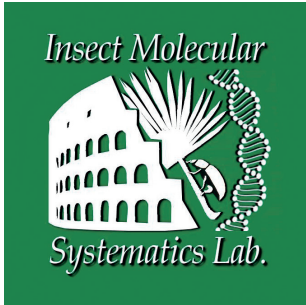




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First record of *Pison koreense* (Radoszkowski, 1887) from Italy (Hymenoptera: Apoidea, Crabronidae)Maurizio MEI^{1,*}, Andree CAPPELLARI²¹Department of Biology and Biotechnology “Charles Darwin”, Sapienza University of Rome, Piazzale A. Moro 5, I-00185 Rome, Italy - maurizio.mei@uniroma1.it²Department of Agronomy, Food, Natural resources, Animals and Environment (DAFNAE), University of Padua, Via dell'Università 16, I-35020 Legnaro (Padua), Italy - andree.cappellari@phd.unipd.it

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Abstract*Pison koreense* (Radoszkowski), an alien crabronid native of East Asia but introduced in North America and in Germany, was collected for the first time in Italy (Veneto).**Keywords:** alien species, Crabronidae, Veneto, pan traps.

In spring and summer 2020, we conducted a pan trap sampling for a project aimed to evaluate the effect of sunflower plantations on pollinator communities at the landscape level. Field work was carried out in the Padua and Vicenza provinces (Veneto, Italy), in an anthropized, agricultural environment dominated by soybean, cereal, maize and sunflower crops. We selected about 150 sampling sites in 14 landscapes. For each of the three sampling rounds in each site, three pan traps (one yellow, one blue, and one white) filled with water and soap were placed on the ground and left outside for 48h.

One female specimen of the crabronid *Pison koreense* (Radoszkowski, 1887) (Fig. 1) was found in a pan trap at Villanova di Camposampiero (Padua), 45,51109788 – 11,97614651, on 25-27.VI.2020. The pan traps were placed on the roadside, near an abandoned farmhouse. We cannot trace which coloured pan trap collected the specimen, as the material from all three traps was placed in the same vial filled with 70% ethanol.

Pison koreense is a species native of Korea, Japan, China and Russian Far East, and was introduced after World War II into Northeastern America (Krombein 1958), where it is now fairly widespread (Antropov 1994; Pulawski 2021). Recently, it has been recorded for the first time in Europe, based on a single male collected with a pan trap in Heidelberg (Germany) (Schmidt 2017).

Remarks. *Pison koreense* is the only representative of the “agile species group” of *Pison* Jurine, 1808 to be found in Europe. It is readily distinguishable among the other four European and Mediterranean species by the strong-

ly pubescent eye, the clavate antenna, the forewing with only 2 submarginal cells, and the very small size (body length of our specimen is 6 mm) (Fig. 1). The abdominal terga are finely punctate, but the surface of tergum 1 is also microsculptured and dull, contrasting with the smooth surface of the following terga (De Beaumont 1961; Bitsch et al. 2007).

The nesting behaviour and prey preferences of this crabronid have been studied both in its native range (Iwata 1964; Antropov 1994) and in the U.S.A. (Sheldon 1968). *Pison koreense* females build small (length 6-10 mm) and

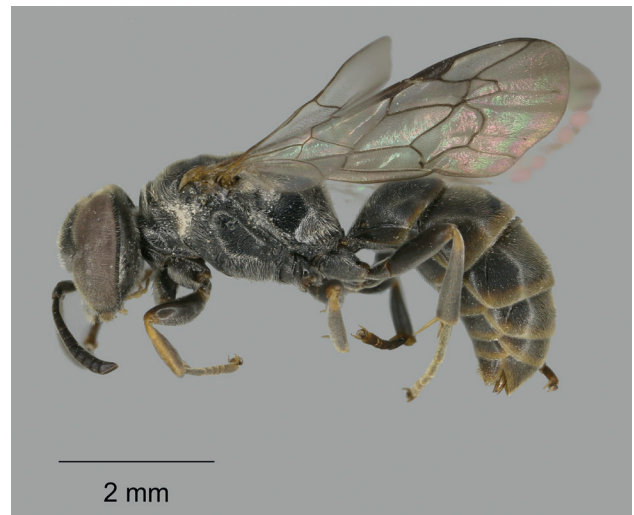


Fig. 1 – *Pison koreense* (Radoszkowski, 1887), female from Villanova di Camposampiero (Padua, Italy): lateral habitus.

delicate mud cells, that are sheltered, separately or in small groups, in a depression or a crevice of a suitable place (so far, all the studied nests have been found on human artifacts: walls, bridges, roofs, sheds, tanks). As is characteristic for the genus, *P. koreense* females provision their cells with small spiders.

Three *Pison* species were already known from Italy (Pagliano & Negrisola 2005; Di Giovanni & Mei 2012), and the present finding is the first record of this alien species. As for the German record (Schmidt 2017), it is not possible to establish whether this is an occasional introduction or *P. koreense* is already naturalized with a stable population in the study area, even if we believe the second hypothesis more likely. As it is difficult to notice and identify such a small and inconspicuous wasp in the field, it is quite possible that its presence in the area, or elsewhere, has so far gone unnoticed. Mud nests should be easier to locate and recognize, and this should be considered for future research aiming to assess the status of *P. koreense* in Italy.

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