

**Recent occurrence of *Perotis lugubris* (Coleoptera: Buprestidae)
in the Czech Republic**

**Aktuální výskyt krasce hnědého (*Perotis lugubris*) (Coleoptera: Buprestidae)
v České republice**

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Abstract. *Perotis lugubris* (Fabricius, 1777) is a large, conspicuous jewel beetle associated with fruit trees in Europe and Western Asia. In Central Europe, it used to occur as far north as Silesia. During the 20th century, however, the range of this species contracted substantially. It has disappeared from Poland and was considered extinct in the Czech Republic. We report recent findings of *P. lugubris* from southern Moravia, and discuss the conservation status of the rediscovered population.

INTRODUCTION

Perotis lugubris (Fabricius, 1777) is a large, conspicuous jewel beetle distributed in southern, central and eastern Europe and western and central Asia (Kubáň 2006). It inhabits thermophilous semi-open habitats such as shrublands, open woodlands, orchards and gardens. Its larvae are reported from the roots and bases of several broadleaved shrubs and trees including e.g. *Arbutus*, *Malus*, *Pistacia* and *Prunus* (Bílý 2002).

On the territory of the Czech Republic, the species has been reported from several sites in southern Moravia, including Brno, Klobouky, Oslavany (Reitter 1870), and Židlochovice (Hoffer 1936) in the 19th and first half of the 20th century. The latter author reports the mass occurrence of *P. lugubris* in 1935 on Výhon hill, when adult beetles damaged shoots of *Prunus armeniaca*. The species was, however, reported as far north as Krnov region in Silesia (Koschatzky 1821) and adjacent southern Poland (Reitter 1870). An old, rather dubious record comes also from the vicinity of Písek in southern Bohemia (Kletečka 2009). The most recent report comes from 1985, when R. Kyliès found the beetle near Mikulov (Schles 1988).

P. lugubris was reported as declining in Moravia already during the first half of the 20th century (Fleischer 1930) and it had disappeared from most of Central Europe by the end of the 20th century. The species was listed as regionally extinct in the Czech Republic (Škorpík 2005) and as requiring confirmation in Poland (Burakowski et al. 1987). Currently, *P. lugubris* is listed as critically endangered in the Czech Republic (Škorpík 2017). The change of status was based on the findings reported here, without further information. Given the lack

of records, the continued presence of the species in the Czech Republic was doubtful. For this reason, we present recent findings of the species from Moravia.

RESULTS

On 6.vii.2016, the first author photographed a large brown jewel beetle on a leaf of *Prunus spinosa* on Výhon hill above Židlochovice, southern Moravia (Fig. 1). The beetle was later identified as *Perotis lugubris* by L. Čížek. A female was collected nearby from *Prunus* sp. on 27.vii.2016 by V. Kubáň (Šlapanice, Czech Republic), and yet another individual was observed on *Prunus* sp. by L. Čížek on 6.viii.2016.

DISCUSSION

The records presented from Výhon hill confirm the presence of *Perotis lugubris* in the Czech Republic. It is noteworthy that the species was found at the same site where its mass occurrence was reported in the 1930s (Hoffer 1936), after several decades without records.

The area around Výhon hill is one of the few remnants of traditional small-scale agricultural landscape mosaics in the Czech Republic. It encompasses large tracts of extensively managed orchards and gardens with various fruit trees, predominantly apricots (*Prunus armeniaca*). The locality of *P. lugubris* is a part of the Výhon Nature Park, which is an important refuge for thermophilous steppic flora and fauna. The close proximity of the area to the city of Brno makes it attractive for development, but land use intensification or abandonment are probably the main threats to the population of this rare beetle.

Despite a focused search, beetles and exit holes were only found within a very small area (V. Kubáň, Šlapanice, pers. comm.). The surviving population is thus probably small and of very restricted distribution. To facilitate its survival, management should focus on retaining existing old fruit trees (apricots, plums) and pruning of large individuals of *Prunus spinosa* in order to allow sunlight to reach their bases. Planting of young fruit trees is also necessary. Grass mowing or grazing should also be maintained.

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REFERENCES

- BÍLÝ S. 2002: Summary of the bionomy of the Buprestid beetles of Central Europe (Coleoptera: Buprestidae). *Acta Entomologica Musei Nationalis Pragae*, **Supplementum 10**: 1–103.
- BURAKOWSKI B., MROCZKOWSKI M. & STEFAŃSKA J. 1987: *Katalog fauny Polski, Tom 14: Chrząszcze – Coleoptera, Cucujoidea 3*. [Catalogue of Polish fauna, Volume 14: Beetles – Coleoptera, Cucujoidea 3]. Państwowe wydawnictwo naukowe, Warszawa, 309 pp. (in Polish).
- FLEISCHER A. 1927–1930: *Přehled brouků fauny Československé republiky*. [Overview of beetle fauna of the Czechoslovak Republic]. Moravské museum zemské, Brno, 485 pp. (in Czech).
- HOFFER A. 1936: K abnormálnímu výskytu *Perotis lugubris* Fbr. na jižní Moravě. [On the outbreak of *Perotis lugubris* in southern Moravia]. *Časopis Československé Společnosti Entomologické* **33**: 188 (in Czech).
- KLETEČKA Z. 2009: Krascovití (Buprestidae) v jižních Čechách. [Jewel beetles (Buprestidae) of South Bohemia]. *Sborník Jihočeského Muzea v Českých Budějovicích, Přírodní Vědy* **49 (Supplementum)**: 1–143 (in Czech).
- KOSCHATZKY K. 1821: Naturhistorische Wanderungen in den Jägerndorfer und heimatlichen Gegenden, geschildert in Briefen an einen Freund in *****h. *Hesperus, Encyclopaedische Zeitschrift für Gebildete Leser* (Prag) **30** (17): 129–136, **30** (19): 146–151, **30** (20): 156–160, **30** (23): 177–184, **30** (26): 203–207.



Fig. 1. Individual of the jewel beetle *Perotis lugubris* (Fabricius, 1777) on a leaf of blackthorn (*Prunus spinosa*) on Výhon hill near Židlochovice, Czech Republic. Photo by J. Roleček.

Obr. 1. Krasec hnědý (*Perotis lugubris* (Fabricius, 1777)) na listu trnky (*Prunus spinosa*) na kopci Výhon nad obcí Židlochovice. Foto: J. Roleček.

KUBÁŇ V. 2006: Family Buprestidae Leach, 1815: tribe Dicerini Gistel, 1848. Pp. 346–350. In: LÖBLI. & SME-TANAA. (eds): *Catalogue of Palaearctic Coleoptera 3: Scarabaeoidea, Scirtoidea, Dascilloidea, Buprestoidea, Byrrhoidea*. Apollo Books, Stenstrup, 690 pp.

REITTER E. 1870: *Uebersicht der Käfer-Fauna von Mähren und Schlesien*. Verhandlungen des naturforschenden Vereines in Brünn, Brünn, vii + 195 pp.

SCHLES R. 1988: *Zpráva o výskytu několika vzácnějších druhů, převážně brouků z CHKO Pálava*. [Letter to administration of Pálava Protected Landscape Area listing some rarer species, mostly beetles from Pálava]. Unpubl. msc., deposited in the Administration of the Pálava Protected landscape area, Mikulov, 1 p. (in Czech).

ŠKORPÍK M. 2005: Buprestidae (krascoviti). Pp. 464–468. In: FARKAČ J., KRÁL D. & ŠKORPÍK M. (eds): *Červený seznam ohrožených druhů České republiky. Bezobratlí. List of threatened species in the Czech Republic. Invertebrates*. Agentura ochrany přírody a krajiny ČR, Praha, 760 pp. (in Czech and English).

ŠKORPÍK M. 2017: Buprestidae (krascoviti). Pp. 289–294. In: HEJDA R., FARKAČ J. & CHOBOT K. (eds): *Červený seznam ohrožených druhů České republiky. Bezobratlí. Red List of threatened species in the Czech Republic. Invertebrates. Příroda (Praha) 36: 1–612 (in Czech and English).*

SOUHRN

Krasec hnědý (*Perotis lugubris* (Fabricius, 1777)) je nápadným druhem lesostepí a sadů západního Palearktu. Ve střední Evropě zasahoval severně až do Slezska, ale během 20. století výrazně ustoupil. Vymizel z Polska a za vyhynulého byl považován také v České republice. Nedávno však byl na našem území znovu nalezen. Uvádíme okolnosti nálezů a diskutujeme možnosti ochrany brouka u nás.

