

Contribution to the knowledge of protected, rare and threatened beetles (Coleoptera) of the Zvolen district

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Abstract: This contribution provides information on the occurrence of selected beetles (Coleoptera) of the Zvolen district, including protected, rare and threatened species. The author has recently documented 27 protected beetle species, which constitute almost 30 % of all protected beetle species in Slovakia; 10 of them rank among the species of European interest. The further 25 remarkable and bioindicatively species are mentioned as well. The rarest and most notable beetle species include *Ampedus quadrisignatus*, *Apalus bimaculatus*, *Boros schneideri*, *Camptorhinus simplex*, *Derodontus macularis*, *Dircaea australis*, *Limoniscus violaceus*, *Melandrya barbata*, *Menephilus cylindricus*, *Necydalis ulmi*, *Teredus opacus* and *Trichoferus pallidus*. These species mostly belong to the significant indicators of well-preserved habitats. The Zvolen district can be considered to be an important area mainly for these submontane and montane species.

Key words: Coleoptera, protected beetles, threatened beetles, Zvolen district, faunistics

Introduction

The studied territory is characterised by broken highland terrain which together with climatic conditions reflect in high diversity of these habitats. A large scale of habitats occurs in the Zvolen district, including wetlands in the valley of the Hron river (270 m a. s. l.), forest steppe and xerothermic habitats in the southern slopes, well-preserved beech and mixed beech-and-fir forests, up to the climax spruce forest in the highest altitudes of the Poľana massif (1 300 m a. s. l.).

The beetle fauna of this area is relatively properly documented, despite the fact that long-lasting systematic research has not been carried out here. A relatively large number of articles and papers is available. With the special regard to nature protection this contribution is especially oriented to the scarce, protected and (or) threatened species, or beetle species cited only rarely in the study area.

Material and methods

Field research was carried out between 2005 – 2014, mainly within the frame of monitoring research of well-known protected sites in the Zvolen district; but we have explored and mapped new potential places with suitable and well-preserved habitats as well.

The beetles were obtained by current methods of collecting, especially sweeping the vegetation, shaking down the beetles from tree branches, night collecting towards light,

sifting detritus and individual collecting on bracket fungi, under the bark and in hollows of old trees. Protected species were nearly always documented by the camera, and left living in the forest. The nomenclature is based on the check-list edited by Jelínek (1993).

The studied territory of the Zvolen district includes soth-eastern part of the Kremické vrchy Mts, bigger part of the Zvolenská and Pliešovská basins, northern part of the Javorie Mts, south-western and central part of the Poľana Mts (fig. 1). The research has not been carried out in war training area Lešť nor yet in the Štiavnické vrchy Mts.

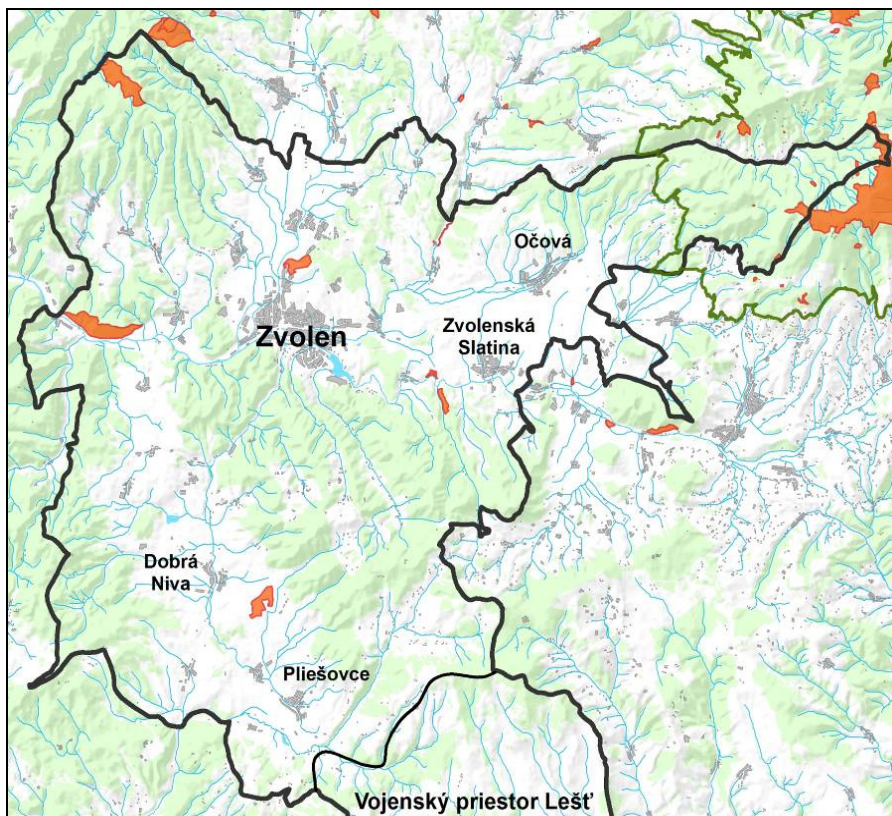


Fig. 1. Map of the studied territory SVM50 © Agency of Geodetics, Cartography and Cadaster of the Slovak Republic, 2000, N° 040/010205-AG, Processed by © Administration of the Protected Landscape Area – Biosphere Reserve Poľana, 2015

Protected beetle species (Coleoptera) are cited in the supplement 6 of the Ordinance 24/2002 and the Act 543/2002 on the nature and landscape protection. These species are mostly mentioned in the Red List of beetles of Slovakia (Holecová & Franc 2001) and in the Red List of threatened species in the Czech Republic as well [Farkač, Král & Škorpík (eds.) 2005], their ecosozological status (ESS) is given in brackets. The following categories of ESS will be cited below: **RE** – regionally extinct, **CR** – critically endangered, **EN** – endangered, **VU** – vulnerable, **LR** – lower risk. The further abbreviations: **§** – protected species, **SAC** (Special Areas of Conservation), **NR** (Nature Reserve), **PLA** – **BR** (Protected Landscape Area – Biosphere Reserve), **R¹ / R²** it is considered to be a relict species of ancient forests of the first / second category in Germany (Müller et al. 2005).

I have occasionally comment problems of ecology and bionomy of referred species, because it often exercises an influence on their ecosozological status. All findings listed are mine, except where the name of different collector is added.

Results (Alphabetical review of species)

This review includes protected, endangered, infrequent or rare species, which are interesting from zoogeographical and (or) ecological point of view.

Species of European Interest

Boros schneideri (Panzer, 1795) CR (RE) § (fig. 2)

Kremnické hory Mts, Železná Breznica env., April 28, 2009, approximately 20 larvae observed in three fir stumps; additional specimens were proved on September 10, 2009, December 3, 2009 and March 23, 2010.

Sielnica, January 1, 2010, 1 larva on the fir in the remaining timber forest.

The probability of additional findings (with exception of the Breznická and Sielnická valleys) is very low. The sites are not closely localised because this species ranks among extremely rare and threatened ones. This relict species has strongly disjunctive range (Majzlan 2005), and each of the discovery sites deserves the strictest protection.



Fig. 2. *Boros schneideri* (photo P. Potocký)

Carabus variolosus Fabricius, 1758 LR (VU) §

Kremnické hory Mts – Sielnická valley, April 13, 2009, 1 dead specimen on a road; later, from May 24 to June 3, 2014, 51 individuals (!) fallen in the live-catch pitfall traps. SAC Mláčky, May 2012, observed one specimen. This scarce hydrophilous ground beetle is probably more distributed in well-preserved forest wetlands almost in the whole studied area.

Cerambyx cerdo Linnaeus, 1758 LR (EN) § R²

Adult beetles are periodically observed in SAC Boky (for example, May 28, 2010 – very early occurrence) and SAC Gavurky, where it has favourable conditions.

The larval grub holes I have documented from 2008 to 2014 in the following sites: Zvolen town (Sekierska valley, Poštárka hill, Pustý hrad hill, Neresnická valley), Očová village (Breziny and Švošť), Turová village (Za hájom), Michalková village (Pavlová) and Kováčová town (cottage colony). A very interesting northerly situated record is from SAC Ponická Dúbrava, which is out of the studied territory, but it is older record.

Cucujus cinnaberinus Scopoli, 1763 LR (EN) §

Recent records are available from almost the whole studied territory, from the valley of the Hron river up to the mountain spruce forests (SAC Poľana, Drábovka). I have observed it every year (2006 – 2014) on many sites (Potocký 2014, Unpubl.). Larvae were mostly observed under the bark of both conifer and deciduous trees (*Quercus*, *Acer*, *Fraxinus*, *Ulmus*, *Fagus*, *Abies*, *Picea* and *Pinus*). There is a stable population in SAC Boky, SAC Mláčky, and in the surrounding of Zvolen (Sekierska and Neresnická valleys, Zálužná and Poštárka hills).

This beetle was often found in the pheromone traps. Its occurrence is expected in the whole studied area, perhaps with exception of intensively managed timber plantations. Remarkable observation: Kremnické vrchy Mts, SAC Boky, January 25, 2009, 25 hibernating specimens under the bark of oak stem; Zvolenská basin, Očová village – Biely vrch, May 6, 2011, under the bark of a dying *Picea abies* in the secondary spruce forest (400 m a. s. l.); Javorie Mts – Červený medokýš, March 8, 2009, several tens of larvae and 1 dead adult under the bark of fallen elm (*Ulmus*) in a scree forest.

Limoniscus violaceus (P. W. J. Müller, 1821) EN (CR) § R¹ (fig. 3)

Kremnické vrchy Mts – SAC Boky, periodically observed in this highly valuable site (adults, their remains and larvae), often together with *Ischnodes sanquinicollis*, most recently March 4, 2014, 1 adult near the cavity of an oak; Javorie Mts, Neresnická valley, August 22, 2013, larvae, 1 pupa and remains of adults in the ground cavity of an oak; Michalková village – Pavlová, June 12, 2014, torso of 1 adult in the ground cavity of an oak.



Fig. 3. *Limoniscus violaceus* Fig. 4. *Rhysodes sulcatus* (photo P. Potocký)

Lucanus cervus (Linnaeus, 1758) LR (EN) §

The stag beetle is remains an abundant species in the surrounding of the Zvolen town, especially in the sites with sufficiency of old oaks. It often flies into the urban area of towns and villages (Zvolen, Budča, Kováčová, Turová). Stable populations are in Neresnická and Sekierska valleys, on Poštárka hill, in SAC Boky and SAC Gavurky.

There were remarkable observations of larvae in stumps and roots of alders (*Alnus*) and apple trees (*Malus*), in garden colony near the Kováčová town: Bienska valley, 2011.

Osmoderma eremita (Scopoli, 1763) EN (CR) § R²

This rare stenoeious species of hollow trees was observed only in known sites: Kremnické vrchy Mts – SAC Boky, January 20, 2011 and July 17, 2014, dead adults; and Pliešovská basin – SAC Gavurky, remains of adults and faeces every year.

Pseudogaurotina excellens (Brancsik, 1874) CR (–) §

The closest sites of this montane species are mentioned from the Starohorské Mts (Staré Hory village) and from the Low Tatras (Sláma 1998).

Detailed monitoring of this species, carried out in the Poľana Mts in recent years, proved its occurrence on the base of larval grub and hatching holes in the branches of the woobine *Lonicera nigra* (Potocký 2010). It occurs in several sites in the central massif, but only one record is from the Zvolen district: SAC Poľana – Drábovka, November 11, 2008, larval grub holes observed in 3 shrubs of *Lonicera nigra*.

Rosalia alpina (Linnaeus, 1758) VU (CR) § R2

This attractive and well-known species was observed in the following sites: Kremnické vrchy Mts, SAC Boky, July 19, 2013; Javorie Mts, Michalková – Pavlová, July 26, 2013, 2 specimens in older beech forest; Zvolen – Zálužná, June 7, 2009, larval tunnels and remains of 1 adult. More remarkable record was registered in known thermophilous site Turová village – Selce, June 22, 2008, 3 adults on beech fuelwood.

Rhysodes sulcatus (Fabricius, 1787) VU (CR) § R¹ (fig. 4)

Kremnické vrchy Mts, SAC Boky, May 20, 2002, 2 specimens under the bark of lying oak; SAC Mláčky, April 24, 2014, approximately 30 specimens (!) under the bark of 4 lying firs; Železná Breznica village – Podjavor, May 2002, 1 specimen in rotten wood a fir; Sielnická valley – Skalica, May 24, 2014, 1 specimen flown on a dead wood of the beech. The further findings of this stenoeious, bioindicatively highly significant species may be expectable in ancient forests of Kremnické vrchy Mts and Poľana Mts.

Species of national importance

Ampedus quadrisignatus (Gyllenhal, 1817) CR (CR) § (fig. 5)

Hitherto known only in one well-known site Kremnické vrchy Mts, SAC Boky, September 10, 2013, 3 specimens, and November 20, 2014 with *Prostomis mandibularis*, *Ampedus elegantulus*, *A. nigerrimus*, *Aesalus scarabaeoides* etc. This attractive species is extremely threatened by commercial „entomologists“.

Apalus bimaculatus Linnaeus, 1761 CR (Ø?) § (fig. 6)

A highly remarkable finding of this rare and critically endangered species has been recently registered from the site Očová village – Bujačia, xerothermic grassland, approximately 60 individuals! (Krištín in verb.), later proved on February 28, 2010 (8 individuals) and March 26, 2010 (2 individuals), leg. Hrúz, Potocký, Wiezik. There also occurs *Dorcadion pedestre*, *Meloe violaceus* and *M. proscarabaeus*. Lately it was discovered in SAC Gavurky as well: March 22, 2012, 1 dead adult (leg. Fabriciusová, det. Potocký). Known also directly from the Zvolen town, spring 2013 (Wiezik in verb.).



Fig. 5. *Ampedus quadrisignatus*
(photo P. Potocký)



Fig. 6. *Apalus bimaculatus*
(photo V. Hruz)

Aporthopleura (= *Orthopleura*) *sanguinicolis* (Fabricius, 1787) EN (CR) § R¹

Kremnické vrchy Mts, SAC Boky, May 28, 2010, observed approximately 10 specimens of this rare species flying during sultry day; Pliešovská kotlina, SAC Gavurky, May 23, 2014, 1 specimen shaken down from oak branches in evening.

Dicerca alni (Fischer von Waldheim, 1824) VU (EN) § R¹

Zvolen – Môťovská priehrada dam, larval grub holes recently observed on dead alders; Ostrá lúka – Ostrolúcka jelšina; the similar circumstances plus remains of adults in 2014. A rare species of alluvial forests.

Dircaea australis Fairmaire, 1856 VU (CR) § R¹

Zvolen – Sekierska valley, June 12, 2014 together with *Trichoferus pallidus*. Recent unpublished record is also known from the Poštárka hill (Wiezik in verb.).

Duvalius microphthalmus microphthalmus (Miller, 1859) VU (–) § (fig. 7)

Only one record is accessible from the studied area: Poľana Mts – Drábovka, northern slope, under the stone near the forest wetland, July 2, 2013.

Elater (= *Ludius*) *ferrugineus ferrugineus* Linnaeus, 1758 VU (CR) § R²

This rare click beetle with nocturnal activity was observed several times in „classic“ sites only: Kremnické vrchy Mts, SAC Boky, March 24, 2010, remains of an adult in the



Fig. 7. *Duvalius microphthalmus* (photo P. Potocký) Fig. 8. *Emus hirtus* (photo V. Hruz)

hollow oak; Pliešovská basin – SAC Gavurky, May 4, 2014, two dead adults in the hollows of two oaks.

Emus hirtus (Linnaeus, 1758) (EN) § (fig. 8)

Poľana Mts, Očová – Bugárovo, June 14, 2009, on horse faeces, 1 specimen (leg. Bariak, det. Potocký). Recent records are very sporadic; (Kočárek 2000) mentions only two sites from Slovakia: Dobrá Niva and Babiná villages. Our record verifies occurrence of this conspicuous species in the Zvolen district. It may survive especially where the traditional methods of farming and pasturing remained the same.

Eurythyrea austriaca (Linnaeus, 1767) VU (RE) § R¹

This stenoecious nearly monophagous species occurs only in areas where older well-preserved beech-and-fir forests are still surviving. In studied area it was documented on the base of larval grub holes and remains of adults only in Kremnické vrhy Mts: SAC Mláčky and surroundings, Sielnická valley – Veľký son and Skalica).

Eurythyrea quercus (Herbst, 1780) VU (CR) § R¹ (fig. 9)

A rare thermophilous species, appearing in older open oak forests and edges. Documented almost always according to larval grub holes and remains of adults: Kremnické vrchy Mts – SAC Boky, quite often observed; Zvolen – Poštárka hill, March 22, 2009; Zvolen – Pustý hrad hill, May 3, 2009; Zvolen – Neresnická valley, July 15, 2014; Pliešovská kotlina – SAC Gavurky, 2009 – 2014, larval grub holes and remains of adults quite often observed.

Lacon lepidopterus (Panzer, 1801) VU (CR) § R¹ (fig. 10)

This rare and bioindicatively significant species is considered to be an ancient forest relict. Documented in the well-preserved habitats of Kremnické vrchy Mts: SAC Mláčky, March 21, 2010 together with *Pogonocherus ovatus* on the fir; Zvolenská basin, Očová – Biely vrch hill, May 6, 2011, 1 specimen on dead cherry tree (*Cerasus*) at a forest edge (a remarkable and surprising finding). It occurs more probably in SCA Poľana, NR Pod Dudášom, Sielnická valley, etc.



Fig. 9. *Eurythyrea quercus* Fig. 10. *Lacon lepidopterus* (photo P. Potocký)

Lacon querceus (Herbst, 1784) VU (EN) § R¹

This scarce species of click beetles is quite often observed only in „classic“ sites Kremnické vrchy Mts – SAC Boky (latest observation on March 4, 2014) and Pliešovská

basin – SAC Gavurky. Its occurrence is expected in the further well-preserved habitats: Sekierska and Neresnická valleys, Poštárka hill.

Melandrya barbata (Fabricius, 1792) EN (EN) §

A very rare saproxylic species considered to be a relict of ancient forests. Hitherto documented only once: Javorie Mts – Michalková, May 29, 2011, 3 specimens shaken down from the drying branch of *Quercus cerris*.

Menophilus cylindricus (Herbst 1784) (RE*) § R¹

A rare species, known from „classic“ locality Pliešovská kotlina – SAC Gavurky (Franc 1992a); during years 2008 – 2014 I observed it sporadically in evening from May to June. M. Wiezik found it in the new site Javorie Mts – Sekierska dolina in 2011 (Wiezik in verb.). The further locality was recently discovered in the Štiavnické vrchy Mts – Voznická valley, June 6, 2014, under the bark of a rotten pine (Franc 2015, in press). *A note: Recently it was re-discovered in the Czech Republic (Krásenský & Zýka 2014), obviously it will be reclassified to category at least EN.

Necydalis ulmi Chevrolat, 1838 EN (CR) § R¹

A very rare conspicuous species resembling a large ichneumonid, considered to be a faunal jewel. Only one record is available: Javorie Mts – 1 km north-easterly from SAC Gavurky, July 2, 2009, 1 specimen hatching out from damaged beech.

Oryctes nasicornis holdhausi Minck, 1914 VU (EN) §

A rare stenoeccious species, originally occurred in hollows of older deciduous trees, recently it is found more likely in sawmills, but here is over the barrel of workers and managers. The population in the sawmill „Uľanka“ near Banská Bystrica town had been totally killed off by employees of this sawmill more than 10 years ago, despite it is a protected species (Franc in verb.). Only one night observation was happened: Kremnické vrchy Mts – SAC Boky, 2 specimens at the base of old oak July 5, 2010, together with larval grub holes of *Cerambyx cerdo*. Recently it lives only locally and rarely in the wilderness.

Sitaris muralis (Forster, 1771) VU (Ø?) §

Kremnické vrchy Mts – Turová village, August 14, 2009, 1 specimen on the wall of an old house (leg. Havierová, det. Potocký), August 2010, 4 specimens, September 2014, 1 specimen (similar circumstances), Zvolenská basin – Očová village, August 2011, on the old wall again; Zvolen – Bariny, 2012, 1 specimen dead on the pavement (Wiezik in verb.), Zvolen town – the main square, September 2014, on the wall of the church (Wiezik in verb.).

Trichopherus pallidus (Olivier, 1790) VU (CR) §

A rare species of open oak forests, formerly had been considered to be extremely rare (Heyrovský 1955). Very sporadically observed due to its nocturnal activity. Recent records from studied territory are known from Neresnická valley and SAC Gavurky (Zach in verb.). I have found it in Javorie Mts – Neresnická valley on June 12, 2014, remains of an adult under the bark of a dead oak; and then its occurrence here is proved.

Additional non-protected but notable species

Acanthocinus aedilis (Linnaeus, 1758)

Kremnické vrchy Mts – Turová, April 6, 2009, cut out from the fuelwood. A remarkable finding of the species abundant elsewhere (the Záhorie region). In the rest of the Slovakian territory it is infrequent, living especially in secondary pine forests (SLÁMA 1998).

Acanthocinus reticulatus (Razoumovsky, 1789) LR: cd (CR) (fig. 11)

Kremnické vrchy Mts – Sielnická dolina: Sovné, December 31, 2009, 1 hibernating adult together with *Opilo mollis* and *Attagenus punctatus*; SAC Mláčky, May 25, 2008, 2 specimens on lying fir together with *Xylita livida*, larvae under the bark of fir April 24, 2014 in the same site.



Fig. 11. *Acanthocinus reticulatus*
(photo P. Potocký)



Fig. 12. *Rhopalopus clavipes*
(photo V. Hruz)

Anthaxia manca (Linnaeus, 1767) VU (EN)

Zvolenská kotlina – Ostrá Lúka, the wood store near the Hron river, May 22, 2014 on the elm (*Ulmus*) stem 1 specimen. Found also in the Kremnické vrchy Mts – SAC Boky, 1 specimen on elm (WIEZIK 2014).

Bolitophagus interruptus (Illiger, 1800) VU (RE) R¹

Zvolen – Červený medokýš, March 8, 2009, 1 adult in old fungus *Ischnoderma resinoseum* growing on old beech (together with *Mycetoma suturale*); Poľana Mts – Dudáš, March 20, 2009, several individuals on a bracket fungus growing on the fir. The latest record is remarkable: Zvolen – foot of the Pustý hrad hill, under the bark of an elder near the Hron river, on the bracket fungus *Panellus serotinus* October 26, 2013, V. Franc leg. (unpublished).

Camptorhinus simplex Seidlitz, 1867 EN

Kremnické vrchy Mts – SAC Boky, July 5, 2010, 3 specimens flown in the night towards light together with *Stenagostus rhombeus*.

Camptorhinus statua (Rossi, 1790) VU (EN) R¹ (fig. 13)

This species was documented merely in well-known sites: Kremnické vrchy Mts – SAC Boky, May 27, 2014, 1 specimen accidentally shaken down from drying oak; and Pliešovská kotlina – SAC Gavurky, where was observed in evening every year 2008 – 2014 in May and June.

Cyrtanaspis phalerata (Germar, 1831) (VU)

Zvolen – Zálužná, June 4, 2014, 1 specimen shaken down from *Sorbus aria*. A lesser known and infrequent species.

Dendrophagus crenatus (Paykull, 1799) VU (EN)

Kremnické vrchy Mts – SAC Mláčky and surroundings, April 12, 2009 and April 28, 2009, several dead individuals under the bark of fir. A rare montane species, its occurrence is expectable in higher altitudes of Poľana Mts.

Derodontus macularis (Fuss, 1850) EN (– ?) R² (fig. 14)

Poľana Mts – NR Pod Dudášom, November 8, 2013 and November 14, 2014, 3 specimens together with *Mycetoma suturale* on the bracket fungi *Ischnoderma*. A very rare and sporadic species, considered to be a relict of ancient forests.

Diacanthous undulatus (De Geer, 1774) (EN)

Kremnické vrchy Mts – SAC Mláčky, April 28, 2009, 1 specimen (ex pupa), under the bark of a dead fir stem. A rare montane and boreal species, it is one of the most southerly situated localities in Slovakia (compare with Mertlík 2007, a faunistic map of the species).



Fig. 13. *Camptorhinus statua*
(photo P. Potocký)



Fig. 14. *Derodontus macularis*
(photo V. Hruz)



Fig. 15. *Tereus opacus*
(photo V. Hruz)

Dromaeolus barnabita (A. et G. B. Villa, 1838) VU (EN)

Pliešovská kotlina – SAC Gavurky, July 2, 2009, 2 specimens, being very active on drying branches of *Betula* during warm noon weather; Zvolen – Neresnická valley, July 15, 2014, 1 adult caught in flight. A rare species of open warmer well-preserved forest habitats.

Eledonoprius armatus (Panzer, 1799) VU (CR) R¹

Kremnické vrchy Mts – SAC Boky, June 19, 2009, several specimens in bracket fungi on oaks; Zvolen – Červený medokýš, March 20, 2011, similar circumstances. A rare species of warmer well-preserved forest habitats.

Endophloeus markovichianus (Piller & Mitterpacher, 1783) VU (– ?)

A smaller scarce species, nevertheless conspicuous due to its cryptic coloration, resembling a flake of bark. Known from two sites: Kremnické vrchy Mts – SAC Boky, June 19, 2009 and March 4, 2014, several specimens under the bark of oaks infected by mycelium and in the hornbeam (*Carpinus betulus*) as well, P. Potocký leg.; Javorie Mts – Podholienec, under the bark of solitary oak March 2, 2014, V. Franc leg. (unpublished). Its distribution is probably wider, having a hidden way of life.



Fig. 16. *Endophloeus markovichianus* (photo P. Potocký)

Gnorimus variabilis (Linnaeus, 1758) VU (EN)

Kremnické vrchy Mts – SAC Boky, regularly almost every year observed remains of adults and larvae; Pliešovská basin – SAC Gavurky, July 2, 2009, 1 specimen on a fallen oak stem (remains of adults are often observed); Javorie Mts – Michalková: Pavlová, June 12, 2014, several hatched out adults under the bark of an old lying oak; Zvolen – Poštárka hill, June 6, 2012, remains of adults in the wet rotten oak wood; Zvolen – Sekierska valley, June 12, 2014, remains of an adult under the bark of a lying oak; Zvolen – Neresnická valley, July 15, 2014, similar circumstances.

Isorhipis melasoides (Laporte de Castelnau, 1835) VU (EN)

Kremnické vrchy Mts – Hrabiny, approx. 1 km northerly from SAC Boky, May 23, 2012, 1 specimen on a lying beech stem; Turová – Lehotská valley, June 22, 2008, 1 specimen on a stock of fuelwood.

Isotomus speciosus (Schneider, 1787) (EN)

Kremnické vrchy Mts – SAC Boky, January 25, 2009, remains of an adult under the bark of an oak. It is one of the northernmost recent records from Slovakia.

Mycetoma suturale (Panzer, 1797) (CR) R²

Kremnické vrchy Mts – SAC Boky, March 8, 2008, several specimens in bracket fungus *Ischnoderma* sp. growing on oaks *Quercus cerris*; Zvolen – Červený medokýš, March 8, 2009, approximately 10 dead specimens in old fungus *Ischnoderma* growing on a beech, together with *Bolitophagus interruptus* (observed during winter 2012 and 2014 as well); Poľana Mts – NR Pod Dudášom, November 8, 2013 and November 14, 2014 on the fungus *Ischnoderma* growing on the beech together with *Derodontus macularis*.

Pelecotoma fennica (Paykull, 1799) VU (CR)

Kremnické vrchy Mts – Turová village, June 30, 2012, 1 specimen under the damaged bark of a lime. Notable and probably the northernmost record in Central Slovakia.

Platypus oxyurus Dufour, 1843 VU (–)

Kremnické vrchy Mts – SAC Mláčky, March 21, 2010 and August 1, 2010. A rare species with apparently disjunctive range, in Slovakia it occurs probably in the Kremnické vrchy Mts (Zach in verb.).

Rhopalocerus rondanii (A. et G. B. Villa, 1833) VU (EN) R²

A rare species of ancient forests but old parks as well, often living near the colonies of ants *Lasius brunneus*. Two records are accessible Javorie Mts – Michalková: Pavlová, April 12, 2014, 1 specimen in the white rotten wood of a beech (Potocký leg.); Zvolen – Zálužná, similar circumstances June 17, 1985 (Franc 1995). It is notable, that strong population had been observed directly in the urban park in the Banská Bystrica town in 1991 (Franc 1992b).

Rhopalopus clavipes (Fabricius, 1755) VU (RE) (fig. 12)

Zvolenská basin – Budča village, July 16, 2009, 1 dead specimen on the road (leg. Havierová); Zvolen – urban area, July 6, 2012, 1 dead specimen on the pavement, and on July 11, 2014 was found accidentally in the garret of a building (leg. Fabriciusová, det. Potocký). A little known species in studied area and elsewhere.

Teredus opacus Habelmann, 1854 EN (CR) (fig. 15)

Pliešovská kotlina – SAC Gavurky, sporadically observed during night already several years, together approximately 12 specimens (Franc 1992a, unpubl.). One of the rarest beetles of Slovakia and Central Europe.

Ulorhinus bilineatus (Germar, 1818) VU (VU)

Zvolen – Zálužná, June 7, 2009, 1 specimen under the bark of rotten beech branches together with relatives *Tropideres albirostris* and *Platyrhinus resinosus*.

Xylophilus corticalis (Paykull, 1800) VU (CR)

Kremnické vrchy Mts – Turová village, June 30, 2012, 1 dead specimen under the damaged bark of a lime.

Xylotrechus capricornis (Gebler, 1830) (EN)

Pliešovská kotlina – SAC Gavurky, July 2, 2009, 1 dead specimen under the bark of a birch (*Betula*) together with many hatching holes.

Conclusions

The territory of the Zvolen district is relatively well-researched from an entomological point of view. Several sites in this area, especially SAC Gavurky and SAC Boky, are considered to be ‘cult’ localities, because they are extraordinarily rich from the biodiversity point of view and plenty of rare and threatened beetles (and another insects and spiders) occur here.

During field research, carried out over approximately the last 10 years, I have documented a lot of remarkable species. The rarest and most notable beetle species include *Ampedus quadrisignatus*, *Apalus bimaculatus*, *Aporthopleura* (= *Orthopleura*) *sanguinicolis*, *Boros schneideri*, *Camptorhinus simplex*, *Camptorhinus statua*, *Derodontus macularis*, *Dromaeolus barnabita*, *Dircaea australis*, *Limoniscus violaceus*, *Melandrya barbata*, *Menophilus cylindricus*, *Necydalis ulmi*, *Pelecotoma fennica*, *Pseudogaurotina excellens*, *Teredus opacus* and *Trichoferus pallidus*.

Apalus bimaculatus, *Camptorhinus simplex*, *Cyrtanaspis phalerata*, *Derodontus macularis*, *Duvalius microphthalmus microphthalmus*, *Melandrya barbata*, *Necydalis*

ulmi, *Pelecotoma fennica* and *Pseudogaurotina excellens* are the first seriously localised records for the Zvolen district.

Protected beetle species in Slovakia recently include 109 species and 6 genera. Directly in the Zvolen district I have proved 27 species that means nearly 30 % of the beetle fauna protected by law. They are mostly bioindicative significant species and studied habitats are suitable and highly significant for their survival. And therefore the most valuable sites have been rightly assigned to the network of sites of European importance under the program NATURA 2000.

Rarity of each species is a relative matter, of course. It should be noted that species protection has virtually no meaning without their habitat. Protected areas have how-such guarantees that they will remain undisturbed. But, on the other hand, the urgent need of preservation of such “non-protected” sites, potentially threatened by human impacts, is urgent; the areas concerned include Poštárka hill, Pustý hrad hill, Sekierska valley, Neresnická valley, Zálužná hill and the valley of Slatina. These remarkable places deserve our attention, but preserving the exceptional biodiversity of these sites across its width is only possible by leaving them for self-development, without major human impacts (the best solution is to ensure their territorial protection with completely non-intervention regime).

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References

1. Farkač J., Král D. & Škorpík M. (eds.), 2005: Červený seznam ohrožených druhů České republiky. Bezobratlí. Agentura ochrany přírody a krajiny ČR, Praha, 760 pp.
2. Franc V., 1992a: Chrobáky navrhovaného CHA Gavurky. In: Kol., 1992: Projektová dokumentácia návrhu CHN Gavurky, manuscript, archív SAŽP – COPK, Banská Bystrica.
3. Franc V., 1992b: Interesting findings of beetles (Coleoptera) in the urban area of Banská Bystrica (Slovakia). Acta Universitatis Carolinae, Biologica 35: 229-237.
4. Franc V., 1995: O výskyte a bioindikačnom využití niektorých vzácných druhov čeľade Colydiidae (Coleoptera) na Slovensku. Ochrana prírody 13: 173-181.
5. Franc V., 2015: Numerous record of a rare and little-known species *Abdera triguttata* (Gyllenhal, 1910) (Coleoptera: Melandryidae) in the Štiavnické vrchy Mts. Naturae Tutela (in press)
6. Heyrovský L., 1955: Tesaříkovití – Cerambycidae. Fauna ČSR, 5. Nakladatelství ČSAV, Praha, 347 pp.
7. Holecová M. & Franc V., 2001: Červený (ekosozologický) zoznam chrobákov (Coleoptera) Slovenska. In: Baláž D., Marhold K. & Urban P. (eds) Červený zoznam rastlín a živočíchov Slovenska, Ochrana prírody 20 (Suppl.): p. 111-128.
8. Jelínek J. (ed.), 1993: Check-list of Czechoslovak insects IV (Coleoptera). Folia Heyrovskyana (Praha) Suppl. 1, 172 pp.
9. Kočárek P., 2000: *Emus hirtus* in Slovakia – on the recent occurrence of endangered species (Coleoptera: Staphylinidae), Entomofauna carpathica, 12: 34-36.

10. Krásenský P. & Zýka M., 2014: První nálezy potemníka *Menephilus cylindricus* (Herbst, 1784) (Coleoptera: Tenebrionidae) na Moravě. Západočeské entomologické listy (Plzeň) 5: 114-116.
11. Majzlan O., 2005: Bezstavovce. In: Polák P. & Saxa A. (eds.): Priaznivý stav biotopov a druhov európskeho významu, 340 pp.
12. Mertlík J., 2007: Faunistické mapy druhů čeledí Cerophytidae, Elateridae, Lissomidae, Melasidae a Throscidae (Coleoptera: Elateroidea) České republiky a Slovenska [The faunistic maps of the family Cerophytidae, Elateridae, Lissomidae, Melasidae and Throscidae (Coleoptera: Elateroidea) of Czech and Slovak Republics]. Elater o. s. Permanentní elektronická publikace k dispozici na: <http://www.elateridae.com>.
13. Müller J., Bußler H., Bense U., Brustel H., Flechtner G., Fowles A., Kahlen M., Möller G., Mühle H., Schmidl J. & Zabransky P., 2005: Urwald relict species – Saproxylic beetles indicating structural qualities and habitat tradition. Waldecologie online, Heft 2, p. 106-113.
14. Potocký P., 2010: Chránené chrobáky (Coleoptera) Chránenej krajinej oblasti – Biosférickej rezervácie Poľana. In: Midriak R. (ed) Biosférické rezervácie na Slovensku VIII, Zborník referátov, Zvolen, p. 121-128.
15. Potocký P., 2014: Monitoring druhov chrobákov európskeho významu (Coleoptera) v územnej pôsobnosti Správy CHKO Poľana v rokoch 2008 až 2014. (Unpubl., depon. na Správe CHKO Poľana)
16. Sláma E. F. M., 1998: Tesaříkovití (Cerambycidae) České republiky a Slovenské republiky (Brouci – Coleoptera). Krhanice, 385 pp.
17. Wiezik M., 2014: Ekosozologicky a faunisticky významné saproxylické druhy chrobákov vybraných území európskeho významu v územnej pôsobnosti Správy CHKO BR Poľana, 7 pp. (Unpubl., depon. na Správe CHKO Poľana)