Geographic Distribution of *Isophya pienensis* in the Romanian Carpathians (Insecta: Orthoptera: Tettigoniidae)

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Abstract. *Isophya pienensis* Mařan, 1952 is a mesophytic bush-cricket occurring in Romania, western Ukraine, southeastern Poland, Slovakia, northeastern Hungary and a few isolated localities in the Czech Republic and Austria (Chobanov et al., 2016). Species distribution in the Romanian Eastern Carpathians and Apuseni Mountains is reviewed, based on literature and personal data.

Key words: *Isophya pienensis*, distribution, Romanian Carpathians.

One of the richest in species phaneropterinae genera, *Isophya* Brunner von Wattenwyl is the most problematic taxa regarding its species-level taxonomy (Heller et al., 2004; Chobanov et al., 2013): the lacking of internal sclerotized male genital organs makes the identification of sympatric *Isophya* species difficult, yet not impossible when studying the diverse rhythmic structures of male song and their species-specific acoustic mating recognition system (Orci et al., 2005; Orci, 2007; Orci et al., 2010; Heller et al., 2015; Iorgu et al., 2017).

Isophya pienensis inhabits montane meadows with herbaceous vegetation, shrublands with *Rubus idaeus* and forest clearings and edges. With a severely fragmented population, the species is listed as Near Threatened (NT) in the IUCN Red List, the known area of occupancy (AOO) being estimated to be between 300–1.500 sqkm (Chobanov et al., 2016).

In Romania, the bush-cricket *Isophya pienensis* occurs in the central and northern areas of Eastern Carpathians and in a small region in Apuseni Mountains (Iorgu, 2012). During recent field surveys conducted in the Romanian Carpathians, *I. pienensis* was recorded in 38 localities, most of these previously unknown (Fig. 1). These findings highlight the need for further surveys in Romania, completing the gaps in orthopterans geographic distribution.

Material. Personal data: Breaza, 47.64°N 25.31°E, 2011.06.27; Izvoarele Sucevei, 47.76°N 25.21°E, 2011.06.27; Borsec pass, 46.96°N 25.49°E, 2011.06.30; Bistricioara, 47.05°N 25.94°E, 2011.07.01; Bradu, 47.01°N 25.85°E, 2011.07.01; Abrud, 46.29°N 23.07°E, 2011.07.08; Roșia Montană, 46.31°N 23.15°E, 2011.07.09; Baia Mare, 47.68°N 23.58°E, 2012.06.07; Dorna Candrenilor, 47.36°N 25.29°E, 2012.06.15; Hășmașu Mare, 46.69°N 25.83°E, 2012.07.12; Sfânta Ana lake, 46.12°N 25.9°E, 2012.08.06; Săpânța, 47.98°N 23.72°E, 2013.06.19; Farcău Mountains, 47.87°N 24.44°E, 2013.06.19; Poienile de sub Munte, 47.82°N 24.49°E, 2013.06.20; Gutâi Mountains, 47.7°N 23.84°E, 2013.06.20; Băile Borșa, 47.7°N 24.71°E, 2014.07.30; Praid, 46.57°N 25.19°E, 23.06.2015; Satu Mare, 46.34°N 25.43°E, 2015.06.23; Munticelu Mountains,

Fig. 1 – Geographic distribution of *Isophya pienensis* in the Romanian Carpathians. Red circles – personal records; blue squares – literature data (other authors, see text).

46.85°N 25.83°E, 2015.08.08; Ilva Mică, 47.26°N 24.67°E, 2017.06.16; Șicasău, 46.51°N 25.44°E, 2017.06.17; Cașin pass, 46.2°N 25.98°E, 2017.06.17; Sântimbru Băi, 46.28°N 25.75°E, 2017.06.19; Mușat pass, 45.96°N 26.39°E, 2017.06.19; Valea Mare, 47.48°N 25.01°E, 2017.06.24; Valea Mare, 47.48°N 24.98°E, 2017.06.24; Anieș, 47.51°N 24.75°E, 2017.06.24; Telciu, 47.41°N 24.39°E, 2017.06.25; Șetref pass, 47.6°N 24.42°E, 2017.06.25; Săcel, 47.62°N 24.49°E, 2017.06.25; Bocicoel, 47.69°N 24.3°E, 2017.06.25; Rozavlea, 47.75°N 24.21°E, 2017.06.25; Șugău, 47.87°N 23.85°E, 2017.06.26; Mara, 47.77°N 23.79°E, 2017.06.26; Dorna Candrenilor, 47.37°N 25.27°E, 2017.07.05; Cârlibaba, 47.56°N 25.15°E, 2017.07.05; Cotârğași, 47.28°N 25.76°E, 2017.07.05; Săvinești, 47.14°N 25.89°E, 2017.07.05.

Literature records (other authors): Baia Borşa (Kis, 1964); Țibleş Mountains, Rodnei Mountains, Sovata, Borsec, Harghita, Tuşnad (Kis & Vasiliu, 1970); Săpânța, Mara, Gutâi pass, Poienile de Sub Munte (Szövényi & Orci, 2008).

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