

***Dryocoetes himalayensis* (Coleoptera: Curculionidae: Scolytinae), a new bark beetle species for Slovakia and Austria, and its occurrence in the Czech Republic**

***Dryocoetes himalayensis* (Coleoptera: Curculionidae: Scolytinae), nový druh kůrovce pro Slovensko a Rakousko, a jeho výskyt v České republice**

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Abstract. We present new records of *Dryocoetes himalayensis* Strohmeier, 1908 from Central Europe. This alien species of bark beetle, native in Himalayan region, has been recorded in one locality in Slovakia (Brestovany, Trnava Region), two localities in Lower Austria (Marchegg and Drösing, Weinviertel Region) and four localities in the Podyjí National Park (Czech Republic). The species has been spreading throughout Central Europe in recent years, and further expansion is expected.

INTRODUCTION

Dryocoetes himalayensis Strohmeier, 1908 is an invasive species with poorly known ecology (Foit et al. 2017). It is native to the Himalayan region of India, in Kashmir (type locality (Strohmeier 1908)), Uttar Pradesh and Uttarakhand (Wood & Bright 1992, Maiti & Saha 2009) and Pakistan (M. Knízek det., unpublished). This species is known to develop in *Juglans regia* and *Pyrus lanata* in the Himalayan region (Wood & Bright 1992). Association with oaks has been suggested in Europe, as it was always collected in or near oak stands (Knízek 2011), but development in *Juglans nigra* was discovered and confirmed by Foit et al. (2017) in southern Moravia. *D. himalayensis* was reported on the basal parts of the trunks with thick bark, mostly in section up to 4 metres above the ground (Foit et al. 2017). Due to similar body shape and long hairs *D. himalayensis* can be confused with the native species, *D. villosus* (Fabricius, 1792), from which can be distinguished by some morphological

characteristics (Gebhart & Bense 2016). The first interstice in the distal part of the elytra is broadened and the elytral declivity is matt in *D. villosus*, whereas it is parallel and shining in *D. himalayensis*. For a thorough comparison of *D. himalayensis* with native Central European species of the genus *Dryocoetes* see Gebhart & Bense (2016).

RESULTS

We present the first record of *D. himalayensis* for Slovakia: Slovakia occ., Trnava Region, Brestovany (7672), 48°23'03"N 17°41'23"E, Rošlímska street, 7.vii.2017, 1 spec., attracted to light in the yard, R. Stejskal lgt., coll. M. Knížek, J. Procházka det., M. Knížek revid. We also present the first records of *D. himalayensis* for Austria: Lower Austria, Weinviertel Region, Gänserndorf District, Drösing floodplain, Drösingwald, 48°32'02"N 16°56'00"E, 11.viii.2016, 1 spec., flight interception trap, D. Hauck, O. Konvička & L. Čížek lgt., coll. M. Knížek, J. Procházka det., M. Knížek revid.; Lower Austria, Weinviertel Region, Gänserndorf District, Marchegg, WWF Naturreservat Marchegg, 48°19'01"N 16°53'03"E, 11.viii.2016, 1 spec., flight interception trap, D. Hauck, O. Konvička & L. Čížek lgt., coll. M. Knížek, J. Procházka det., M. Knížek revid.

We present the first known records from Podyjí National Park: Moravia mer., Znojmo District, Hnanice env. (7161), 48°48'08"N 15°57'57"E, oak forest near Daniž stream, 15.v., 30.vi. and 1.ix.2015, 3 spec., flight interception trap, D. Kopr lgt., coll. J. Schlaghamerský, J. Procházka det.; Znojmo District, Popice env. (7162), 48°49'22"N 16°00'00"E, oak forest near Havranické vřesoviště, 15.v.2015, 2 spec., 16.vi.2015, 1 spec., flight interception trap, D. Kopr lgt., coll. J. Schlaghamerský, J. Procházka det.; Znojmo District, Havraníky env. (7162), 48°48'43"N 16°00'32"E, garden, 1. and 3.viii.2017, 2 spec., attracted to UV light, R. Stejskal lgt. et coll., J. Procházka det., M. Knížek revid. (Fig. 1); Znojmo District, Hradiště (7162), 48°51'29"N 16°1'45"E, forest near Pivovarský brook, 11.vii. 2017, 1 spec., attracted to UV light, R. Stejskal lgt. et coll., J. Procházka det., M. Knížek revid.

To illustrate the invasion of the species we also mention records from other south Moravian sites ordered by faunistic squares: Brno-city District, Brno-Medlánky (6765), Chateau park, flight interception trap placed on oak, 3.viii.–31.viii.2017, 1 spec., J. Kašák lgt., det. et coll.; Břeclav District, Uherčice-Kolby (7065), 48°57'21"N 16°38'29"E, 12.–28.vi.2013, 1 spec., flight interception trap, D. Hauck, O. Konvička & L. Čížek lgt., coll. L. Čížek, J. Procházka det., M. Knížek revid.; Znojmo District, Znojmo (7162), 48°51'28"N 16°03'04"E, Horní park, 20.vi.2017, 1 spec., attracted to UV light, R. Stejskal lgt. et coll., J. Procházka det., M. Knížek revid.; Hodonín District, Hodonín (7168), 48°50'49"N 17°09'01"E, 17.vii.–9.viii.2013, 1 spec., flight interception trap, D. Hauck, O. Konvička & L. Čížek lgt., coll. L. Čížek, J. Procházka det., M. Knížek revid.; Břeclav District, Pohansko (7267), 48°43'53"N 16°54'05"E, pitfall trap placed in the cavity of an old oak, 16.vii.2010, 1 spec., J. Budka lgt., coll. J. Schlaghamerský (Masaryk University, Brno, Czech Republic), J. Procházka det.

DISCUSSION

In Europe, *Dryocoetes himalayensis* was first recorded from France and Switzerland in 1975 and 1980 (Knížek 2011). It spread to other countries and became established on the continent (Kirkendall & Faccoli 2010, Knížek 2011). Recent records are known from Germany,



Fig. 1. *Dryocoetes himalayensis* Strohmeyer, 1908. Imago from the Podyjí National Park, R. Stejskal lgt. Body size 2.4 mm. Photo: J. Procházka.

Obr. 1. *Dryocoetes himalayensis* Strohmeyer, 1908. Imago z Národního parku Podyjí, R. Stejskal lgt. Velikost 2,4 mm. Foto: J. Procházka.

Switzerland (Gebhart & Bense 2016) and France (Noblecourt 2014, Rassati et al. 2016). We present the first records of the species from Slovakia and Austria (Fig. 2). *D. himalayensis* was first recorded in the Czech Republic in 2009 (Knížek 2011) and so far, it is known only from southern Moravia. Knížek (2011) presents a record from Pavlov-Dívčí Hrad (Břeclav District), Foit et al. (2017) from Vranovice (Brno-country District). We show the expansion of the species to several other sites in southern Moravia, including the Podyjí National Park. In general it seems that *D. himalayensis* is spreading eastwards (Fig. 2), but more data especially from Germany is needed to better understand the direction of its expansion. The state of knowledge could be affected by high sampling effort and also by overlooking of the species in some areas. As *Juglans* was found to be the host tree both in the Czech Republic (Foit et al. 2017) and in the place of origin (Wood & Bright 1992), it can be assumed that *D. himalayensis* breeds on this host in other European locations, and will spread to places where *Juglans* trees are cultivated. More individuals of *D. himalayensis* were found in oak forests in the Podyjí National Park (localities Hnanice and Popice), and one individual was found

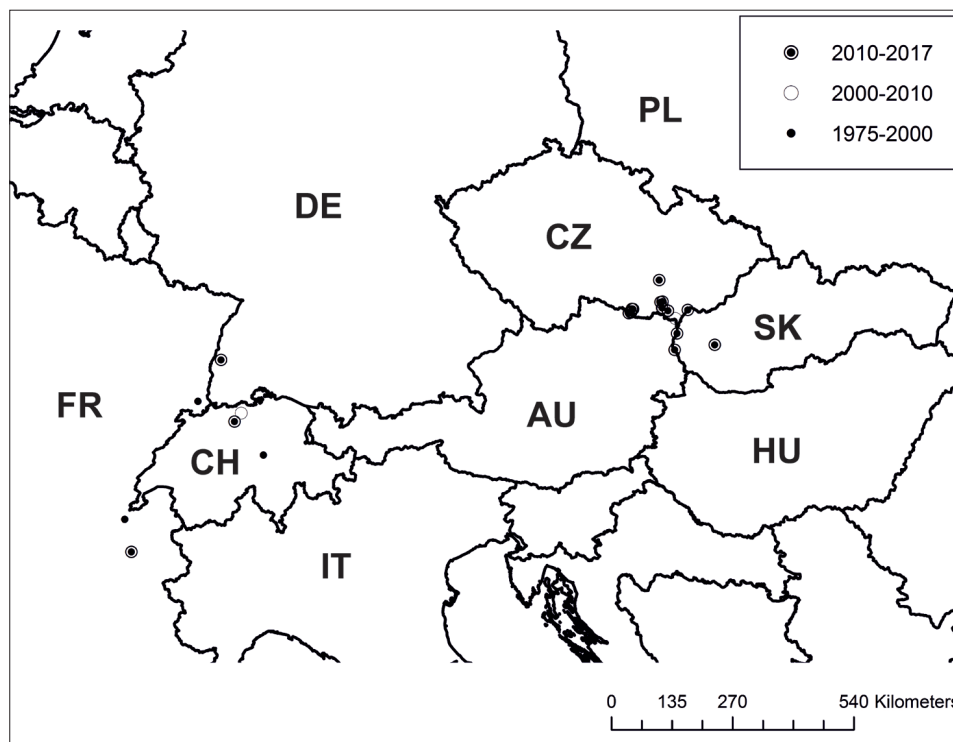


Fig. 2. Distribution of *Dryocoetes himalayensis* Strohmeyer, 1908 in Europe. Map based on published records (Knížek 2011, Gebhart & Bense 2016, Foit et al. 2017) and on our findings.

Obr. 2. Rozšíření kůrovce *Dryocoetes himalayensis* Strohmeyer, 1908 v Evropě. Mapa je založena na publikovaných datech (Knížek 2011, Gebhart & Bense 2016, Foit et al. 2017) a na našich nálezech.

accidentally in a pitfall trap placed inside the cavity of an old oak near Pohansko castle. These records support the hypothesis of Knížek (2011) that this bark beetle may also be associated with oak trees, but further research is needed.

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SOUHRN

Kůrovec *Dryocoetes himalayensis* Strohmeier, 1908 se přirozeně vyskytuje v Himalájích. V Evropě byl tento druh zaznamenán v roce 1975 ve Francii a v roce 1980 ve Švýcarsku, od roku 2009 je znám i z České republiky (Knížek 2011). V tomto článku prezentujeme nové nálezy ze střední Evropy. Výskyt *D. himalayensis* byl potvrzen na jedné lokalitě na Slovensku (Brestovany, okres Trnava), dvou lokalitách v Dolním Rakousku (Marchegg a Drösing, Weinviertel Region) a čtyřech lokalitách v Národním parku Podyjí. Dále uvádíme několik nových nálezů z jižní Moravy. Ve své domovině se *D. himalayensis* vyvíjí v ořešáku královském (*Juglans regia*) a v hrušni *Pyrus lanata* (Wood & Bright 1992). Na jižní Moravě byl potvrzen vývoj v ořešáku černém (*Juglans nigra*) (Foit et al. 2017). Nálezy z dubových porostů v NP Podyjí a nález jednoho exempláře v padací pasti v dutině dubu na Pohansku podporují předpoklad Knížka (2011), že *D. himalayensis* se vyvíjí i na dubech.