

MICHALINA KIJOWSKA, AGATA SZWARC, FRANÇOIS LEFEBVRE, THIERRY ALEZINE, XAVIER CHEVILLOT, FLORIAN MALARD, CHRISTOPHE DOUADY, ANNA WYSOCKA & TADEUSZ NAMIOTKO

NEW STYGOBITIC OSTRACOD SPECIES OF THE GENUS
CANDONOPSIS (CANDONIDAE) FROM INTERSTITIAL WATERS
OF NOUVELLE-AQUITAINE, FRANCE

The subfamily Candoninae, one of the most species-rich lineages of non-marine Ostracoda, includes now about 550 extant species across more than 50 genera classified in seven tribes (MEISCH *et al.*, 2019). The tribe Candonopsini is usually distinguished on the basis of the absence of posterior seta on the caudal ramus, but due to the frequent reductions of setae and claws in a number of various candonid species, to correctly diagnose Candonopsini this feature must be considered carefully and in concert with other morphological traits (carapace shape, elongation of terminal segments of mandibular palp, chaetotaxy of the cleaning leg or the male clasping organs and hemipenis morphology) (HIGUTI & MARTENS, 2012), and if only possible supplemented with molecular data in integrative taxonomy. In general, the proper assignment of a new candonid species to the tribe and genus remains often challenging due to considerable homoplasy frequently occurring in this group.

The genus *Candonopsis* Vávra, 1891 is the type genus of the tribe Candonopsini and comprises 33 recent species classified in two subgenera (MEISCH *et al.*, 2019): *Abcandonopsis* Karanovic, 2004 with seven species restricted to Australia (KARANOVIC, 2004) and *Candonopsis* with 25 species. Although the nominotypical sugenus has a worldwide distribution, most species occur in the Southern Hemisphere (KARANOVIC & MARMONIER, 2002; KARANOVIC, 2012). Of the six species known from Europe, two are epigeal and four hypogean (SCHÄFER, 1945; DANIELOPOL, 1980; KARANOVIC & PETKOVSKI, 1999; MEISCH, 2000).

In this study, we describe a new species of the subgenus *Candonopsis* from male and female individuals collected from hyporheal of three rivers within the catchment of the Dordogne-Garonne Rivers in the Corrèze

Department of Nouvelle-Aquitaine in central France. The samples were taken following the protocol of the PASCALIS project (MALARD *et al.*, 2002). The newly identified species based on morphological evidence differs from other members of the genus by its unique carapace shape and also the structure of the male copulatory organs (mainly shape of the inner lobe of the hemipenis). Additionally, phylogenetic analysis based on cytochrome oxidase subunit I mitochondrial gene (COI mtDNA) and a nuclear region (28S rDNA nDNA) provided further support for the differentiation of the new species, which formed a distinctly separate clade, yet with the closest relationship with *Candonopsis kingsleii* (Brady & Robertson, 1870), the other species of the genus used in our genetic analysis.

The present study underscores the significance of employing an integrative approach, which combines the analysis of carapace, morphology of limbs (soft-body) as well as molecular data, to accurately characterize the biodiversity of groundwater ostracods.

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Authors' Addresses – M. KIJOWSKA, A. SZWARC, A. WYSOCKA, T. NAMIOTKO, Department of Evolutionary Genetics and Biosystematics, Faculty of Biology, University of Gdańsk, Wita Stwosza 59, 80-308 Gdańsk, Poland, michalina.kijowska@ug.edu.pl; agata.szwarc@ug.edu.pl; anna.wysocka@ug.edu.pl; tadeusz.namiotko@ug.edu.pl; F. LEFEBVRE, Sepanso Aquitaine, 4 Rue de Polverel, 19100 Brive-la-Gaillarde, France, francois.lefebvre@sepanso.org; T. ALEZINE, X. CHEVILLOT, Sepanso Aquitaine, 1 Rue de Tausia, 33800 Bordeaux, France, thierry.alezine@sepanso.org; xavier.chevillot@sepanso.org; F. MALARD, C. DOUADY, Lehna, University of Lyon 1, Rue Raphaël Dubois, 69622 Villeurbanne Cedex, France, florian.malard@univ-lyon1.fr; christophe.douady@univ-lyon1.fr