, DG.
10. ***Calosoma (Campalita) auropunctatum auropunctatum*** (Herbst, 1784)
    New material: ***R03***: 1♀1♂ *[1]*, 2♀ *[2]*.
11. ***Carabus (Eucarabus) ulrichii rhilensis*** Kraatz, 1876
    New material: N Kolena vill., near the small river of Kolenska, *Carpinus orientalis*, *Alnus glutinosa*, 42°29'25.5''N, 25°43'10.1''E, 285 m, pitfall trap, 1♀, 11.IV.2018, DG.
12. ***Carabus (Tachypus) cancellatus*** Illiger, 1798
    [as *subgraniger*] "Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904); Kayaldzh-dere near Turiya vill. (Buresch & Kantardzhieva 1928).
13. ***Carabus (Carabus) granulatus granulatus*** Linnaeus, 1758
    New material: ***R03***: 1♂ *[2]*, 1♂ *[3]*.
14. ***Carabus (Archicarabus) montivagus montivagus*** Palliardi, 1825
    New material: ***I***: 1♀2♂ *[3]*; ***II***: 1♀ *[1]*, 1♀ *[3]*; ***V***: 3♀1♂ *[1]*, 3ex. *[2]*; ***VII***: 2♀4♂ *[1]*, 1♂ *[2]*, 1♀1♂ *[3]*; ***VIII***: 1ex. *[2]*; ***IX***: 1♀1♂ *[2]*; ***X***: 4♀7♂ *[1]*, 1♂ *[2]*; ***XI***: 9♀2♂ *[1]*, 5♀14♂1ex. *[2]*, 6♀5♂ *[3]*; ***XII***: 4♀2♂2ex. *[1]*, 4♀3♂ *[2]*, 12♀9♂ *[3]*; ***XIII***: 1♀1♂ *[1]*, 1♀2♂ *[3]*; ***XV***: 2♀ *[1]*, 1♀ *[2]*; ***XVII***: 1♀ *[1]*; ***XIX***: 1♀ *[1]*, 3♀1♂ *[3]*; ***XXI***: 50♀56♂ *[1]*, 15♀24♂3ex. *[2]*, 16♀29♂ *[3]*; ***XXII***: 26♀13♂ *[1]*, 5♀3♂ *[2]*, 1♂ *[3]*; ***Mr***: 1♀ *[1]*, 2♂ *[3]*, 2♀ *[4]*; ***Sv***: 1♀2♂ *[1]*, 1♂ *[2]*; ***Ch***: 1♀1♂ *[1]*, 1♀ *[2]*, 4♀4♂ *[3]*, 3♀2♂ *[6]*; ***Ka***: 3♀4♂1ex. *[1]*, 2♀3♂ *[2]*, 3♀9♂ *[3]*; ***R03***: 1♀ *[2]*, 1♀ *[3]*; ***G02***: 1♂ *[1]*.

15. ***Carabus (Tomocarabus) convexus dilatatus*** Dejean, 1826

"Sredna Gora/Karadzhadag" near Turiya vill. (Buresch & Kantardzhieva 1928). New material: ***I***: 1♀2♂ *[1]*, 6♂ *[3]*; ***II***: 1♂ *[2]*, 2♀2♂ *[3]*; ***V***: 2♀ *[1]*, 4♀3♂6ex. *[2]*; ***VI***: 1♀3♂ *[2]*; ***VII***: 3♀ *[1]*, 1♂ *[2]*, 2♂ *[3]*; ***VIII***: 2♂ *[1]*, 1♀2♂ *[2]*, 2♀4♂ *[3]*; ***IX***: 1♀ *[1]*, 10♀7♂ *[2]*, 2♀3♂ *[3]*; ***X***: 3♀2♂ *[1]*, 2♀ *[2]*; ***XI***: 6♀4♂ *[1]*, 20♀14♂1ex. *[2]*, 32♀54♂ *[3]*; ***XII***: 1♀1♂ *[1]*, 1♀ *[2]*, 12♀24♂ *[3]*; ***XIII***: 1♀ *[1]*, 1♀1♂ *[3]*; ***XV***: 1♀ *[2]*, 1♀1♂ *[3]*; ***XVI***: 2♀ *[1]*, 1♀1♂ *[2]*, 1♀1♂ *[3]*; ***XVII***: 18♀5♂ *[1]*, 1♀ *[2]*, 1♀7♂ *[3]*; ***XVIII***: 1♂ *[1]*; ***XIX***: 1♀4♂ *[3]*; ***XXI***: 6♀12♂ *[1]*, 2♀2♂ *[2]*, 4♀4♂ *[3]*; ***XXII***: 1♀1♂ *[1]*, 3♂ *[2]*; ***Do***: 1♂ *[1]*, 4♀6♂, *[2]*, 3♀ *[3]*; ***Mr***: 1♂ *[1]*, 10♀3♂ *[2]*, 2♀1♂ *[3]*, 2♀1♂ *[4]*, 1♀ *[5]*; ***Sv***: 1♀3♂ *[1]*, 2♀ *[2]*, 1♀1♂ *[3]*; ***Ch***: 2♀16♂ *[1]*, 17♀16♂ *[2]*, 11♀6♂ *[3]*, 2♀3♂ *[4]*, 1♀ *[5]*, 1♂ *[6]*; ***Ka***: 4♀6♂ *[1]*, 7♀5♂ *[2]*, 3♀2♂ *[3]*; ***R02***: 1♂ *[1]*; N Kolena vill., near the small river of Kolenska, *Carpinus orientalis*, *Alnus glutinosa*, 42°29'25.5''N, 25°43'10.1''E, 285 m, pitfall trap, 1♀1♂, 11.IV.2018, DG.

16. ***Carabus (Pachystus) hortensis hortensis*** Linnaeus, 1758

"Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904, Buresch & Kantardzhieva 1928). New material: ***II***: 1♂ *[2]*; ***III***: 2♀ *[1]*, 1♀1♂ *[2]*; ***IV***: 8♀3♂2ex. *[2]*; ***VI***: 1♀ *[1]*, 11♀7♂4ex. *[2]*; ***VII***: 4♀1♂ *[1]*, 10♀4♂7ex. *[2]*; ***VIII***: 2♀2♂ *[2]*; ***IX***: 1♀2♂ *[2]*; ***XXII***: 56♀12♂ *[1]*, 24♀27♂ *[2]*, 1♀ *[3]*; ***Ka***: 1♂ *[2]*.

17. ***Carabus (Chaetocarabus) intricatus intricatus*** Linnaeus, 1760

"Sarnena Gora" (Buresch & Kantardzhieva 1928). New material: ***III***: 2ex., 11.XI.2019, obs. TT&NK; ***IV***: 2♀ *[1]*, 2♀2♂2ex. *[2]*; ***VI***: 2♂ *[1]*, 6♀4♂ *[2]*; ***VII***: 2♀1♂ *[1]*, 2♀ *[2]*; ***VIII***: 1♀1♂ *[2]*; ***IX***: 2♀3♂ *[2]*; ***XIV***: 1♂ *[1]*, 3ex. *[2]*, 1♀ *[3]*, 1ex., 23.III.2019, obs. TT&NK; ***XV***: 20♀13♂ *[1]*, 13♀8♂ *[2]*, 1♀1♂ *[3]*; ***XVI***: 28♀25♂ *[1]*, 5♀3♂ *[2]*, 1♀ *[3]*; ***XXII***: 4♀4♂1ex. *[1]*; ***Sv***: 2♂ *[1]*; ***Ka***: 3♀4♂ *[2]*, 2♀1♂ *[3]*; NE Kavakliyka Hut, 42°29'12''N, 25°13'50''E, 1055 m, 1ex., 31.V.2019, obs. TT; W Kolena vill., 42°28'58.1''N, 25°42'20.4''E, 359 m, *Pinus nigra* forest, 1♂, 18.III.2018, DG; near Zmeevo vill., 42°30'53.11''N, 25°37'47.88''E, 765 m, mixed deciduous forest, 1♂, 28.V.2018, DG.

18. ***Carabus (Megodontus) violaceus azuresens*** Dejean, 1826

"Sredna Gora/Karadzhadag" (Yoakimov 1904, Nedelkov 1909, Buresch & Kantardzhieva 1928). New material: ***III***: 1♂ *[2]*; ***IV***: 4♀ *[2]*; ***VI***: 12♀4♂ *[2]*; ***VIII***: 1♀ *[1]*; ***XXII***: 1♀2♂ *[1]*, 6♀1♂ *[2]*.

19. ***Carabus (Procrustes) coriaceus cerisyi*** Dejean, 1826

"Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904). New material: ***I***: 2♀ *[1]*, 1♀1♂ *[2]*; ***VII***: 1♂ *[2]*; ***VIII***: 2♀ *[1]*, 3♀ *[2]*; ***XI***: 2♀1♂ *[1]*, 1♂ *[2]*; ***XII***: 1♂ *[1]*, 5♀5♂ *[2]*, 1♀ *[3]*; ***XIII***: 1♀1♂ *[1]*, 1♀1♂ *[2]*, 1♀ *[3]*; ***XIV***: 1♂ *[1]*; ***XV***: 3♀1♂ *[1]*, 1♀ *[2]*; ***XVI***: 1♀ *[1]*, 1♂ *[2]*; ***XVII***: 2♀1♂ *[1]*, 3♀ *[2]*, 1♀ *[3]*; ***XVIII***: 1♀1♂ *[1]*, 4♀8♂ *[2]*; ***XIX***: 1♀ *[1]*, 2♀10♂ *[2]*, 2♀ *[3]*; ***XX***: 1♀ *[1]*; ***XXI***: 7♀1♂ *[1]*, 7♀4♂ *[2]*, 2♀2♂ *[3]*; ***R02***: 1♀2♂ *[2]*, 1♀ *[3]*; ***G02***: 1♂ *[3]*; ***G03***: 1♀1♂ *[2]*; ***Do***: 1♂ *[1]*; ***Mr***: 1♀ *[2]*, 1♀ *[5]*; ***Sv***: 1♀ *[2]*; ***Ch***: 3♀ *[2]*, 2♀1♂ *[6]*; ***Hr***: 1♀, 9.VII.2018.

20. ***Carabus (Procerus) scabrosus scabrosus*** Olivier, 1790

"Sredna Gora above Stara Zagora" (Nedelkov 1909); "Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904, Buresch & Kantardzhieva 1928). New material: ***XII***: 1♀1♂ *[2]*; ***XIV***: 2♂ *[2]*; ***XV***: 2♀1♂ *[2]*; ***XVI***: 1♂ *[1]*, 2♀ *[2]*; ***XX***: 1♀1♂ *[1]*, 2♀1larva *[2]*, 1ex., 08.VII.2019, obs. TT&NK; ***XXI***: 1ex. *[1]*, 1larva *[2]*; Moruley Hut, 42°31'20'' N 25°44'54'' E, 595 m, oak forest, 1♂, 19.VI.2020, NK&TT; Svezhen vill., 42°30'17''N, 25°01'32''E, 750 m, 1♂, 23.VI.2018, DGr&YP.

21. ***Cychrus semigranosus balcanicus*** Hopffgarten, 1881

"Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904, Buresch & Kantardzhieva 1928). New material: ***II***: 1ex. *[1]*; ***III***: 1♂ *[1]*, 3♀3♂ *[2]*; ***IV***: 1♀ *[1]*, 2♀1♂1ex. *[2]*; ***VI***: 2♀1ex. *[2]*; ***VII***: 3♀ *[1]*, 1♂3ex. *[2]*; ***XXI***: 1♂ *[3]*; ***XXII***: 1♀ *[1]*, 3♀2♂ *[2]*; ***Ka***: 1♂ *[2]*, 2♀4♂ *[3]*; near Moruley Peak, 42°31'28''N, 25°45'32''E, 586 m, oak-hornbeam forest with small glades, 1ex., 7.VI.2018, DG.

22. ***Elaphrus (Elaphroterus) aureus aureus*** P. W. J. Müller, 1821

New material: ***XXII***: 2♀ *[1]*.

23. ***Apotomus clypeonitens adanensis*** Jedlička, 1961

New material: ***R03***: 1♂ *[2]*.

24. ***Perileptus (Perileptus) areolatus*** (Creutzer, 1799)
    "Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904).
25. ***Trechus (Trechus) quadristriatus*** (Schrank, 1781)
    New material: ***I***: 1♀1♂ *[1]*; ***III***: 1♀1♂ *[2]*; ***VI***: 1♀1♂ *[2]*; ***VII***: 3♀3♂ *[1]*; ***VIII***: 1♂ *[2]*; ***X***: 1♂ *[1]*; ***XI***: 1♂ *[1]*; ***XIV***: 1♀3♂ *[1]*; ***XVII***: 1♀ *[1]*; ***XVIII***: 1♂ *[2]*; ***XIX***: 4♀3♂ *[2]*, 34♀52♂ *[3]*; ***XX***: 1♀1♂ *[2]*; ***XXI***: 3♀7♂ *[1]*; ***XXII***: 1♂ *[2]*; ***Do***: 1♂ *[1]*; ***Mr***: 2♀ *[1]*, 3♀3♂ *[2]*, 1♀ *[6]*; ***Sv***: 1♂ *[1]*; ***Ch***: 4♀9♂ *[2]*, 1♀2♂ *[5]*, 1♀ *[6]*; ***Ka***: 1♂ *[1]*, 1♀ *[2]*, 1♂ *[3]*; ***R02***: 1♂ *[1]*; ***R03***: 1♀1♂ *[2]*; ***G02***: 1♂ *[1]*; ***G03***: 1♀ *[2]*; ***Hr***, at light: 1♀, 7.IX.2018, 1♀1♂, 13.IV.2018; NW Moruley Hut, 42°31'55"N 25°43'53"E, 785 m, beech forest, 2♀, under stone, 19.VI.2020, TT; NE Kavakliyka Hut, 42°29'12"N, 25°13'50"E, 1055 m, 3♀4♂, 31.V.2019, TT; S Shanovo vill., 42°31'58"N, 25°38'36"E, 432 m, near river, 1♀, 26.V.2018, DG; W Stara Zagora, 42°24'33"N, 25°33'26"E, 390 m, meadows, 1♀, 4.VI.2018, DG.
26. ***Trechus (Trechus) crucifer*** Piochard de la Brûlerie, 1876
    New material: ***II***: 1♀2♂ *[3]*; ***VII***: 1♀ *[3]*.
27. ***Trechus (Trechus) irenis*** Csiki, 1912
    New material: ***XXII***: 1♂ *[1]*.
28. ***Tachys (Paratachys) bistriatus bistriatus*** (Duftschmid, 1812)
    New material: ***R03***: 1♀ *[2]*.
29. ***Tachyura (Sphaerotachys) hoemorroidalis*** (Ponza, 1805)
    New material: ***Hr***, under lamp: 1♀, 13.IV.2018, DG.
30. ***Tachyta (Tachyta) nana*** (Gyllenhall, 1810)
    "Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904).
31. ***Asaphidion flavipes*** (Linnaeus, 1760)
    New material: ***XX***: 1♀ *[1]*.
32. ***Asaphidion flavicorne*** (Solsky, 1874)
    New material: ***X***: 1♀ *[1]*.
33. ***Bembidion (Metallina) lampros*** (Herbst, 1784)
    New material: ***X***: 1♂ *[1]*, 1♀ *[2]*; ***XX***: 2♂ *[2]*, 1♀ *[3]*; SW Srednogorovo vill., 42°30'04"N, 25°16'21"E, 860 m, oak-hornbeam forest, 2♂, 31.V.2019, TT.
34. ***Bembidion (Metallina) properans*** (Stephens, 1828)
    New material: ***XX***: 1ex. *[2]*; ***R02***: 1♂ *[1]*; ***R03***: 1♂ *[2]*.
35. ***Bembidion (Talanes) subfasciatum*** Chaudoir, 1850
    "Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904).
36. ***Bembidion (Peryphus) femoratum*** Sturm, 1825
    "Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904).
37. ***Bembidion (Peryphanes) deletum deletum*** Audinet-Serville, 1821
    "Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904). New material: N Moruley Hut, 42°31'32" N 25°44'53" E, 560 m, oak forest, 1♀, 19.VI.2020, TT.
38. ***Bembidion (Peryphanes) dalmatinum dalmatinum*** Dejean, 1831
    New material: ***XIV***: 1♂ *[3]*; NW Zlati Voivoda vill., 42°37'00"N, 26°10'10"E, 174 m, near Tundzha River, 1♀1♂, 30.V.2019, TT; S Shanovo vill., 42°31'47.7"N, 25°38'39.8"E, 450 m, oak-hornbeam forest, near brook, 1♀1♂, 26.V.2018, DG.
39. ***Bembidion (Peryphanes) castaneipenne*** Jacquelin du Val, 1852
    New material: ***XX***, at the river bank: 2♀3♂, 08.VII.2019, TT.
40. ***Bembidion (Peryphanes)* sp.**
    New material: N Moruley Hut, 42°31'32"N 25°44'53"E, 560 m, oak forest, 1♂, 19.VI.2020, TT.
41. ***Xenion ignitum*** (Kraatz, 1875)
    New material: ***II***: 1♀ *[2]*; ***III***: 1♂ *[1]*, 4♀3♂ *[2]*; ***IV***: 17♀14♂ *[1]*, 25♀15♂1ex. *[2]*; ***V***: 2♀1♂ *[1]*, 1ex. *[2]*; ***VI***: 5♀3♂ *[1]*, 10♀3♂ *[2]*; ***VII***: 5♀8♂1ex. *[1]*, 5♀8♂4ex. *[2]*; ***IX***: 3♀3♂ *[1]*; ***XXII***: 9♀12♂ *[1]*, 2♀3♂ *[2]*; ***Sv***: 1♀ *[2]*; ***Ka***: 3♀3♂ *[1]*, 1♀ *[2]*.

42. ***Myas (Myas) chalybaeus*** (Palliardi, 1825)

"Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904). New material: ***II***: 2♂3ex. *[1]*, 1♀2♂ *[2]*; ***III***: 9♀5♂1ex. *[2]*; ***IV***: 5♀1♂ *[1]*, 5♀8♂2ex. *[2]*, 1♂ *[3]*; ***V***: 2♀1♂ *[1]*, 2♀4♂2ex. *[2]*, 1♀ *[3]*; ***VI***: 11♀3♂ *[1]*, 15♀11♂ *[2]*, 2♂ *[3]*; ***VII***: 15♀8♂ *[1]*, 10♀17♂18ex. *[2]*; ***VIII***: 8♀6♂ *[2]*, 1♀ *[3]*; ***IX***: 1♂ *[1]*, 3♀4♂ *[2]*; ***X***: 3♂ *[2]*; ***XI***: 5♀1♂ *[1]*, 3♀6♂ *[2]*; ***XV***: 1♀1ex. *[1]*, 2♀ *[2]*; ***XVI***: 1♀1♂ *[1]*, 1♀ *[2]*, 1♂ *[3]*; ***XVII***: 1♂ *[2]*; ***XVIII***: 1♀2♂ *[2]*; ***XIX***: 1♂ *[2]*; ***XX***: 2♀5♂ *[2]*; ***XXI***: 1♀ *[1]*, 10♀6♂ *[2]*; ***XXII***: 1♂ *[1]*; ***Mr***, 2♂ *[1]*, 1♀1♂ *[2]*, 2♀2♂ *[4]*, 4♂ *[5]*, 2♀6♂ *[6]*; ***Ch***: 2♀2♂ *[1]*, 1♀1♂ *[2]*, 3♀1♂ *[6]*; ***Ka***: 2♀2♂ *[1]*, 5♀8♂ *[2]*, 38♀32♂ *[3]*; ***G03***: 1♂ *[2]*.

43. ***Poecilus (Poecilus) cupreus cupreus*** (Linnaeus, 1758)

New material: ***XX***: 1♀1♂ *[1]*, 1♀ *[2]*; ***R02***: 5♀7♂ *[1]*, 2♀3♂ *[2]*, 1♂ *[3]*; ***R03***: 17♀34♂1ex. *[1]*, 39♀21♂ *[2]*, 17♀18♂ *[3]*; NW Zlati Voivoda vill., 42°37'00''N, 26°10'10''E, 174 m, near Tundzha River, 1♀, 30.V.2019, TT.

44. ***Poecilus (Poecilus) cursorius cursorius*** (Dejean, 1828)

New material: ***R03***: 1♂ *[2]*.

45. ***Poecilus (Poecilus) versicolor*** (Sturm, 1824)

New material: ***I***: 1♀1♂ *[1]*.

46. ***Pedius inquinatus*** (Sturm, 1824)

New material: ***R03***: 1♂ *[1]*.

47. ***Pterostichus (Parahaptoderus) vecors*** Tschitschérine, 1897

New material: ***XXII***: 1♀1♂ *[1]*.

48. ***Pterostichus (Platysma) niger niger*** (Schaller, 1783)

New material: ***III***: 6♀2♂ *[2]*; ***IV***: 2♀1♂3ex. *[2]*; ***VII***: 1♂4ex. *[2]*; ***VIII***: 1♀ *[2]*; ***X***: 1♀ *[1]*, 1♀1♂ *[2]*; ***XIV***: 1ex. *[2]*; ***XXII***: 1♂ *[1]*, 14♀21♂ *[2]*.

49. ***Pterostichus (Argutor) vernalis*** (Panzer, 1796)

New material: ***X***: 1♂ *[1]*.

50. ***Pterostichus (Pseudomaseus) anthracinus anthracinus*** (Illiger, 1798)

"Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904). New material: ***R03***: 1♀ *[3]*.

51. ***Pterostichus (Pseudomaseus) nigrita nigrita*** (Paykull, 1790)

New material: ***XXII***: 1♀1♂ *[1]*.

52. ***Pterostichus (Phonias) strenuus*** (Panzer, 1796)

New material: ***X***: 2♀ *[1]*.

53. ***Pterostichus (Bothriopterus) oblongopunctatus oblongopunctatus*** (Fabricius, 1787)

"Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904). New material: ***I***: 1♀ *[3]*; ***II***: 1♀1ex. *[1]*, 1ex. *[2]*; ***III***: 1♀5♂ *[1]*, 2♀ *[2]*; ***IV***: 2♂ *[1]*, 1ex. *[2]*; ***V***: 4♀2♂1ex. *[1]*; ***VI***: 2♀2♂ *[1]*, 2♀ *[2]*, 1♀ *[3]*; ***VII***: 18♀14♂ *[1]*, 4♀3♂3ex. *[2]*, 3♀4♂ *[3]*, 2ex., 11.XI.2019, obs. TT; ***IX***: 1ex. *[1]*, 12♀6♂ *[2]*; ***X***: 34♀55♂ *[1]*, 8♀8♂ *[2]*, 3♂ *[3]*; ***XI***: 1♀1♂ *[1]*, 1♀1♂ *[2]*; ***XXI***: 1♀ *[1]*; ***XXII***: 56♀61♂ *[1]*, 24♀20♂ *[2]*.

54. ***Pterostichus (Bothriopterus) quadrifoveolatus*** Letzner, 1852

New material: ***XVI***: 1♀ *[1]*.

55. ***Pterostichus (Petrophilus) melanarius*** (Illiger, 1798)

[as *vulgaris*] "Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904).

56. ***Pterostichus (Feronidius) melas depressus*** (Dejean, 1828)

"Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904). New material: ***VIII***: 3♀1♂1ex. *[2]*; ***XIV***: 1ex. *[2]*; ***XV***: 3♀1♂ *[1]*, 2♀4♂ *[2]*, 1♀ *[3]*; ***XVI***: 2♀2♂ *[1]*, 6♀8♂ *[2]*; ***XVII***: 1♀ *[1]*, 3♀6♂ *[2]*; ***Ch***: 1♂ *[4]*, 1♂ *[5]*; ***Ka***: 11♀11♂ *[1]*, 41♀34♂ *[2]*, 13♀2♂ *[3]*; near Stara Zagora, 42°28'44.9''N, 25°39'55.1''E, 471 m, *Tilia-Quercus* spp. forest, found dead under trunk, 1ex., 3.I.2019, DG.

57. ***Pterostichus (Feronidius) incommodus*** Schaum, 1858

New material: ***XVII***: 1♀ *[2]*.

58. ***Pterostichus (Pterostichus) merklii*** J. Frivaldszky, 1879

New material: ***XXII***: 2♀5♂ *[1]*.

59. ***Abax (Abax) parallelus parallelus*** (Duftschmid, 1812)

New material: ***XXI***: 1♂ *[3]*; ***XXII***: 30♀22♂ *[1]*, 21♀21♂ *[2]*, 14♀10♂ *[3]*.

60. ***Abax (Abax) ovalis*** (Duftschmid, 1812)

"Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904). New material: ***III***: 2♀3♂ *[1]*, 22♀18♂ *[2]*, 2♀ *[3]*; ***IV***: 1♀ *[1]*; ***VI***: 1♂ *[1]*, 1ex. *[2]*; ***VII***: 1♀ *[3]*; ***IX***: 1♀ *[1]*; ***XXII***: 10♀5♂ *[1]*, 5♀4♂ *[2]*, 3♀1♂ *[3]*; ***Ka***: 2♀1♂ *[2]*, 2♀ *[3]*.

61. ***Abax (Abax) carinatus carinatus*** (Duftschmid, 1812)

New material: ***I***: 1♀ *[3]*; ***II***: 1♀2♂ *[2]*, 1♂ *[3]*; ***III***: 1♀ *[1]*, 8♀4♂ *[2]*, 1♂ *[3]*; ***V***: 2♀2♂ *[1]*, 4♀1♂5ex. *[2]*; ***VII***: 1♂ *[1]*, 3♀3♂5ex. *[2]*, 1♀ *[3]*; ***VIII***: 1♀ *[1]*, 1♀ *[2]*, 1♂ *[3]*; ***IX***: 1♀ *[1]*, 7♀3♂ *[2]*, 1♀2♂ *[3]*; ***X***: 4♀5♂ *[1]*, 3♀3♂1ex. *[2]*, 1♂ *[3]*; ***XI***: 1♀4♂ *[1]*, 14♀11♂ *[2]*; ***XIV***: 1♀1♂ *[1]*; ***XV***: 1♀1♂ *[1]*, 2♂ *[2]*, 1♀ *[3]*; ***XVI***: 1♀ *[1]*, 1♂ *[2]*, 1♀1♂ *[3]*; ***XVII***: 1♂ *[1]*; ***XXI***: 18♀16♂ *[1]*, 4♀2♂6ex. *[2]*, 4♀1♂ *[3]*; ***XXII***: 4♂ *[1]*, 3♀ *[2]*; ***Mr***: 1♀ *[1]*, 1♂ *[4]*; ***Sv***: 1♂ *[1]*; ***Ch***: 1♀ *[1]*, 1♀1♂ *[5]*, 1♀1♂ *[6]*; ***Ka***: 4♀3♂ *[1]*, 2♀3♂ *[2]*, 5♀ *[3]*.

62. ***Molops (Molops) dilatatus angulicollis*** J. Müller, 1936

New material: ***III***: 1♀3♂ *[1]*, 1♂ *[2]*; ***V***: 1♂ *[1]*; ***X***: 5♂ *[1]*; ***XI***: 6♂ *[1]*, 1♀ *[3]*; ***XXII***: 1♀5♂ *[1]*; ***Mr***: 4♂ *[1]*, 1♀1♂ *[2]*.

63. ***Molops (Molops) alpestris kalofericus*** Mlynář, 1977

Sarnena Gora (Guéorguiev *et al.* 1997). New material: ***III***: 12♀9♂ *[1]*; ***V***: 2♂ *[1]*; ***VI***: 1♂ *[1]*; ***IX***: 1♀ *[1]*; ***XXI***: 1♂ *[1]*; ***XXII***: 6♀6♂ *[1]*; NE Kavakliyka Hut, 42°29'12"N, 25°13'50"E, 1055 m, 1♀, 31.V.2019, TT.

64. ***Molops (Molops) piceus bulgaricus*** Mařan, 1938

New material: ***II***: 1♂ *[2]*, 2♀ *[3]*; ***III***: 17♀17♂ *[1]*, 20♀20♂ *[2]*, 23♀17♂ *[3]*; ***IV***: 9♀34♂ *[1]*, 13♀10♂ *[2]*, 29♀29♂ *[3]*; ***V***: 9♀24♂ *[1]*, 1♂ *[2]*, 2♀1♂ *[3]*; ***VI***: 3♀8♂ *[1]*, 1♀2♂ *[2]*, 5♀1♂ *[3]*; ***VII***: 4♀26♂1ex. *[1]*, 1♂ *[2]*, 3♀7♂ *[3]*; ***VIII***: 1♂ *[1]*, 1♀ *[3]*; ***IX***: 1♀8♂ *[1]*, 3♀3♂ *[2]*, 8♀7♂ *[3]*; ***XIX***: 1♀ *[1]*; ***XXII***: 2♀4♂ *[1]*, 3♀ *[3]*; NE Kavakliyka Hut, 42°29'12"N, 25°13'50"E, 1055 m, 1♂, 31.V.2019, TT.

65. ***Tapinopterus (Tapinopterus) cognatus kalofirensis*** Mařan, 1933

New material: ***III***: 1♀5♂ *[1]*, 6♀3♂ *[2]*, 3♂ *[3]*; ***VI***: 1♀1♂ *[1]*; ***VII***: 3♀2♂ *[1]*, 2♂ *[3]*; ***VIII***: 1♀ *[1]*; ***XXII***: 1♀ *[1]*.

66. ***Calathus (Calathus) distinguendus*** Chaudoir, 1846

New material: ***IV***: 1♀ *[2]*; ***V***: 2♀ *[2]*; ***VIII***: 10♀2♂ *[2]*; ***XI***: 1♀1♂ *[1]*; ***XVII***: 1ex. *[1]*, 2♀ *[2]*, 1♀ *[3]*; ***XVIII***: 1♂ *[1]*, 21♀8♂ *[2]*, 1♀1♂ *[3]*; ***XIX***: 5♂ *[1]*, 105♀69♂1ex. *[2]*; ***XX***: 2♀3♂ *[2]*; ***Mr***: 1♀ *[3]*, 1♀ *[5]*, 1♀ *[6]*; N Zmeevo vill., 42°30'12"N, 25°36'01"E, 445 m, grasses and shrubs, 3♀4♂, 24.IV.2018, DG; S Ostra Mogila vill., 42°27'10"N, 25°28'27"E, 418 m, near river, 1♀, 26.X.2018, DG.

67. ***Calathus (Calathus) fuscipes fuscipes*** (Goeze, 1777)

"Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904). New material: ***I***: 1♀ *[1]*, 2♀ *[3]*; ***II***: 1♂ *[1]*, 1♀ *[3]*; ***IV***: 1ex. *[2]*; ***V***: 5♀ *[2]*; ***VIII***: 1♀ *[1]*, 33♀27♂ *[2]*; ***IX***: 6♀1♂ *[2]*; ***X***: 1♂ *[1]*, 16♀6♂1ex. *[2]*; ***XI***: 15♀2♂ *[2]*; ***XII***: 2♀ *[2]*; ***XVI***: 1♂ *[1]*; ***XIX***: 3♂ *[1]*, 34♀42♂2ex. *[2]*, 1♀ *[3]*; ***XX***: 15♀18♂ *[2]*; ***Do***: 1♀1♂ *[1]*, 15♀9♂ *[2]*, 1♂ *[3]*; ***Mr***: 7♀ *[2]*, 3♀ *[5]*; ***Sv***: 1♂ *[1]*, 5♀4♂ *[2]*; ***Ch***: 1♂ *[2]*, 1♀ *[4]*, 4♀1♂ *[5]*, 3♀1♂ *[6]*; ***R03***: 2♀ *[2]*; ***G03***: 1♂ *[2]*; ***Hr***: 1♀, 31.X.2018; W Drangovo vill., 42°22'18"N, 25°00'08"E, 260 m, pasture, 1♀1♂, 20.VI.2020, TT; N Zmeevo vill., 42°30'12"N, 25°36'01"E, 445 m, 3♀1♂, 24.IV.2018, DG; Starozagorski Bani, 42°26'59.30"N, 25°29'39.25"E, 383 m, park, 1♀, 10.V.2018, DG.

68. ***Calathus (Calathus) longicollis*** Motschulsky, 1865

New material: ***XII***: 1♀1♂ *[2]*; ***Ka***: 2♀ *[2]*.

69. ***Calathus (Neocalathus) melanocephalus melanocephalus*** (Linnaeus, 1758)

New material: ***I***: 1♂ *[2]*; ***VIII***: 1♀ *[2]*; ***X***: 1♀ *[2]*; ***XX***: 1♂ *[2]*; ***Sv***: 2♀1♂ *[1]*.

70. ***Calathus (Neocalathus) cinctus*** Motschulsky, 1850

New material: ***XIII***: 3♀ *[3]*; ***Hr***: 1♂, under lamp, 6.IX.2018; Hrishteni vill., ruderal plants near agricultural buildings, 42°27'03.8"N, 25°42'09.2"E, 227 m, 1♀, 29.IV.2018, DG.

71. ***Sphodrus leucophthalmus*** (Linnaeus, 1758)

"Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904).

72. ***Laemostenus (Laemostenus) venustus*** (Dejean, 1828)

New material: ***IV***: 1♂ *[2]*, 1♀ *[3]*; ***VI***: 1♂ *[2]*, 2♀ *[3]*; ***IX***: 1♀1♂ *[2]*; ***XV***: 1♂ *[1]*; ***XVI***: 1♀ *[1]*, 1♂ *[3]*; ***XXI***: 1♂ *[1]*, 1♀1♂ *[3]*.

73. ***Laemostenus (Pristonychus) terricola punctatus*** (Dejean, 1828)
New material: ***V***: 1♀ *[1]*; ***XVI***: 2♀1♂ *[3]*; ***XVII***: 2♀ *[3]*; ***XXII***: 1♀ *[3]*; ***Ch***: 1♀1♂ *[2]*, 1♀ *[5]*.
74. ***Laemostenus (Pristonychus) cimmerius weiratheri*** J. Müller, 1932
New material: ***I***: 3♀1♂2ex. *[2]*, 2♀1♂ *[3]*; ***II***: 2♀2♂ *[2]*, 2♀2♂ *[3]*; ***IV***: 3♀1♂ *[2]*; ***V***: 13♀4♂ *[1]*, 18♀11♂18ex. *[2]*, 2♀ *[3]*; ***VI***: 2♀1♂ *[2]*; ***VII***: 2♀ *[1]*, 4♀5♂9ex. *[2]*; ***VIII***: 1♀ *[1]*, 12♀4♂ *[2]*, 1♂ *[3]*; ***IX***: 2♀ *[1]*, 19♀12♂1ex. *[2]*; ***X***: 1♀ *[1]*, 15♀1♂4ex. *[2]*, 1♂ *[3]*; ***XI***: 1♀ *[1]*, 10♀8♂9ex. *[2]*, 2♀1♂ *[3]*; ***XII***: 1ex. *[1]*, 23♀10♂ *[2]*, 3♀3♂ *[3]*; ***XIII***: 2♀ *[2]*, 13♀2♂ *[3]*; ***XIV***: 3♀ *[1]*, 1♀2ex. *[2]*; ***XV***: 48♀10♂12ex. *[1]*, 28♀28♂ *[2]*, 9♀6♂ *[3]*; ***XVI***: 50♀24♂ *[1]*, 13♀29♂3ex. *[2]*; ***XVII***: 15♀3♂ *[1]*, 5♀2♂ *[2]*, 6♀2♂ *[3]*; ***XVIII***: 1♀1♂ *[2]*; ***XX***: 1♀ *[2]*; ***XXI***: 24♀7♂ *[1]*, 21♀20♂11ex. *[2]*, 5♀2♂ *[3]*; ***XXII***: 1♀1♂ *[1]*, 3♀ *[2]*; ***Mr***: 4♀2♂ *[4]*, 5♀4♂ *[5]*, 1♀1♂ *[6]*; ***Ch***: 2♀ *[3]*, 1♀1♂ *[4]*, 3♀1♂ *[5]*, 6♀1♂ *[6]*; ***Ka***: 2♀1♂ *[1]*, 25♀19♂ *[2]*, 17♀7♂ *[3]*; Mechata Peshtera Cave, Ostra Mogila vill., 42°27'13.7''N, 25°28'16.2''E, 405 m, 2♀, 21.III.2018, 1♀, 28.III.2018, DG.
75. ***Synuchus (Synuchus) vivalis vivalis*** (Illiger, 1798)
"Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904). New material: ***X***: 1♂ *[1]*, 1♀ *[2]*.
76. ***Platyderus (Platyderus) rufus rufus*** (Duftschmid, 1812)
New material: ***V***: 1♂ *[1]*.
77. ***Limodromus assimilis*** (Paykull, 1790)
New material: ***IX***: 1♂ *[2]*; ***X***: 23♀12♂ *[1]*, 19♀18♂ *[2]*, 1♀1♂ *[3]*; ***XI***: 1♂ *[2]*; ***XVIII***: 1♀ *[1]*; ***XXII***: 56♀35♂ *[1]*, 4♀3♂ *[2]*, 1♀ *[3]*; S Ostra Mogila vill., 42°27'10.1''N, 25°28'27.5''E, 418 m, near river, 1♂, 26.X.2018, DG.
78. ***Anchomenus dorsalis dorsalis*** (Pontoppidan, 1763)
New material: ***XVIII***: 1♀ *[3]*; ***XIX***: 2♀3♂ *[2]*; ***XX***: 1♂ *[2]*; ***XXI***: 6♀4♂ *[1]*; ***R02***: 1♂ *[1]*, 2♂ *[2]*; ***R03***: 2♀3♂ *[1]*, 2♀2♂ *[2]*, 1♂ *[3]*; ***Hr***: 1♀, 14.V.2018.
79. ***Amara (Zezea) chaudoiri incognita*** Fassati, 1946
New material: ***R03***: 1♀2♂ *[3]*.
80. ***Amara (Zezea) fulvipes*** (Audinet-Serville, 1821)
New material: ***R03***: 1♀ *[3]*; ***G02***: 1♂ *[3]*.
81. ***Amara (Amara) aenea*** (De Geer, 1774)
"Karadzhadag" (Hieke & Wrase 1988). New material: ***X***: 1♀ *[3]*; ***XVIII***: 1♀ *[1]*; ***XIX***: 1♀1♂ *[1]*; ***XX***: 1♀ *[1]*; ***R02***: 7♀2♂ *[1]*, 7♀1♂ *[2]*; ***R03***: 8♀3♂ *[1]*, 5♀ *[2]*, 1♀ *[3]*; ***G03***: 2♀3♂ *[1]*, 3♀ *[2]*; Varben vill., 42°25'16''N, 24°58'00''E, 328 m, house yard, 1♀, 20.VI.2020, TT; Hrishteni vill., 42°27'03.8''N, 25°42'09.2''E, 227 m, ruderal plants near agricultural buildings, 1♀, 29.IV.2018, DG; above Turiya vill., 1♀, 24.V.2018, DGr&YP.
82. ***Amara (Amara) anthobia*** A. Villa et G. B. Villa, 1833
"Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904). New material: ***X***: 4♀2♂ *[1]*; ***XII***: 2♀1♂ *[1]*; ***XVIII***: 2♀ *[1]*; ***G03***: 1♀ *[2]*; ***Hr***: 1♂, 29.IV.2018.
83. ***Amara (Amara) convexior*** Stephens, 1828
New material: ***XX***: 6♀8♂ *[1]*, 1♀ *[2]*, 3♀1♂ *[3]*; ***XXI***: 10♀7♂ *[1]*; ***XXII***: 1♀ *[1]*.
84. ***Amara (Amara) eurynota*** (Panzer, 1796)
New material: ***VIII***: 1♀ *[1]*, 1♀ *[2]*.
85. ***Amara (Amara) communis*** (Panzer, 1797)
New material: ***R03***: 1♀ *[2]*.
86. ***Amara (Amara) familiaris*** (Duftschmid, 1812)
New material: ***R02***: 1♀ *[1]*.
87. ***Amara (Amara) lucida*** (Duftschmid, 1812)
New material: ***XVIII***: 1♀ *[1]*; ***G03***: 1♀ *[1]*, 1♀ *[2]*.
88. ***Amara (Amara) ovata*** (Fabricius, 1792)
New material: ***XI***: 1♀ *[3]*; ***R03***: 1♂ *[1]*, 1♀1♂ *[2]*; ***G03***: 1♀ *[2]*.
89. ***Amara (Amara) saphyrea*** Dejean, 1828

New material: ***X***: 6♀5♂ *[1]*; ***XI***: 3♀1♂ *[1]*, 1♀1♂ *[3]*; ***XII***: 4♀6♂ *[1]*, 2♀1♂ *[3]*; ***XX***: 1♂ *[1]*; ***XXI***: 3♂ *[1]*, 1♂ *[3]*; ***R03***: 1♂ *[1]*; ***G03***: 1♀ *[1]*; Svezhen vill., 42°30'17''N, 25°01'32''E, 750 m, near river, 1♀1♂, 22.IV.2018, DGr.

90. ***Amara (Amara) similata*** (Gyllenhal, 1810)
New material: ***R02***: 1♂ *[2]*; ***R03***: 1♂ *[1]*, 1♀ *[2]*.

91. ***Amara (Amara) montivaga*** Sturm, 1825
New material: N Moruley Hut, 42°31'32''N, 25°44'53''E, 560 m, oak forest, 2♀1♂, 19.VI.2020, TT.

92. ***Amara (Xenocelia) municipalis*** (Duftschmid, 1812)
"Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904).

93. ***Amara (Bradytus) consularis*** (Duftschmid, 1812)
New material: Varben vill., 42°25'16''N, 24°58'00''E, 328 m, house yard, 1♂, 09.VII.2019, TT; Svezhen vill., 42°30'17''N, 25°01'32''E, 750 m, at light, 1♂, 20.VII.2018, DGr.

94. ***Amara (Percosia) equestris equestris*** (Duftschmid, 1812)
New material: ***XX***: 1♀ *[2]*.

95. ***Zabrus (Zabrus) tenebrioides*** (Goeze, 1777)
New material: N Lyulyak vill., 42°31'25''N, 25°39'26''E, 517 m, pitfall trap, 1♀, 15.VI.2018, DG.

96. ***Zabrus (Pelor) spinipes spinipes*** (Fabricius, 1798)
"Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904). New material: ***Do***: 1♂ *[1]*.

97. ***Anisodactylus (Anisodactylus) binotatus*** (Fabricius, 1787)
New material: ***I***: 1♂ *[1]*.

98. ***Gynandromorphus etruscus*** (Quensel en Schönherr, 1806)
New material: ***R03***: 1♀1♂ *[1]*, 1♀ *[2]*, 4♀7♂ *[3]*.

99. ***Diachromus germanus*** (Linnaeus, 1758)
New material: ***R03***: 1♀ *[3]*.

100. ***Dicheirotrichus (Trichocellus) discicollis*** (Dejean, 1829)
New material: ***XII***: 1♀ *[1]*.

101. ***Stenolophus (Stenolophus) teutonus*** (Schrank, 1781)
"Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904). New material: ***Hr***: 1♀, under lamp, 18.VII.2018.

102. ***Stenolophus (Stenolophus) abdomialis persicus*** Mannerheim, 1844
New material: ***R03***: 1♂ *[2]*.

103. ***Acupalpus (Acupalpus) meridianus*** (Linnaeus, 1760)
New material: ***R03***: 1♂ *[2]*.

104. ***Acupalpus (Acupalpus) dubius*** Schilsky, 1888
New material: ***Hr***: 1♀, under lamp, 9.VI.2018.

105. ***Parophonus (Parophonus) maculicornis*** (Duftschmid, 1812)
New material: ***X***: 1♂ *[1]*; ***XII***: 1♀ *[1]*.

106. ***Parophonus (Parophonus) laeviceps*** (Ménétriés, 1832)
New material: ***R02***: 1♀5♂ *[1]*, 6♀6♂ *[2]*, 1♀ *[3]*; ***R03***: 1♀1♂ *[1]*.

107. ***Parophonus (Parophonus) mendax*** (P. Rossi, 1790)
New material: ***XIII***: 1♀ *[1]*; ***R02***: 1♀ *[2]*; ***R03***: 1♀1♂ *[1]*; ***G02***: 1♂ *[1]*.

108. ***Ophonus (Metophonus) laticollis*** Mannerheim, 1825
New material: ***XX***: 1♂ *[1]*, 6♀18♂ *[2]*; ***XXI***: 4♀5♂ *[1]*; ***XXII***: 1♂ *[1]*; N Zmeevo vill., 42°30'11.8''N, 25°36'01.5''E, 445 m, grasses and shrubs, 1♂, 24.IV.2018, DG.

109. ***Ophonus (Metophonus) parallelus*** (Dejean, 1829)
New material: ***XIX***: 1♂ *[2]*.

110. ***Ophonus (Metophonus) brevicollis*** (Audinet-Serville, 1821)
New material: ***XIX***: 2♂ *[2]*; ***Hr***: 1♀, 14.VII.2018; Svezhen vill., 42°30'17''N, 25°01'32''E, 750 m, at light, 1♀1♂, 20.VII.2018, DGr.

111. ***Ophonus (Hesperophonus) azureus*** (Fabricius, 1775)

New material: ***XVIII***: 1♀3♂ *[1]*, 1♀1♂ *[2]*; ***XIX***: 1♀ *[1]*; ***Hr***: 1♀, 18.IV.2018; ***R02***: 1♀1♂ *[1]*; ***R03***: 1♂ *[3]*; ***G03***: 1♀2♂ *[3]*; Varben vill., 42°25'16''N, 24°58'00''E, 328 m, yard, 1♂, 08.VII.2019, TT.

112. ***Ophonus (Hesperophonus) cribricollis*** (Dejean, 1829)
New material: ***Do***: 2♂ *[2]*; ***R02***: 2♂ *[2]*, 1♀ *[3]*; ***R03***: 1♀ *[2]*; ***G02***: 2♂ *[1]*, 2♂ *[2]*; ***G03***: 1♀1♂ *[1]*, 5♂ *[2]*, 1♂ *[3]*; N Korten vill., 42°34'14''N 25°59'52''E, 335 m, 1♂, 18.VI.2020, TT.

113. ***Ophonus (Ophonus) sabulicola*** (Panzer, 1796)
New material: ***XIX***: 2♀1♂ *[1]*, 1♀15♂ *[2]*; ***XX***: 1♀ *[2]*; ***R03***: 1♂ *[2]*; ***G03***: 1♂ *[3]*.

114. ***Harpalus (Semiophonus) signaticornis*** (Duftschmid, 1812)
New material: ***XIII***: 2♀ *[1]*; ***XVIII***: 1♀ *[1]*; ***XIX***: 1♀ *[1]*; ***R02***: 1♀1♂ *[1]*, 2♀ *[2]*; ***G03***: 1♂ *[2]*.

115. ***Harpalus (Pseudophonus) rufipes*** (De Geer, 1774)
New material: ***XIX***: 1♂ *[2]*; ***XX***: 6♀4♂ *[2]*; ***R02***: 2♂ *[3]*; ***R03***: 4♀3♂ *[3]*; ***Hr***: 1♂, 14.VI.2018.

116. ***Harpalus (Pseudoophonus) griseus*** (Panzer, 1796)
New material: ***R03***: 1♂ *[3]*; ***Sv***: 1♀, at light, 21.VII.2018; ***Hr***: 1♂, under lamp, 18.VII.2018.

117. ***Harpalus (Harpalus) rufipalpis rufipalpis*** Sturm, 1818
New material: ***VIII***: 1♀1♂ *[2]*; Mezhdenik Hill, 42°38'15''N, 25°52'59''E, 260 m, near Zhrebchevo Dam, 1♂, 18.VI.2020, TT.

118. ***Harpalus (Harpalus) honestus*** (Duftschmid, 1812)
New material: ***VII***: 2♀ *[1]*, ***XIX***: 1♂ *[2]*.

119. ***Harpalus (Harpalus) rubripes*** (Duftschmid, 1812)
New material: ***V***: 1♀1♂ *[1]*; ***X*** 1♂ *[1]*; ***XII***: 2♀ *[1]*, 1♀ *[2]*; ***XVIII***: 2♂ *[1]*, 1♀1♂ *[2]*; ***XIX***: 1♀1♂ *[1]*; ***R03***: 1♀ *[1]*; ***G02***: 1♂ *[3]*; ***G03***: 2♀3♂ *[1]*, 2♀2♂ *[2]*, 1♀1♂ *[3]*.

120. ***Harpalus (Harpalus) attenuatus*** Stephens, 1828
New material: ***XVIII***: 1♀ *[1]*, 1♀ *[2]*; ***XIX***: 1♂ *[2]*; ***Do***: 1♀ *[2]*; ***G02***: 1♀1♂ *[2]*, 4♀2♂ *[3]*; ***G03***: 1♂ *[3]*.

121. ***Harpalus (Harpalus) atratus*** Latreille, 1804
"Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904). New material: ***X***: 1♀ *[1]*; ***XV***: 1♀ *[1]*; ***XVII***: 1♀ *[1]*; ***XXI***: 1♀1♂ *[1]*, 1♀ *[2]*; ***Mr***: 1♀ *[3]*; ***Sv***: 1♂ *[1]*; ***Ch***: 1♀ *[1]*, 1♀ *[2]*.

122. ***Harpalus (Harpalus) serripes serripes*** (Quensel, 1806)
"Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904). New material: ***XII***: 2♀1♂ *[1]*, 1♀1♂ *[2]*; ***XIII***: 1♂ *[2]*; ***G03***: 1♀2♂ *[2]*; ***Hr***: 1♀, 15.VII.2018; ***Do***: 1♀ *[2]*, 1♀ *[3]*; NE Rozovets vill., 42°29'19''N, 25°08'57''E, 825 m, beech forest, 1♂, 20.VI.2020, TT; SW Chehlare vill., 1♂, 23.VI.2018, YP; S Shanovo vill., 42°31'52.0''N, 25°38'41.9''E, 435 m, oak-hornbeam forest, 1♀, 7.VI.2018, DG.

123. ***Harpalus (Harpalus) flavicornis*** Dejean, 1829
New material: ***XIII***: 1♂ *[1]*, 1♂ *[2]*; ***XVIII***: 11♂ *[1]*, 2♀6♂ *[2]*, 1♀ *[3]*; ***XIX***: 1♀4♂ *[1]*; ***XXI***: 1♂ *[1]*; ***R02***: 2♀2♂ *[3]*; ***G02***: 1♀ *[2]*, 1♀1♂ *[3]*; ***G03***: 2♂ *[1]*, 1♀ *[2]*; Varben vill., 42°25'16''N, 24°58'00''E, 328 m, house yard, 1♂, 01.VI.2019, TT; NE Varben vill., 42°25'42''N, 24°58'27''E, 380 m, pasture, 1♂, 01.VI.2019, TT.

124. ***Harpalus (Harpalus) pumilus*** Sturm, 1818
New material: ***G03***: 1♂ *[1]*, 1♂ *[2]*; ***Hr***: 1♀, 21.IV.2018.

125. ***Harpalus (Harpalus) picipennis*** (Duftschmid, 1812)
New material: ***XIX***: 1♀ *[1]*.

126. ***Harpalus (Harpalus) subcylindricus*** Dejean, 1829
New material: ***XVIII***: 1♀ *[1]*; ***XX***: 1♀1♂ *[1]*; ***G03***: 1♀3♂ *[1]*.

127. ***Harpalus (Harpalus) flavescens*** (Piller et Mitterpacher, 1783)
"Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904).

128. ***Harpalus (Harpalus) tardus*** (Panzer, 1796)
New material: ***V***: 5♀2♂ *[1]*; ***X***: 3♀1♂ *[1]*; ***XI***: 2♀2♂ *[1]*, 1♀1♂ *[3]*; ***XII***: 36♀39♂ *[1]*, 2♂ *[3]*; ***XIII***: 1♀2♂ *[1]*; ***XIV***: 2♂ *[1]*; ***XV***: 3♀1♂ *[1]*; ***XVI***: 1♂ *[1]*; ***XVIII***: 2♀3♂ *[1]*, 1♀ *[2]*; ***XIX***: 1♀1♂ *[1]*, 1♂ *[2]*; ***XX***: 19♀29♂ *[1]*, 1♂ *[2]*; ***XXI***: 11♀9♂ *[1]*, 1♂ *[2]*; ***Do***: 1♀ *[2]*; ***Sv***: 2♀1♂ *[1]*; ***R03***: 2♀1♂ *[1]*, 1♀1♂ *[2]*; ***G03***: 9♀3♂ *[1]*, 1♂ *[2]*; N Korten vill., 42°34'14''N 25°59'52''E, 335 m, 1♀, 18.VI.2020, TT.

129. ***Harpalus (Harpalus) albanicus*** Reitter, 1900

New material: ***XVIII***: 1♀1♂ *[1]*; ***XIX***: 1♀3♂ *[1]*; ***XX***: 3♀1♂ *[1]*; ***G02***: 2♂ *[1]*; ***Hr***: 1♀, 11.IV.2018.

130. ***Harpalus (Harpalus) smaragdinus*** (Duftschmid, 1812)
"Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904).

131. ***Harpalus (Harpalus) cupreus fastuosus*** Faldermann, 1836
New material: ***R03***: 2♀4♂ *[1]*, 3♀2♂ *[2]*, 2♀3♂ *[3]*.

132. ***Harpalus (Harpalus) dimidiatus*** (P. Rossi, 1790)
New material: ***G03***: 1♂ *[1]*, 3♀1♂ *[2]*.

133. ***Harpalus (Harpalus) caspius*** (Steven, 1806)
New material: ***XVII***: 1♀ *[1]*; ***XVIII***: 4♀3♂ *[1]*, 3♀ *[2]*; ***XIX***: 3♀4♂ *[1]*; ***XX***: 1♂ *[1]*; ***Do***: 1♂ *[1]*; ***Sv***: 1♂ *[3]*; ***G03***: 1♀3♂1ex. *[1]*; N Lyulyak vill., 42°31'25"N, 25°39'26"E, 517 m, 1♂, 15.VI.2018, DG.

134. ***Harpalus (Harpalus) pygmaeus*** Dejean, 1829
New material: ***G02***: 1♀ *[2]*; ***G03***: 1♀ *[2]*.

135. ***Harpalus (Harpalus) hospes hospes*** Sturm, 1818
New material: ***XIX***: 11♀16♂ *[1]*, 6♀11♂ *[2]*; ***R02***: 1♀ *[1]*; ***R03***: 2♀1♂ *[1]*; Varben vill., 42°25'16"N, 24°58'00"E, 328 m, house yard, 1♀, 20.VI.2020, TT.

136. ***Harpalus (Harpalus) affinis*** (Schrank, 1781)
New material: ***R02***: 1♂ *[1]*, 1♂ *[2]*; ***Hr***: 1♂, 22.V.2018, 1♂, 1.X.2018.

137. ***Harpalus (Harpalus) distinguendus distinguendus*** (Duftschmid, 1812)
New material: ***IV***: 1♀ *[3]*; ***V***: 1♂ *[1]*; ***X***: 1♀ *[3]*; ***XIX***: 2♀ *[1]*, 1♀ *[2]*, 1♂ *[3]*; ***XX***: 2♂ *[1]*; ***R02***: 6♀4♂ *[1]*, 20♀9♂ *[2]*; ***R03***: 4♀3♂ *[1]*, 10♀3♂ *[2]*, 1♀ *[3]*; ***G02***: 9♀2♂ *[1]*, 4♀7♂ *[2]*, 3♀3♂ *[3]*; ***G03***: 1♂ *[1]*; ***Hr***: 1♀, 31.III.2018, 2♀1♂, 18.IV.2018, 1♂, 22.IV.2018; NE Rozovets vill., 42°29'19"N, 25°08'57"E, 825 m, beech forest, 1♀, 20.VI.2020, TT.

138. ***Harpalus (Harpalus) saxicola*** Dejean, 1829
New material: ***G02***: 2♀1♂ *[1]*, 1♀ *[2]*, 1♀ *[3]*.

139. ***Harpalus (Harpalus) angulatus scytha*** Tschitschérine, 1899
New material: ***G02***: 3♀ *[3]*.

140. ***Acinopus (Acinopus) picipes*** (Olivier, 1795)
New material: ***III***: 1♀ *[2]*; ***R02***: 3♂ *[3]*; ***G02***: 1♀1♂ *[3]*.

141. ***Acinopus (Oedematicus) megacephalus*** (P. Rossi, 1794)
New material: ***R02***: 3♂ *[3]*; ***G03***: 1♂ *[3]*.

142. ***Carterus (Carterus) dama*** (P. Rossi, 1792)
New material: ***R02***: 1♀ *[3]*.

143. ***Ditomus calydonius calydonius*** (P. Rossi, 1790)
New material: ***G03***: 1♀ *[3]*.

144. ***Dixus obscurus*** (Dejean, 1825)
New material: ***XIII***: 1♀ *[1]*.

145. ***Amblystomus metallescens*** (Dejean, 1829)
New material: ***R02***: 1♂ *[2]*.

146. ***Amblystomus rectangulus*** Reitter, 1883
New material: ***R03***: 1♀ *[1]*.

147. ***Chlaenius (Dinodes) decipiens*** (L. Dufour, 1820)
New material: ***XIX***: 2♀6♂ *[2]*; ***R02***: 1♀ *[2]*; ***R03***: 1♂ *[2]*.

148. ***Chlaenius (Trichochlaenius) aeneocephalus aeneocephalus*** Dejean, 1826
New material: ***XIX***: 1♀ *[1]*; ***R02***: 1♀1♂ *[1]*; ***R03***: 1♂ *[1]*, 3♀1♂ *[2]*.

149. ***Chlaenius (Chlaeniellus) nitidulus*** (Schrank, 1781)
New material: ***X***: 2♀ *[1]*.

150. ***Chlaenius (Chlaeniellus) vestitus*** (Paykull, 1790)
"Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904). New material: Hrishteni vill., 42°27'03.8"N, 25°42'09.2"E, 202 m, grasses near brook, 1♀, 12.V.2018, DG.

151. ***Licinus (Licinus) depressus*** (Paykull, 1790)
New material: ***R02***: 1♀1♂ *[3]*.

152. ***Licinus (Licinus) cassideus cassideus*** (Fabricius, 1792)
New material: ***XIX***: 2♀ *[2]*; near the "Russian road", 42°29'19.2''N, 25°46'16.6''E, 286 m, shrubs in a limestone terrain, near river, 1♀, 13.IV.2018, DG.
153. ***Lebia (Lebia) cruxminor cruxminor*** (Linnaeus, 1758)
"Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904).
154. ***Lebia (Lebia) humeralis*** Dejean, 1825
New material: ***G02***: 1♀5♂ *[2]*.
155. ***Lebia (Lebia) scapularis scapularis*** (Geoffroy, 1785)
New material: ***G02***: 1♀1♂ *[1]*.
156. ***Dromius (Dromius) quadrimaculatus*** (Linnaeus, 1758)
New material: ***Sv***: 1♂, at light, 24.VIII.2018.
157. ***Philorhizus notatus*** (Stephens, 1827)
New material: ***I***: 1♂ *[3]*; **X**: 1♂ *[3]*; ***XIII***: 1♀1♂ *[3]*.
158. ***Syntomus obscuroguttatus*** (Duftschmid, 1812)
New material: ***XX***: 2♂ *[2]*; ***R02***: 1♂ *[2]*; ***R03***: 2♀ *[1]*.
159. ***Syntomus pallipes*** (Dejean, 1825)
New material: ***XII***: 2♀ *[1]*; ***XXI***: 1♀ *[1]*.
160. ***Microlestes corticalis*** (L. Dufour, 1820)
New material: ***R03***: 1♂ *[2]*.
161. ***Microlestes fissuralis*** (Reitter, 1901)
New material: ***XIX***: 1♀2♂ *[2]*; ***R02***: 1♀2♂ *[1]*, 2♂ *[2]*, 4♀3♂ *[3]*; ***R03***: 1♂ *[2]*; ***G02***: 8♀2♂ *[2]*, 3♀ *[3]*; ***G03***: 5♀4♂ *[1]*, 5♀1♂ *[2]*, 5♀1♂ *[3]*.
162. ***Microlestes fulvibasis*** (Reitter, 1901)
New material: ***R02***: 1♀ *[2]*; ***R03***: 1♂ *[2]*; ***G02***: 4♀10♂ *[2]*, 1♂ *[3]*.
163. ***Microlestes luctuosus luctuosus*** Holdhaus, 1904
New material: ***XIX***: 2♂ *[3]*.
164. ***Microlestes maurus maurus*** (Sturm, 1827)
New material: ***XIX***: 2♀8♂ *[3]*; ***R02***: 1♂ *[3]*; ***G02***: 1♀1♂ *[2]*, 1♀1♂ *[3]*; ***G03***: 4♀2♂ *[1]*, 1♀2♂ *[3]*.
165. ***Microlestes minutulus*** (Goeze, 1777)
New material: ***I***: 1♂ *[1]*; ***XVIII***: 1♀1♂ *[3]*; ***XIX***: 4♀3♂ *[2]*; ***R02***: 1♀2♂ *[1]*, 5♀2♂ *[2]*, 3♀ *[3]*; ***R03***: 23♀14♂ *[1]*, 10♀6♂ *[2]*, 1♀2♂ *[3]*; ***G02***: 1♂ *[1]*, 3♀1♂ *[2]*; ***G03***: 1♀ *[1]*, 5♀1♂ *[2]*; NE Varben vill., 42°25'42''N, 24°58'27''E, 380 m, pasture, 1♀, 01.VI.2019, TT; Hrishteni vill., 42°27'03.8''N, 25°42'09.2''E, 202 m, grasses near brook, 1♂, 12.V.2018, DG.
166. ***Microlestes negrita negrita*** (Wollaston, 1854)
New material: ***R02***: 2♀ *[1]*, 1♀ *[2]*.
167. ***Cymindis (Cymindis) axillaris axillaris*** (Fabricius, 1794)
New material: ***XIII***: 1♀ *[3]*.
168. ***Drypta (Drypta) dentata*** (P. Rossi, 1790)
New material: Starozagorski Min. Bani, 42°27'02''N, 25°29'39''E, 382 m, 1ex., 01.VI.2017, TT.
169. ***Polystichus connexus*** (Geoffroy in Fourcroy, 1785)
New material: ***R02***: 1♂ *[1]*.
170. ***Aptinus bombarda*** (Illiger, 1800)
"Sredna Gora/Karadzhadag" near Turiya vill. (Yoakimov 1904). New material: ***III***: 60♀43♂ *[1]*, 153♀71♂1ex. *[2]*; ***IV***: 1♂ *[1]*; ***V***: 1ex. *[2]*; ***VII***: 1♀ *[2]*; ***IX***: 10♀13♂1ex. *[1]*, 25♀8♂3ex. *[2]*, 1♂1ex. *[3]*; ***XXII***: 18♀16♂ *[1]*, 24♀13♂ *[2]*; ***Ka***: 6♀ *[1]*.
171. ***Brachinus (Brachinus) alexandri*** F. Battoni, 1984
New material: ***R03***: 1♀ *[2]*.
172. ***Brachinus (Brachinus) crepitans*** (Linnaeus, 1758)
New material: ***XII***: 1♀1♂ *[1]*, 4♀7♂ *[2]*; ***XVII***: 1♀ *[1]*; ***XIX***: 8♀5♂ *[1]*, 3♀3♂ *[2]*; ***XX***: 2♀5♂ *[1]*, 4♀4♂ *[2]*; ***XXI***: 45♀32♂ *[1]*.

173. ***Brachinus (Brachinus) psophia*** Audinet-Serville, 1821

New material: ***R02***: 4♀1♂ *[1]*, 1♀ *[2]*, 1♂ *[3]*; ***R03***: 3♀2♂ *[1]*, 4♀1♂ *[2]*, 2♀3♂ *[3]*.

174. ***Brachinus (Brachynidius) brevicollis*** Motschulsky, 1844

New material: ***XX***: 1♂ *[2]*.

175. ***Brachinus (Brachynidius) explodens*** Duftschmid, 1812

New material: ***XII***: 1♀3♂ *[1]*, 5♀5♂ *[2]*; ***XVIII***: 1♂ *[1]*; ***XIX***: 1♂ *[1]*; ***XX***: 1♀ *[1]*; ***XXI***: 42♀37♂ *[1]*; ***XXII***: 1♀ *[1]*; ***R02***: 19♀16♂ *[1]*, 1♀6♂ *[2]*; ***R03***: 13♀10♂ *[1]*, 7♀4♂ *[2]*; ***G03***: 2♀2♂ *[1]*, 2♀6♂ *[2]*; ***Hr***: 1♀, 26.IV.2018, 1♀, 9.V.2018; W Stara Zagora, 42°24'49.8''N, 25°32'49.4''E, 389 m, meadow with bushes, in puddle, 1♂, 11.VI.2018, DG; W Lyulyak vill., 42°30'36.4''N, 25°40'17.0''E, 414 m, shrubs and sparse forest, in leaf litter of *Acer* sp., 1♂, 25.X.2018, DG.

Only 36 species are known for Sarnena Gora from the literature. Of them, 32 species were recorded by Yoakimov (1904), Nedelkov (1909) reported two species, Buresh & Kantardzhieva (1928) reported seven species, *Molops alpestris* was reported by Guéorguiev *et al.* (1997), and *Amara aenea* was reported by Hieke & Wrase (1988). During the field work we collected many of them, with the exception of 11 species (*Carabus cancellatus*, *Perileptus areolatus*, *Tachyta nana*, *Bembidion subfasciatum*, *B. femoratum*, *Pterostichus melanarius*, *Sphodrus leucophthalmus*, *Amara municipalis*, *Harpalus flavescens*, *H. smaragdinus* and *Lebia cruxminor*). All other 138 species are new for this part of the mountain. *Amblystomus rectangulus* and *Acupalpus dubius* are reported as new and rare species for Bulgaria (Teofilova *et al.* 2020), but those are the same records presented in this paper.

New high altitude boundaries were established for the distribution of nine species, but it would be tenuous to claim these new findings are evidence for a real shift of the species distribution to higher altitude. This is probably more reflective of lesser knowledge about the ecology of these species and their distribution in Bulgaria. These are: *Acinopus picipes* (so far known only from below 1000 m a.s.l., now found at 1100 m in sampling site *III*), *Amblystomus metallescens* (so far known only from below 110 m, now found at 280 m in *R02*), *Apotomus clypeonitens* (so far known only from below 107 m, now found at 288 m in *R03*), *Brachinus brevicollis* (so far known only from below 300 m, now found at 363 m in sampling site *XX*), *Calathus longicollis* (so far known only from below 180 m, now found at 366 m in sampling site *XII*, and at 812 m in *Ka*), *Dicheirotrichus discicollis* (so far known only from below 35 m, now found at 366 m in sampling site *XII*), *Ophonus brevicollis* (so far known only from below 700 m, now found at 750 m in Svezhen vill.), *Parophonus laeviceps* (so far known only from below 180 m, now found at 288 m in *R03*), and *Poecilus cursorius* (so far known only from below 240 m, now found at 288 m in *R03*).

The richest tribes are Harpalini (50 species), Pterostichini (25 species), Amarini (18 species), Lebiini (15 species), and Carabini (12 species). Similar ratio of the number of species in the tribes was found in the Vrachanska Planina Mts (Western Stara Planina Mts) (Teofilova 2019), with the exception of Lebiini, which are more numerous here probably due to their higher presence in the sampling sites near Zelenikovo vill. (in the lowest belts of Sarnena Gora). Harpalini and Amarini include mostly ecologically plastic carabids. Carabini and Pterostichini are typical forest dwellers; most of them are stenotopic and any impact on the forest habitats where they occur, also affects the structure of their communities.

Similarly to the carabid fauna of the Vrachanska Planina Mts (Teofilova 2019), the most species rich genera are *Harpalus* (24 species), *Amara* (15 species), *Pterostichus* (11 species), and *Carabus* (9 species).

It seems that the region of the Sarnena Gora keeps a very diverse ground beetle fauna and has a significant conservation value. Currently three relicts (*Carabus hortensis*, *Myas chalybaeus*, and *Xenion ignitum*) and 14 endemic species and subspecies are known, of which Bulgarian regional endemics are 2 subspecies, Bulgarian endemics are 3 taxa (2 species and 1 subspecies), Balkan endemics are 7 taxa (1 species and 6 subspecies), and 2

species are Balkan subendemic (Table 2). *Carabus intricatus* is included in the IUCN Red List as "Near Threatened". *Carabus scabrosus* is included in the Red Data Book of Bulgaria as "Vulnerable" (Golemanski *et al.* 2015).

Some rare and stenotopic species also occur in the studied region: *Abax parallelus*, *Amara communis*, *Aptinus bombarda*, some *Bembidion* spp. *Carabus cancellatus*, *C. granulatus*, *C. scabrosus*, *Cychrus semigranosus*, most of the *Molops* spp., *Pterostichus incommodus*, *Pt. merklii*, *Pt. quadrifoveolatus*, *Pt. vecors*, *Tapinopterus cognatus*, *Xenion ignitum*, etc. Some of the species (e.g. *Calosoma inquisitor*, and many of the *Carabus* spp.) have become rare under the influence of anthropogenic pressures, changes in their primary habitats, and the use of chemical agents in the agriculture. In most cases these species are attached to a limited type of biotope and require specific abiotic and biotic conditions, making them vulnerable to destruction of their habitats. A major factor in the preservation of the stenotopic species is the conservation of their primary habitats.

Bulgarian endemics, some Balkan endemics with limited distribution and endangered and internationally protected species can be regarded as taxa of world importance. Balkan endemic species as a whole have European significance, and relicts, nationally protected and rare forms have national significance.

Table 2. List of the endemic ground beetles in Sarnena Sredna Gora Mts.

Species	Level
Molops alpestris kalofericus	Regional Bulgarian
Molops dilatatus angulicollis	Regional Bulgarian
Pterostichus vecors	Bulgarian
Pterostichus merklii	Bulgarian
Tapinopterus cognatus kalofirensis	Bulgarian
Carabus scabrosus scabrosus	Balkan
Carabus violaceus azuresens	Balkan
Cychrus semigranosus balcanicus	Balkan
Molops piceus bulgaricus	Balkan
Laemostenus cimmerius weiratheri	Balkan
Pterostichus melas depressus	Balkan
Trechus irenis	Balkan
Myas chalybaeus	Balkan subendemic
Xenion ignitum	Balkan subendemic

Zoogeographical analysis on species level shows that the European complex (52 species, 30% of all) and Mediterranean (*sensu lato*) complex (51 species, 29% of all) prevail. They are closely followed by the Northern Holarctic and European-Siberian complex with 40 species (23%). European-Asiatic complex has 23 species (13%), and Endemic complex consists of 8 species (5%) (Figure 2).

We found greatest number of species for the European-Neareastern, European-Central Asian, European, and Palaearctic categories (Table 3). Palaearctic, European-Central Asian, and European-Neareastern categories were the most species rich in Vrachanska Planina Mts too, but there the Northern Holarctic complex prevailed (having 37% of all species), the Mediterranean complex had only 17% of all species, and the share of the endemics was greater (11%) (Teofilova 2019). Greater number of endemics was also established in the central part of the Stara Planina Mts – in "Leshnitsa" Reserve (Teofilova 2016).

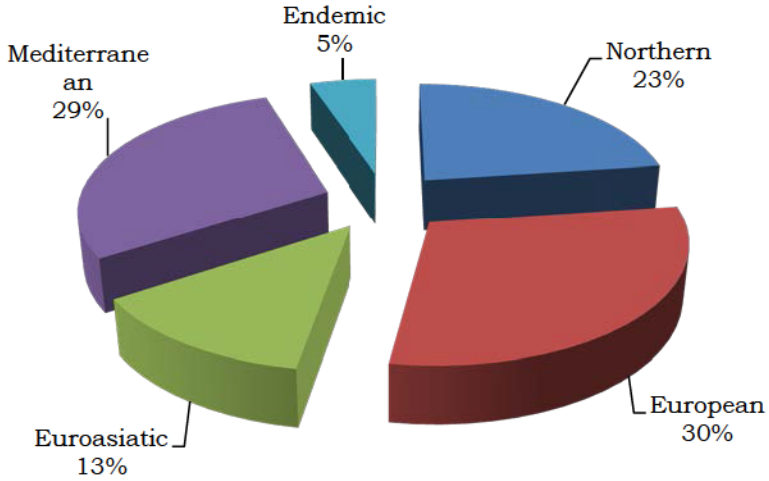

Fig. 2. Distribution of the carabid species among the zoogeographical complexes.

Table 3. Zoogeographical categories of the ground beetles in Sarnena Gora (on species level).

Complex	Zoogeographical element	species	
		No	%
Northern Holarctic and European-Siberian	Holarctic	7	4.0
	Palaearctic	12	6.9
	Western Palaearctic	7	4.0
	European-Siberian	10	5.7
	European and West Siberian	4	2.3
European	European-Neareastern	21	12.0
	European	13	7.4
	Central and Eastern European and Neareastern	8	4.6
	Central and Eastern European	9	5.1
	Southern and Eastern European	1	0.6
Euroasiatic	Euroasiatic steppe and forest-steppe complex	6	3.4
	European and Central Asian	17	9.7
Mediterranean	European-Central Asian-Mediterranean	10	5.7
	European-Neareastern-Mediterranean	8	4.6
	Mediterranean-Central Asian	4	2.3
	Mediterranean-Neareastern	3	1.7
	Mediterranean	1	0.6
	Eastmediterranean	1	0.6
	Pontic-Submediterranean	2	1.1
	South European and Northmediterranean	8	4.6
	Northmediterranean-Central Asian	2	1.1
	Balkan-Central Asian	2	1.1
	Balkan-Neareastern	10	5.7
Endemic	Balkan subendemic (+ Balkan-Carpathian)	2	1.1
	Balkan endemic	4	2.3
	Bulgarian endemic	2	1.1

The carabid fauna of the Sarnena Gora is extremely heterogeneous and diverse in zoogeographical terms, given its contact areas with the Central Stara Planina Mts and Sashtinska Sredna Gora Mts on the one hand, and the Upper Thracian Lowland and the Podbalkan Valleys, on the other. The river systems of the rivers of Maritsa and Tundzha are important corridors and refugia for the expansion of meso-therophilic forms, and the southern and eastern borders of the subregion of the Tundzha Hilly Lowland are in direct contact with the biogeographical subregions of the Southern Black Sea and Lower Maritsa Valley, where the xerophilous and Neareastern biota penetrates through. The proximity of the mountain to the Thracian and Tundzha Hilly Lowlands results with increased presence of Mediterranean species (almost 30%). The relatively low proportion of the Pontic forms is also noticeable, probably resulting from the relative remoteness of the Black Sea Coast and the mesophilic microclimate created by the river systems and mountain ranges.

The mountain carabid fauna, despite the very low ridge parts of the Sarnena Gora, is well differentiated and close in composition to that of the Central Stara Planina Mts and Sashtinska Sredna Gora Mts. The limits of this fauna conditionally overlap with the areal of the common beech (*Fagus sylvatica* L.), which on the southern slopes starts at about 850 m a.s.l., and on the northern – at about 550 m a.s.l. At these heights were found complexes of more than 50 mountainous and forest mesophiles, such as the endemic species and subspecies, as well as a large part of the European, Euro-Siberian, and Holarctic species, most of which are characteristic of the other Bulgarian mountains, too. Typical mountain species are: *Carabus hortensis*, *C. violaceus*, *C. intricatus*. *Cychrus semigranosus*, and the endemic *Molops* spp., *Tapinopterus cognatus*, *Pterostichus vecors*. In the same time, during our study we found specific differences with the mountain fauna of the Central Stara Planina Mts, which is naturally connected with Sarnena Sredna Gora through the Strazhata and Mezhdenik Ridges. Specific to Sarnena Gora are *Carabus scabrosus* and *C. hortensis*, and in Shipchenka Planina Mts specific are *C. gigas* Creutzer, 1799, *C. versicolor* I. Frivaldszky von Frivald, 1835, and *Platynus proximus* (J. Frivaldszky, 1879) (Teofilova 2016).

There is a common regularity in different regions in Bulgaria about the distribution of the complexes of the two main types of biota – northern and southern. The established proportion in the Sarnena Gora is 58% to 42%, of which, respectively, almost 30% are Mediterranean thermophilous and xerophilous species, and another 30% are European mesophilous forest species. A similar distribution of the two main faunal complexes is established for the Vrachanska Planina Mts (Teofilova 2019) and "Leshnitsa" Reserve in the Central Stara Planina Mts (Teofilova 2016). The difference in the share of Mediterranean and Eurasian xerophiles in the southern carabid fauna is probably due to the different geographical location and the proximity of Sarnena Gora to territories with Mediterranean climatic influence and to the rivers of the Eastern Aegean catchment, which effect as a Mediterranean corridor and refugium is evident. The ratio of the northern to southern biota is 55%:45%, both in NW Bulgaria (the Zlatiya Plateau) (Teofilova & Kodzhabashev 2020b), and NE Bulgaria ("Srebarna" Reserve) (Kodzhabashev 2016). In Southern Bulgaria, this ratio is 35%:65% in the Eastern Rhodopes (Teofilova & Kodzhabashev 2020a), and in pseudomaquis habitats in Struma Valley and lower belt of the Pirin Mts (Teofilova 2020).

Conclusions

The present study proves that the region of the Sarnena Sredna Gora Mts keeps a very rich, diverse and zoogeographically heterogeneous ground beetle fauna, and has a significant conservation value.

When analyzing the zoogeographic distribution of the mountain faunistic complex of Sarnena Gora, we established a regularity relating the lower limits of the mountain on the

southern and northern slopes. The mountain elements forming the specific psychrophilic and mesophilic complex on the southern slopes of the mountain appear at about 850 m a.s.l., and on the northern slopes – at about 550 m a.s.l. In this case, it also coincides with the distribution of the beech, which can be used for practical purposes for determination of the lower limit of the middle-mountain belt of Sarnena Gora.

The insufficient research in the area and the large carabid species richness suggest that future targeted studies would contribute to the enrichment of the species list presented here. Further studies are needed in more habitats, on a larger area and in different parts of the mountain, with sufficient regularity and longer duration, focusing on the application of different methods for collection of biological material, in order to ensure a more qualitative coverage of the local biodiversity and a traceability of the phenology of the species. It would be appropriate to analyse the preimaginal stages of the ground beetles too.

In order to assure the preservation of the natural habitats and significant species, a proclamation of some protected areas and/or zones is recommendable.

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