

First sightings of *Ruspolia nitidula* (Orthoptera: Tettigoniidae) and *Mecostethus parapleurus* (Orthoptera: Acrididae) after fifty years in the Czech Republic

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Abstract

Ruspolia nitidula (Scopoli, 1786) and *Mecostethus parapleurus* (Hagenbach, 1822) are species with similar requirements – both are hygrophilous and prefer mainly wet lowland meadows (KOČÁREK et al. 2005). Besides that, they are thermophilous. In the Czech Republic they occurred at the margin of their ranges and became extinct in the 1950s (HOLUŠA & KOČÁREK 2005). Now, after fifty years, these species appeared in southern Moravia lowlands. The probable reason for the current range expansion to the north are the global warming in the last decades.

Zusammenfassung

Nach über fünfzig Jahren wurden *Ruspolia nitidula* (Scopoli, 1786) und *Mecostethus parapleurus* (Hagenbach, 1822) im Jahr 2006 erstmals wieder in Tschechien nachgewiesen. Der Hauptgrund für die Wiederbesiedlung des Südostens Tschechiens dürfte die Klimaerwärmung der zurückliegenden Jahrzehnte sein.

***Ruspolia nitidula* (Scopoli, 1786)**

R. nitidula is a stenotopic hygrophilous species living on swampy meadows and the edges of cut-off canals and is distributed in northern Africa, southern Europe and Palearctic Asia (KOČÁREK et al. 2005). In the Czech Republic, only MAŘAN (1965) reported the occurrence of this species for Pouzdřany and Věstonice (Fig. 1). Since that time, no other occurrence has been recorded, despite the fact that the suitable habitats are still common in this territory (*Phragmites* stands). CHLÁDEK (1995) considered this species endangered due to the long absence of any records, and we also consider it critically endangered in our current red-list (HOLUŠA & KOČÁREK 2005).

In 2006, presence of *R. nitidula* was recorded in two areas: Sedlec (surroundings of the pond Nesyt) and Lanžhot (see below, Fig. 1). It seems that the abundance is low (although the use of a bat detector is necessary for precise observation) because no singing male was observed after the collection of several specimens in Doubravka near Lanžhot (see below). Based on the low abundance we assume that this spreading is recent. Although many suitable habitats (edges of streams and rivers, ox bows, wet meadows etc.) exist in the floodplain forests near Lanžhot, it should be still classified as critically endangered in the Czech Republic.

Published data

Pouzdrány (7065), 23.8.1956, 0 (male)/1(female) (MAŘAN 1965);

Věstonice (7165), 24.8.1956, two nymphs (MAŘAN 1965).

Unpublished data

Sedlec, protected area Slanisko u Nesytu, 48°46'30.68"N, 16°41'49.12"E (7266), 19.8.2006, one singing male along the road at railway station;

Lanžhot (Doubravka), 48°42'0.17"N, 16°55'45.12"E (7367), 19.8.2006, 2/1, leg., det. et coll. J.Holuša; 5.9.2006, no singing male, observ. Holuša et Kočárek;

Lanžhot (Křenová alej), 48°41'42.58"N, 16°57'25.26"E (7367), 19.8.2006, one singing male at forest road, observ. J.Holuša; 5.9.2006, 1/0, leg., det. et coll. P. Kočárek.

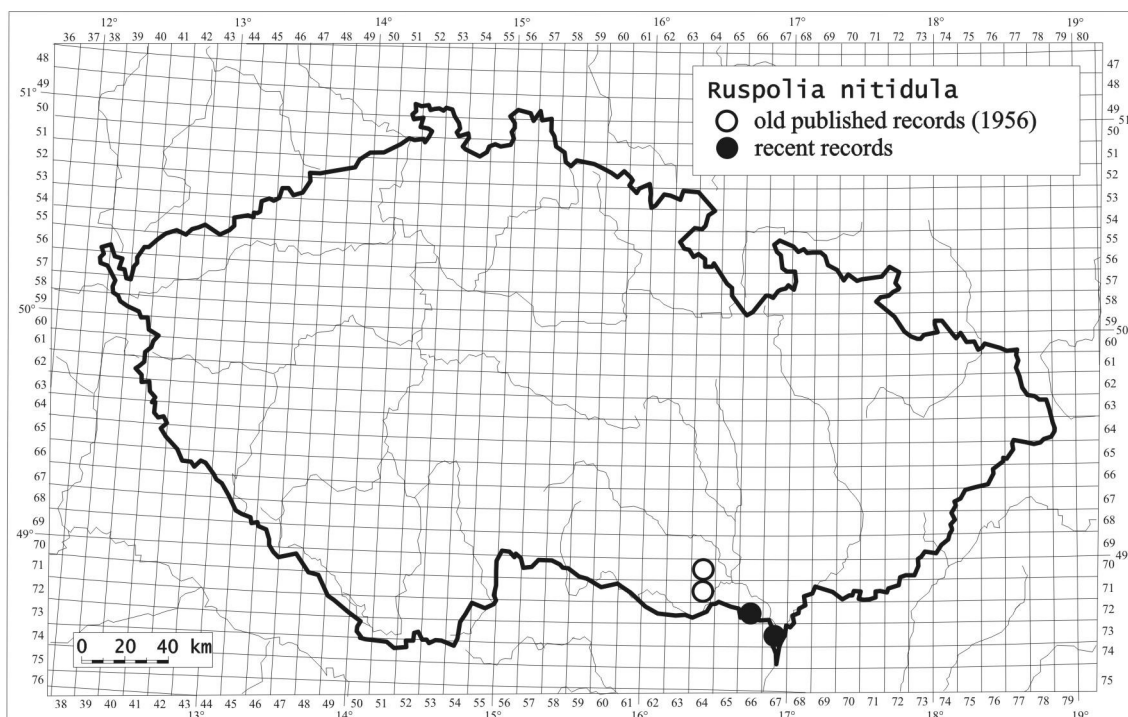


Fig. 1: Occurrence of *Ruspolia nitidula* in the Czech Republic

Mecostethus parapleurus (Hagenbach, 1822)

M. parapleurus is a Eurosiberian species distributed from the Pyrenees, central and southern Europe (as far as Germany and Poland in the north) to Siberia, N China, Korea and Japan. *M. parapleurus* is a thermophilous and moderately to strongly hygrophilous species; it inhabits wet meadows, salt marshes etc. (KOČÁREK et al. 2005). In the Czech Republic, only old records with data for the Pavlovské vrchy hills (GINTER 1951, 1971), Čejč (GINTER 1951) and Komorní Lhotka (HETSCHKO 1928) are known. It has not been observed in the Czech Republic since 1948 (see below), so CHLÁDEK (1995) considered this species as vulnerable. It became extinct in the surroundings of Komorní Lhotka, and now there are no suitable habitats for this species (HOLUŠA 2000). The locality is situated near the edge of the range in Poland, where the species also became extinct due to the loss of suitable habitats (GLOWACINSKI & NOWACKI 2004). Similarly, there are no wet meadows in the surroundings of Čejč and on the foot of

the Pavlovské vrchy hills. Based on this data we suggested that this species should have been considered regionally extinct in the Czech Republic (HOLUŠA & KOČÁREK 2005).

In 2006, we found an abundant population on wet meadows south of Lanžhot village, which was not a surprise because of the presence in the Borská nížina lowland in Slovakia (GAVLAS 2002) and in Lower Austria (KARNER et al. 1992).

This occurrence is probably recent because of a negative survey in 2002 (August 3, September 26) at the same place. It is possible that the occurrence will be followed by a further increase of *M. parapleurus* abundance. Due to the lack of suitable habitat and management in the Czech Republic, however, this species should be classified as critically endangered.

Published data

Komomí Lhotka (6377), 25.8.1920, 2 ex. (HETSCHKO 1928), 0/1, leg. Hetschko, coll. Slezské zemské museum Opava, revid. Holuša;

Čejč (7067), 16.8.1947, 2/1 (GINTER 1951), 2/0, leg. O. Ginter, coll. Muzeum jihovýchodní Moravy Zlín, revid. J. Holuša;

Pavlovské vrchy hills (7165-66), 12.8.1948, 0/1 (GINTER 1951), leg. O. Ginter, coll. Muzeum jihovýchodní Moravy Zlín, revid. J. Holuša.

Unpublished data

Lanžhot (Košárské louky and Pláky grasslands), 48°38'25.71"N, 16°55'55.87"E (7367), 5.9.2006, 3/2, leg., det. et coll. J.Holuša; 20.9.2006, 2/1, leg., det. et coll. P. Marhoul;

Lanžhot (pond near ground elevation 153,9 m asl known as Melambon), 48°40'34.45"N, 16°55'26.76"E (7367), 20.9.2006, observ. P. Marhoul;

Lanžhot (castle Lány), 48°42'39.02"N, 16°55'9.41"E (7267), 20.9.2006, observ. P. Marhoul.

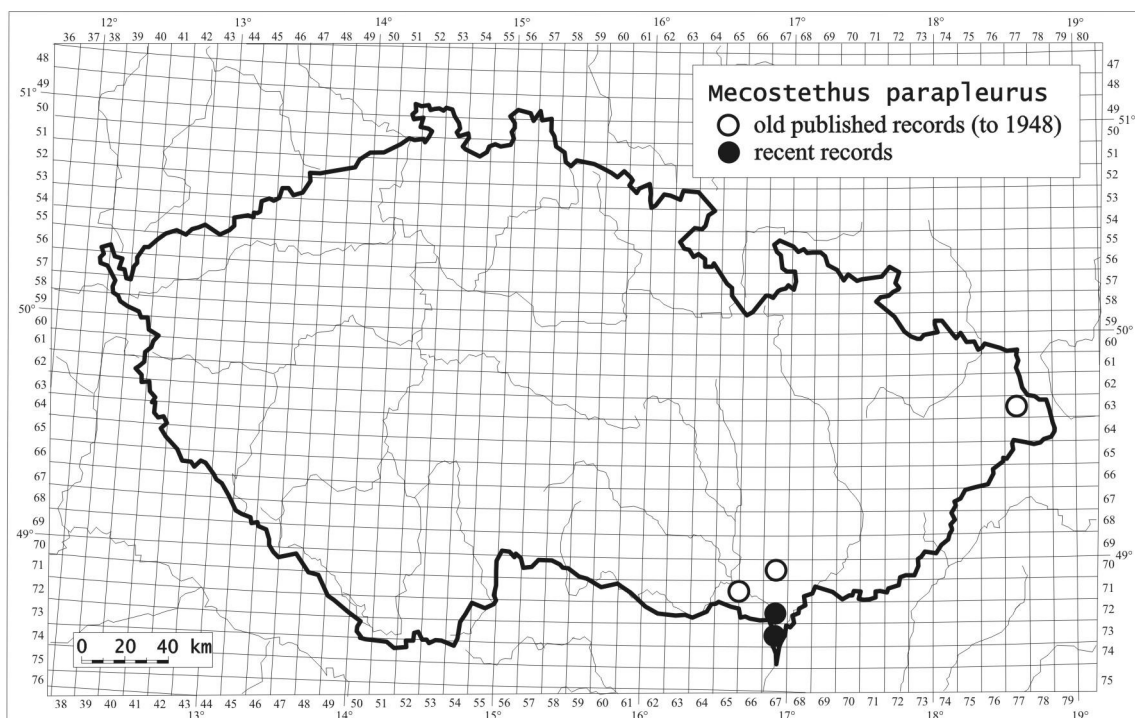


Fig. 2: Occurrence of *Mecostethus parapleurus* in the Czech Republic

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