

FIVE NEW *LUTICOLA* SPECIES FROM ULU PENINSULA (JAMES ROSS ISLAND, NW WEDDELL SEA, ANTARCTICA)

Kateřina Kopalová¹, Linda Nedbalová^{1,2}, Myriam de Haan³ & Bart Van de Vijver³

¹Charles University in Prague, Faculty of Science, Department of Ecology, Viničná 7, 128 44 Prague 2, Czech Republic (k.kopalova@hotmail.com)

²Academy of Sciences of the Czech Republic, Institute of Botany, Section of Plant Ecology, Dukelská 135, CZ-37982 Třeboň, Czech Republic

³National Botanic Garden of Belgium, Department of Bryophyta & Thallophyta, Domein van Bouchout, B-1860 Belgium

During a survey of the non-marine diatom flora from lakes on Ulu Peninsula, a large ice-free area in the northern part of the Antarctic James Ross Island (Maritime Antarctic Region), a large number of species belonging to the genus *Luticola* has been found. Most of the observed taxa show a restricted Antarctic distribution. Five of them could not be identified based on the currently available literature and have been described as new taxa (Kopalová et al. 2011). *Luticola desmetii* Kopalová & Van de Vijver sp. nov. is a rather large, sturdy species with a clearly rhomboid valve outline and distinct capitate apices. *L. doliaeformis* Kopalová & Van de Vijver sp. nov. has a distinct axial and central area. *L. permuticopsis* Kopalová & Van de Vijver sp. nov. belongs to the group of capitate taxa related to *L. muticopsis* (Van Heurck) D.G. Mann but based on its higher number of areolae, its raphe structure and its more symmetrical valve outline, the species cannot be confused with any other taxon of this complex. *L. tomsui* Kopalová sp. nov. is one of the rare *Luticola* taxa with a constricted valve outline. Finally, *L. evkae* Kopalová sp. nov. is a small, delicate species with a large axial area and a reduced number of areolae per stria. Detailed morphology descriptions of these taxa are given based on both light (LM) and scanning electron microscopy (SEM). The morphological features of each taxon have been compared with similar taxa and notes on the ecology of the species have been added.

References:

Kopalová, K., Nedbalová, L., de Haan, M. & Van de Vijver, B. (2011). The genus *Luticola* (Diadesmidaceae) in lakes of James Ross Island (Maritime Antarctic Region) with the description of five new species. *Phytotaxa* (in press).

POSTER