PRELIMINARY DATA REGARDING THE SAPROXYLIC SPECIES OF CERAMBYCIDAE (INSECTA: COLEOPTERA) IN ROSCI0045 CORIDORUL JIULUI, ROMANIA

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Abstract

Observations carried out in May-September 2022 in Coridorul Jiului, a Natura 2000 area located in the south-western part of Romania, highlighted 16 species of Cerambycidae beetles. The landscape, local climate and forest management impact the diversity and distribution of these species in the site. All species have been listed on The IUCN Red List of Threatened Species, of which, Cerambyx cerdo, Rosalia alpina and Morimus asper funereus are also included in the Natura 2000 network. Five species were recorded for the first time in this area. Furthermore, another species noted, Isotomus speciosus, is a rare species in many European countries. The saproxylic character of these beetles makes them an essential participant within the forest ecosystem, which is why a responsible management of the forests in the Coridorul Jiului area is necessary to maintain the populations of these coleopterans on a stable trend.

***Key words**:longicorns, taxonomy, saproxylic, distribution*

INTRODUCTION

Cerambycidae Latreille, 1802, is an important family of Coleoptera consisting of about 36,300 species in more than 5,300 genera and eight subfamilies (Tavakilian, 2015; Monne et al., 2017), spread over all continents except Antarctica (Linsley, 1959). More than 90% of the species are concentrated in two subfamilies: Lamiinae and Cerambycinae (Rossa & Goczał, 2021). The long antennae present in most species, is the reason for the common names of longicorns, longhorns, and longicorn beetles (Monne et al., 2017). Although are almost exclusively phytophagous, the feeding behavioris very distinct between the two stages of development, larva and adult (Haak, 2017). In some species adults do not eat, while in other species, for sexual maturation, adults feed on the pollen and nectar of flowers, bark, foliage, cones, sap, fruit, roots, and

fungi (Linsley 1959; Haak, 2017). On the other hand, the genus *Dorcadio*n is known for consuming roots of grasses by both the larvae and the adults (Linsley, 1959). In the larval stage, most cerambycides develop in trees, shrubs, and woody vines (Haak, 2017), some of them, the saproxylic species, being dependent on dead wood in various stages of decomposition. For this reason, many species are considered endangered due to loss or alterations of their habitat (Seibold et al., 2015). Therefore, management of forests which controls the amount of dead wood, the veteran trees, the size and age of forests is very important to maintain the species richness (Davies et al., 2008; Irmler et al., 2010). In Romania, the first mentions of Cerambycidae species date from the end of the 19th century in Transylvania, when Seidlitz published in 1891 Fauna Transsylvanica with identification keys for the 173 species known at that time (Panin & Săvulescu, 1961). Petri (1912) published an extensive work dedicated to the species of coleopterans collected up to 1911 in Transylvania, in which 188 species of longicorns are mentioned. Some species were collected by him during his own research, while others were cited from works published by various authors up to that time. Later, the research on this group of coleopterans took off, an important monograph was published by Panin and Săvulescu (1961). In the last decades, many studies dedicated to the 252 species of Cerambycidae from the Romanian fauna were published (Serafim, 2005; 2006; 2007; 2009; 2010). Regarding the Cerambycidae fauna from Oltenia, Serafim and Chimişliu (2009; 2010) publish a list of 156 species of Cerambycidae collected from 205 sites, based on the analysis of bibliographic resources present between the years 1865-2010, and the existing species in the collections of the Oltenia Museum.

The aim of this study is to contribute to the knowledge of cerambycid beetle biodiversity in the ROSCI0045 Coridorul Jiului area and to highlight their taxonomic and ecological aspects.

MATERIALS AND METHODS

Area description

The site ROSCI0045 Coridorul Jiului was declared an area of community importance in 2007 and has a surface of 71,452 ha, distributed over a length of about 150 km, stretching mainly over the territory of two counties, Dolj (73.76%) and Gorj (25.07%), with very small areas in Olt and Mehedinţi counties (fig. 1). The reserve of paleontological interest Locul fosilifer Drănic, is also included in this site, together with the natural reservation of botanical interest Pădurea Zăval, and two sites of avifaunistic interest: ROSPA0023 Confluența Jiu-Dunăre and ROSPA0010 Bistreț.

The area's coordinates are $23^0$16'30.655" East/$44^0$56'22.79" North. The southernmost point of the area is in the Danube Meadow, at the confluence of an irrigation channel with the Danube - $24^0$9'31.5"East/ $43^0$41'32.4" North, and the northernmost, Branului Hill - $23^0$16'30.655" East/ $44^0$56'22.79" North. The altitude ranges between 20 m and 404.9 m. a.s.l. The protected area crosses four major geographical units, the Getic Plateau, the Gătanu-Burdea Plains, the silvo-steppe of the Romanian Plain, the Danube Meadow. From a climatic point of view, the site presents dominant sub-Mediterranean and temperate continental influences, with periods of excessive aridity. The most important rivers that cross the site are the Jiul (with the main tributary

the Jieţ stream) and the Jilţu Mic, Desnătui, Gilortul rivers, as well as the Danube river.

The community importance of this site is due to the fact that it represents one of the main trans-Balkan migration routes for birds, it protects 22 habitats, of which 4 are of priority interest, 2 plant species, 8 invertebrate species, 14 fish species, 5 species of amphibians and reptiles, 2 species of mammals (https://www.coridoruljiului.ro/PM_ROSCI0045.pdf)

Studies currently carried out in this site will bring new data on these species of plants and animals of conservative interest.

Methods

The studies were carried out during May – September 2022. Considering the large surface of the area, the researches focused on the habitats specific for the Cerambycidae species, respectively, the deciduous forests. In the targeted habitats, old trees of *Quercus* spp*., Fagus sylvatica, Carpinus betulus, Prunus avium*, etc., stumps, trunks, dry trees, wood stacks, litter, forest roads were inspected.

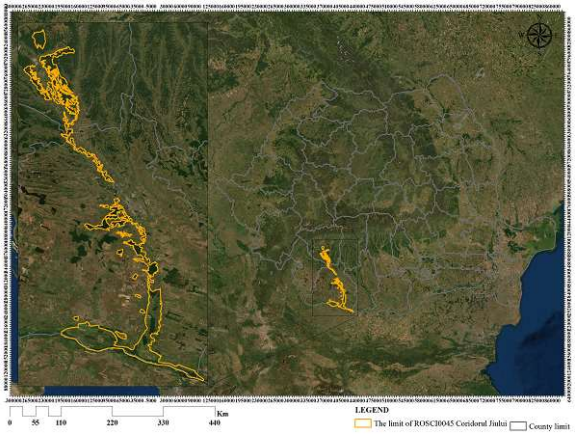

Figure 1. Location of the CoridorulJiului area

The specimens that were observed on them were inventoried, and after the end of the flight period, their exoskeletons were also documented. Inventory and monitoring methods indicated by literature were considered (Iorgu et al., 2015; Campanaro et al., 2017; Hardersen et al., 2017). It is important to specify that the year 2022 was characterized by very high temperatures in the summer, and low precipitation in the spring and summer. The status of the species was assessed based on *The IUCN Red List of Threatened Species*. The nomenclature and systematic classification of the Cerambycidae species were made in accordance with Sama (2013) in "Fauna Europaea", Danilevsky (2022), and Hoskovec et al. (2022). The data about the recorded specimens has been presented in the following order: date of observation/ specimens (♀ and ♂; exoskeleton/ altitude/ locality/ GPS coordinates. The coordinates were recorded in Stereo 1970 system with a Garmin GPS map 60 CSx.

RESULTS AND DISCUSSIONS

The taxonomic spectrum of Cerambycidae species

In Coridorul Jiului, the 16 species of identified Cerambycidae represent 10.3% of the species known in the longicorn beetles fauna of Oltenia (Serafim & Chimişliu, 2010). From a taxonomic point of view, these species belong to 13 genera, included in 9 tribes and 4 subfamilies. Serafim and Chimişliu (2010) mention 5 subfamilies for the 156 species from the fauna of Oltenia. The genus *Cerambyx* is represented by three species, the genus *Plagionotus,* by two species, and the other genera by one species each (table 1).

Table 1. Species of Cerambycidae in Coridorul Jiului

No.	Subfamily	Tribus	Genus	Species
1.	Prioninae Latreille,1802	Prionini Latreille, 1802	*Prionus* Geoffroy, 1762	*Prionus coriarius* (Linnaeus, 1758)
2.	Lepturinae Latreille, 1802	Rhagiini Kirby, 1837	*Rhagium* Fabricius, 1775	*Rhagium (Megarhagium) sycophanta* (Schrank, 1781)
3.		Lepturini Latreille, 1804	*Leptura* Linnaeus, 1758	*Leptura aurulenta* Fabricius, 1793
4.			*Stenurella* Villiers, 1974	*Stenurella (Nigrostenurella) nigra* (Linnaeus, 1758)
5.			*Pachytodes* Pic, 1891	*Pachytodes ererraticus* (Dalman 1817)
6.	Cerambycinae Latreille, 1802	Cerambycini Latreille, 1804	*Cerambyx* Linnaeus, 1758	*Cerambyx cerdo* Linnaeus, 1758
7.				*Cerambyx scopolii* Füssli, 1775
8.				*Cerambyx welelensii* Küster, 1846
9.		Compsocerini Thomson, 1864	*Rosalia* Audinet-Serville, 1834	*Rosalia alpina* (Linnaeus, 1758)
10.		Clytini Mulsant, 1839	*Chlorophorus* Chevrolat, 1863	*Chlorophorus varius* (O.F.Müller, 1766)
11.			*Isotomus* Mulsant, 1863	*Isotomus speciosus* (Schneider, 1787)
12.			*Plagionotus* Latreille, 1829	*Plagionotus arcuatus* (Linnaeus, 1758)
13.				*Plagionotus* detritus (Linnaeus, 1758)
14.		Stenopterini Fairmaire, 1868	*Stenopterus* Illiger, 1804	*Stenopterus rufus* (Linnaeus, 1767)
15.	Lamiinae Latreille, 1825	Lamiini Latreille, 1825	*Morimus* Brullé, 1832	*Morimus asper funereus* Mulsant, 1862
16.		Saperdini Mulsant, 1839	*Saperda* Fabricius, 1775	*Saperda (Lopezcolonia) scalaris* (Linnaeus, 1758)

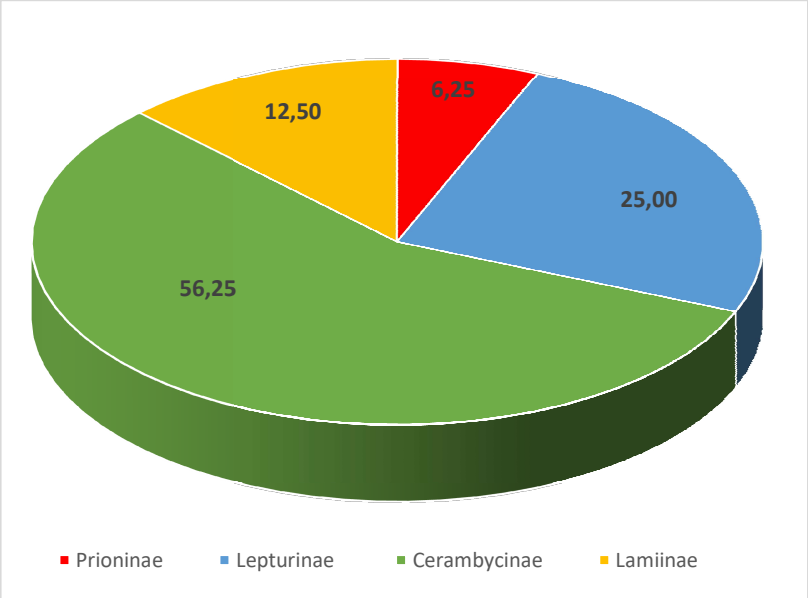

Figure 2. Distribution in subfamilies of Cerambycidae species, CoridorulJiului

The greatest taxonomic diversity is noted within the Cerambycinae subfamily which included 9 species, respectively 56.25% of the identified species (fig. 2), which belong to 4 tribes and 6 genera. The subfamily Lamiinae, known as the richest in Cerambycidae species (Monné et al., 2017), include only two of the species recorded in our study.

Characterization of Cerambycidae species from the Coridorul Jiului area

1. *Prionus coriarius* (Linnaeus, 1758) (Fig. 3a)

Status: Least Concern (LC), the population considered in decline in Europe (IUCN).

Distribution: Europe, Turkey, Caucasus, Transcaucasia, Iran and North Africa (Hoskovec et al., 2022).

Host plant: larva develops in rotten wood of deciduous and coniferous trees (Hoskovec et al., 2022). Panin and Săvulescu (1961) consider the species common in hilly and mountain forests, and according to Istrate (pers. comm., 2009) (in IUCN) it occurs large populations in Transylvania and adults are active during August. The species is known in the forests of Oltenia (Serafim et al., 2004) and was also reported in the vicinity of the area, in Bechet (Serafim, 1985, 2005) and Gura Văii (Serafim et al., 2005). Distribution of the species in site 01.07.2022/ 1♂/186 m a.s.l./ Bâlteni Forest/367686,615759;378371,883871 (on forest road). 02.07.2022/ 1♂/301 m a.s.l./ Bâlteni Forest/368150,256865;382117,807114 (on old trunk of *Quercus petraea*). 07.08.2022/1♀exoskeleton/279ma.s.l./ Artanu Forest/362381,2256;368011,6244 (on the litter). 07.08.2022/ headless exoskeleton /289 m a.s.l./Condeieşti Forest /363003,9416; 364478,0363 (on the litter).

According to our observations, the adults are active from the end of June, as a result of the local climatic conditions.

2. *Rhagium sycophanta* (Schrank, 1781)

Status: Least Concern (LC), the stable population in Europe (IUCN). Distribution: from Spain to Ural Mts (Hoskovec et al., 2022).

Host plant: larva develops under the bark of stumps or fallen trunks with higher humidity in deciduous forest; prefers *Quercus* spp. (Hoskovec et al., 2022). Panin and Săvulescu (1961) consider it frequent in the country in deciduous forest, occasionally also on conifers. The species is known in the forests of Oltenia (Serafim et al., 2004), but it has not been reported in the area until now. Distribution of the species in site 21.05.2022/ 1♀/258 m a.s.l./ Scoruşu Forest / 368244,593803; 358454,705470 (on a *Q. petraea* stump). 22.05.2022/ 1 specimen//301 m a.s.l./ Cursaru Forest / 376735,878034; 354899,469359 (on a trunk of *Q. frainetto* with dry basal branches).

3. *Leptura aurulenta* Fabricius, 1793 (Figure 3b.)

Status: Least Concern (LC), the stable population in Europe (IUCN). Distribution: Europe except North, North Africa (Algeria, Tunisia), Turkey (Hoskovec et al., 2022).

Host plant: larva develops in dead and wet wood of fallen or still living deciduous trees forest, preferred *Fagus sylvatica* (Hoskovec et al., 2022).

The species is known in the forests of Oltenia (Serafim & Chimişliu, 2010), but it has not been reported in the area until now.

Distribution of the species in site 01.07.2022/ 1♂/241 m a.s.l./Bâlteni Forest/373664,778463;376062,763837 (on a beach stump).

4. *Stenurella (Nigrostenurella) nigra* (Linnaeus, 1758)(Figure 3c.) Status: Least Concern (LC), the stable population in Europe (IUCN). Distribution: Europe, Russia, Armenia, Azerbaijan, Georgia, Turkey (Hoskovec et al., 2022; IUCN).

Host plant: larva develops in decaying wood of deciduous trees (Hoskovec et al., 2022).

Distribution of the species in site 29.06.2022/ 1♂/130 m a.s.l./Dâlga Forest/404402,7830;296664,1156 (in clearance, on Asteraceae).

5. *Pachytodes erraticus* (Dalman, 1817) Status: it has been assessed as Least Concern (LC) in 2016 in Europe, with stable population (IUCN). Distribution: Central and South Europe, Caucasus, Transcaucasia, North Iran, Turkey (Hoskovec et al., 2022) Host plant: larva develops underground dead parts of deciduous trees (*Quercus, Betula, Acer, Corylus, Prunus* etc.) (Hoskovec et al., 2022). The species has also been reported in the area or nearby: Bucovăţ (Serafim, 2006; Serafim et al., 2004, Serafim & Chimişliu, 2009), Podari (Serafim, 1985), Gura Motrului (Serafim, 1985).

Distribution of the species in site 01.07.2022/ 1♂/65 m a.s.l./ Secui/ 408496,6675;302236,4902 (in clearance, on *Erigeron annuus*).

6.*Cerambyx cerdo* Linnaeus 1758

Status: Habitats Directive 92/43/CEE, Annex II, IV; in Romania - OUG 57/2007 Annex 3, 4A. It is listed as Vulnerable to global level and Near Threatened in Europe (IUCN), and Vulnerable in our country (Tatole et al., 2009). Distribution: Southern and Central Europe, Caucasus and in the Middle East up to northern Iran (De Zan et al., 2017). Host plant: larva develops in deadwood of standing living veteran oak trees (*Quercus* spp.), and other trees: *Castanea sativa*, *Juglans regia*, *Fraxinus* spp., *Salix* spp., *Ulmus* spp., *Fagus sylvatica*, *Platanus* spp., *Prunus* spp. (De Zan et al., 2017). Panin and Săvulescu (1961) report the species throughout the country, being preferred veterans *Quercus* spp. trees in clearance. The species is known in the site, being reported in the forests in Deleni (Serafim et al., 2004), Gura Văii (Botu, 1998; Serafim, 1985, 2009), Gura Motrului (Serafim, 1985).

Distribution of the species in site 21.05.2022/ 2♂♂/270 m a.s.l./ Baniu Forest/ 365443,548193;360843,593449 (on *Q. frainetto* trunk); 22.05.2022/ 1♂+ exoskeleton/286 m a.s.l./ Cursaru Forest/376654,593258;354878,479010 (on *Q. frainetto* trunk; on the litter); 30.06.2022/ 1♂+ exoskeleton /246 m a.s.l./ Bâlteni Forest/365595,988132; 378774,298528 (on *Q. frainetto* trunk; on the litter); 30.06.2022/ 8♂♂+3♀♀+ exoskeleton/271-304 m a.s.l./ Bâlteni Forest (Branului Hill) (365600,997080; 379778,426607-365621,118149; 380980,969531) (most of them on *Q. petraea* trunks*)*; 01.07.2022/ 1♂+ 2 exoskeleton/262-299 m a.s.l./ Ţicleni-Bărbăteşti Forest /373660,052688;375944,488540 - 374045,090703; 375605,400612; 23.07.2022/ 1♂ exoskeleton/274 m a.s.l./ Peşteana Jiu Forest/373421,667308;

374528,582819 (close to *Q. petraea* trunks); 02.08.2022/ 4 specs. - exoskeletons remains/218-242 m a.s.l./ Peşteana Jiu Forest/ 366823,025799; 372904,441933 - 366998,869895; 372861,965984 (close to *Q. frainetto* trunks); 02.08.2022/ 2♂♂+1♀/237-269 m a.s.l./Peşteana Jiu Forest /366980,851820; 372798,321845 - 367183,420752; 372974,809419; 07.08.2022/ 2♂♂+2 specs. - exoskeletons remains/291-300 m a.s.l./ Artanu Forest/ 361330,5741;367482,0277-361259,6339; 367459,1217.

The species has been observed in *Quercus* forests with sun exposure. The adults were observed resting during the day, sometimes hidden in galleries or at the base of *Quercus* trees with dry basal branche.

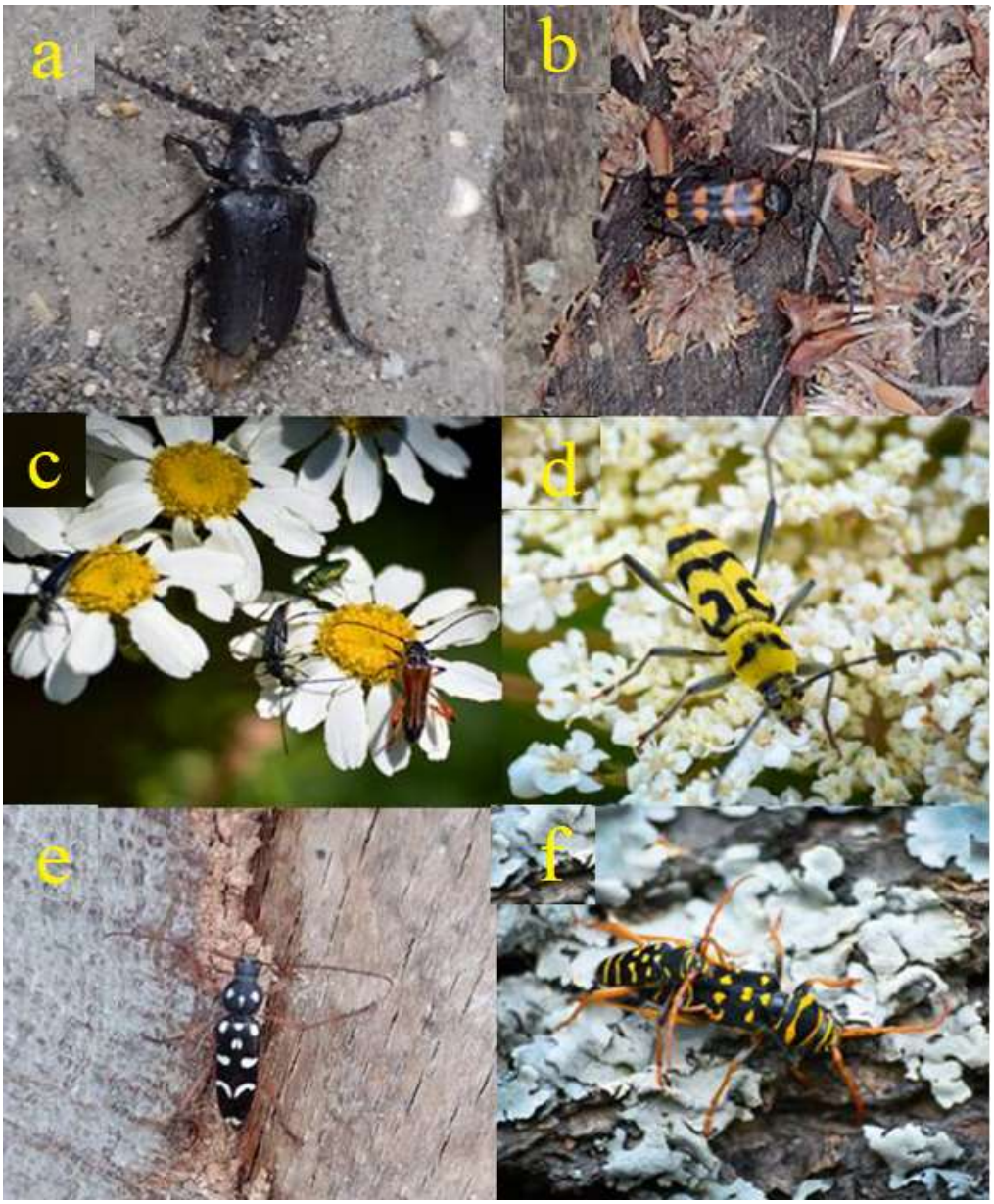

Figure 3. a. *Prionus coriarius*, male; b. *Leptura aurulenta*; c. *Stenurella nigra* (left) and *Stenopterus rufus* (right); d. *Chlorophorus varius*; e. *Isotomus speciosus*; f. *Plagionotus arcuatus* (in copula)

7. *Cerambyx scopolii* Füssli, 1775
Status: Least Concern (LC), the stable population in Europe (IUCN).
Distribution: Europe, Caucasus, Transcaucasia, North Africa, Near East (Hoskovec et al., 2022).
Host plant: larva develops in dying or freshly dead standing deciduous trees, and fruit trees (Hoskovec et al., 2022). The species has also been reported in the area: Gura Văii (Botu, 1998; Serafim, 2009). Distribution of the species in site 21.05.2022/ 2♂♂/263 m a.s.l./ Baniu Forest/ 366593,267476;361282,006436, a male on a trunck of *Q. cerris*; another male nearby); 30.06.2022/ 1♂; headless exoskeleton /287 m a.s.l./ Bâlteni Forest/365626,948557; 379955,604351; 07.08.2022/ elytra/295 m a.s.l./ Valea Racilor Forest / 362400,9098 -365958,2398.

8. *Cerambyx welensii* (Küster, 1845) (=*C. velutinus* Brullé, 1832) (= *Hamma-ticheruswelensii* Küster, 1845)
Status: Near Threatened (NT) in Europe (IUCN).
The xerophilous requirements lead to the distribution of the species in the area between Iran and Spain (Hoskovec et al., 2022). Recently, species was recorded for the first time in North Macedonia (Cvetkovska-Gjorgjievska & Torres-Vila, 2022).
Host plant: larva develops in oaks wood of different ages (*Quercus* spp.) (Hoskovec et al., 2022).In Romania, the species was recorded in a few locations in the south and west part of the country (Panin & Săvulescu, 1961; Ruicănescu, 1992; Serafim & Chimisliu, 2010). Also, the species is known in the area: Leamna, Bucovăț (Serafim et al., 2004), Gura Văii (Serafim, 1985, 2009).
Distribution of the species in site 22.05.2022/ ♀ exoscheleton/ 303 m a.s.l./ Cursaru Forest/ 376692,643939; 354914, 865007; (close to *Q. frainetto* trunks); 22.05.2022/ 2 exoscheleton and elytra/313 m a.s.l./ Cursaru Forest/ 376772,449123; 354966,004259 (close to *Q. frainetto* trunks); 30.06.2022/ headless exoskeleton /249 m a.s.l./ Bâlteni Forest /365541,608181; 379670,981659. The species was recorded in forests where *C. cerdo* was present, which confirms the association with the great capricorn beetle (Istrate, pers. obs., 2009) (in IUCN).

9. *Rosalia alpina* (Linnaeus, 1758) (Coleoptera: Cerambycidae)
Status: Habitats Directive 92/43/CEE, Annex II, IV; in Romania - OUG 57/2007 Annex 3, 4A. It is listed as Vulnerable (VU) to global level and Least Concern in Europe (IUCN), while in our country, Tatole et al. (2009) includes it into VU category. The population is stable in Europe (IUCN).
Distribution: from the Pyrenees, the Alps, and the Carpathians, to Crimea, the Caucasus, and the Urals (Sama, 2002).
Host plant: larva develops in dead wood of deciduous trees, preferring *Fagus sylvatica*, but also in species of *Ulmus spp.*, *Carpinus* spp.*,Tilia* spp., *Castanea* spp.; in Bulgaria it was observed in living tissue of *Acer campestre* (Campanaro et al., 2017; Hoskovec et al., 2022). According to Panin and Săvulescu (1961), in Romania it occurs throughout the country in the area of beech and conifers, but it is occasionally found in the steppe complex with grasses, e.g. in Dobrogea. Marcu (1928) reports the species as common in the mountainous area of Oltenia, and Tatole et al. (2009) mentions

it in Northern Gorj. According to Istrate (pers. comm., 2009) (in IUCN) the largest populations from Europe of this species are in the south-western part of Romania. The species was reported near the area, at Gura Văii (Serafim, 2009), but it is not mentioned in the standard form. Distribution of the species in site 30.06.2022/14♂♂+11♀♀/288-286 m a.s.l./ Bâlteni Forest (Bran Hill)/365626,948557;379955,604351 - 365726,144441;380264,498490 (on beech stacks located along the forest road); 03.07.2022/ 9♂♂+7♀♀/254-292 m a.s.l./ Țicleni-Strâmbei Valey /378190,167687; 376257,248132 - 378954,226702; 376308,533128 (on the trunks of old beech trees with areas of dead wood).

10. *Chlorophorus varius* (O.F.Müller, 1766) (Figure 3d)

Status: Least Concern in Europe (LC), the stable population in Europe (IUCN)

Distribution: Europe except North, Caucasus, Transcaucasia, European Turkey, Kazakhstan, West Siberia (Hoskovec et al., 2022).

Host plant: larva develops in deadwood of exposed fine and dry branches of deciduous trees (Hoskovec et al., 2022). The species has also been reported in the area: Bucovăţ, Bistreţ, Corlăţel, Podari (Serafim, 1985), Gura Văii (Botu, 1998), Leamna (Serafim et al., 2004). Distribution of the species in site 29.06.2022/ specimen/130 m a.s.l./ Dâlga Forest/ 406215,2879; 295689,8313 (in clearance, on Umbelliferae).

11. *Isotomus speciosus* (Schneider, 1787) (Figure 3e.)

Status: Least Concern in Europe (LC) (IUCN).

Distribution: Europe, Caucasus, Transcaucasia. It is less common in Central Europe due to the destruction of its natural habitats. It is considered rare in Czech Republic, Ukraine, disappeared from Poland (Hoskovec et al., 2022; IUCN).

Host plant: larva develops in dead, dry wood of deciduous trees (Hoskovec et al., 2022).

The species has also been reported in the area: Leamna (Serafim et al., 2004). According to Istrate (pers. comm. 2009) (in IUCN), in Romania it is widespread, but not common. Distribution of the species in site 30.06.2022/ 1♀/286 m a.s.l./ Bâlteni Forest/365641,962207; 379974,515007 (a female on the exfoliated bark of a beech for egg laying).

12. *Plagionotus arcuatus* (Linnaeus, 1758) (Figure 3f)

Status: Least Concern (LC) in Europe (IUCN).

Distribution: Europe, Caucasus, Transcaucasia, North Africa, Turkey, North Iran (Hoskovec et al., 2022).

Host plant: larva develops in dead trunks and thick branches of deciduous trees (Hoskovec et al., 2022). In Romania it is present in old oak forests, with clearance inside (P. Istrate, pers. comm., 2009) (in IUCN). The species has also been reported in the area: Bucovăţ (Serafim et al., 2004). Distribution of the species in site 28.06.2022/ copula/70 m a.s.l./Bratovoeşti Forest/ 410570,8795; 289383,0660 (on dead wood of *Q. frainetto*).

13. *Plagionotus detritus* (Linnaeus, 1758)

Status: Least Concern (LC) in Europe (IUCN).

Distribution: Europe, Caucasus, North Africa, Turkey, Kazakhstan (Hoskovec et al., 2022).

Host plant: larva develops under/in the bark of sun-exposed standing or fallen trunks and thick branches of deciduous trees (Hoskovec et al., 2022). Extinct in Denmark. In Romania it is present in old oak forests, in association with *P. arcuatus* (P. Istrate, pers. comm., 2009) (in IUCN). The species has also been reported in the area: Bucovăţ (Serafim et al., 2004). Distribution of the species in site 19.06.2022/ 1♂/112 m a.s.l./ Picu Forest/376613,0653;343061,6657(on fresh stump of *Quercus* spp.).

14. *Stenopterus rufus* (Linnaeus, 1767) (Figure 3c.)

Status: Least Concern in Europe (LC) (IUCN).

Distribution: widespread from Portugal to Turkmenistan (Hoskovec et al., 2022).

Host plant: larva develops in dead branches of deciduous trees and shrubs (Hoskovec et al., 2022). In Romania, populations species are well preserved (P. Istrate pers. comm., 2009)(in IUCN). The species has also been reported in the area, in Podari (Serafim, 1985) and Gura Văii (Botu, 1998). Distribution of the species in site 29.06.2022/ 1♂/130 m a.s.l./ Dâlga Forest/ 404402,7830; 296664,1156 (in clearance, on Umbelliferae).

15. *Morimus asper funereus* Mulsant 1862

Status: Habitats Directive 92/43/CEE, Annex II; in Romania - OUG 57/2007 Annex 3. It is listed as Vulnerable to global level (IUCN) and in Romania, too (Tatole et al., 2009).

Distribution: Central-West and South-Eastern Europe (Hoskovec et al., 2022).

Host plant: larva develops in dead wood, fresh stumps, dead parts of standing trees in deciduous trees (Hoskovec et al., 2022). Panin and Săvulescu (1961) consider the species common in Romania and mention it in deciduous forests, rarely in coniferous ones. Moreover, the preference for deciduous forests is also noted by other authors (Vrezec et al., 2010; Leonarduzzi et al., 2017). The species has also been reported in the area: Bratovoeşti (Serafim et al., 2004), Gura Văii (Serafim, 2010). Distribution of the species in site 21.05.2022/ 1♀/257 m a.s.l./ Scoruşu Forest/; 368190,329489; 358475,056295 (forest road); 30.06.2022/1♂/179 m a.s.l./ Bâlteni Forest (365641,218448; 378205,589538 (wood stacks); 03.07.2022/ 2♂♂/260-273 m a.s.l./ Ţicleni (Strâmbei Valey) / 378802,194106; 376383,677943 - 378151,401766; 376213,868831 (on stump and dry beech trunks); 23.07.2022/ 2♀♀+ exosckeleton/236-274 m a.s.l./Peşteana Jiu Forest/ 373424,718797; 374530,967163 (forest road);

27.08.2022/1♂/136 m a.s.l./Ţuglui Forest/406842,8870;296726,8421 (forest road).

16. *Saperda (Lopezcolonia) scalaris* (Linnaeus, 1758)

Status: Least Concern (LC) in Europe (IUCN).

Distribution: a large area of distribution in temperate zone of Eurasia (Hoskovec et al., 2022). This species with stable populations in European area is common in central Europe, in Ukraine, but it is difficult to find in Romania, although it is widespread (IUCN).

Host plant: larva develops in dead trees, trunks and thick branches of deciduous species, and occasionally in conifers (Hoskovec et al., 2022).

The species was recorded in Oltenia in the Parâng Mts. and the Gilort Gorges

(Ruicănescu & Patko, 1995), but in Coridorul Jiului has not been reported. Distribution of the species in site 21.05.2022/ 1 specimen /262 m a.s.l./ Baniu Forest/ 366593,267476; 361282,006436.

A specimen is observed in Baniu Forest near a male of *C. scopolii* on a trunk of *Q.cerris*. The species *R. sycophanta, L. aurulenta, S. nigra, R. alpina, S. scalaris* are reported for the first time in the Coridorul Jiului. We also mention the species *I. speciosus*, rare in many European countries. The larvae of these 16 species feed on the dying or dead wood of deciduous trees, contributing to the decay of the wood. Consequently, these insects play a major role in the investigated forests. According to Geiser (1998), it is estimated that 20-30% of all forest insects are saproxylic, and in Europe the populations of saproxylic Coleoptera, implicitly, of Cerambycidae species, are in decline due to the loss or fragmentation of their habitats.

CONCLUSIONS

In the forests of the ROSCI0045 Coridorul Jiului, 16 species of Cerambycidae were identified, most of them belonging to the Cerambycinae subfamily. The climate with sub-Mediterranean influences favors the presence of some xerophilous species, such as *Cerambyx welensii* and *Stenopterus rufus*. All of these saproxylic species are listed on the IUCN Red List of Threatened Species and their conservation status in Europe is LC (13 species) and NT (2 species). According to IUCN, *Cerambyx cerdo, Rosalia alpina,* and *Morimus asper funereus* are assessed at global level as Vulnerable and were included in the list of Natura 2000 species.

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