

1 Conference Proceedings Paper

2 The role of springs in maintaining the biodiversity of 3 freshwater algae

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10 **Abstract:** Springs are globally abundant. They are classified according to many typologies
11 primarily due to the combination of a very diverse geological formation and hydrology of
12 their area. In hydrobiological research the most important are the type of a niche, water
13 quality and catchment area. The high diversity of these parameters is reflected in a broad
14 range of spring habitats and a development of different algae communities.

15 The aim of the presentation is to report the springs as a refuge for freshwater algae. The
16 presence of many rare, endangered and new to science taxa has been documented in many
17 springs. Diatoms are amongst the most common and abundant organisms. The diatom flora
18 of springs in Europe has been extensively studied for over 200 years and is therefore the
19 best recognized in the world. The most studies on algae occurring in the springs, however,
20 were limited to upland and mountain areas. In the case of Poland, the researchers also
21 focused on such areas. The results of my research on diatom assemblages in the lowland
22 springs of north-eastern Poland confirm the important role of the springs in maintaining the
23 biodiversity.

24 Alongside cosmopolitan and widespread species, many rare ones have been described.

25 Among them were *Navicula striolata* (Grunow) (Lange-Bertalot 1985), *Cocconeis*
26 *pseudothumensis* E. (Reichardt 1982), *Diploneis krammeri* (Lange-Bertalot & E. Reichardt
27 2000), and *Diploneis alpina* (F. Meister 1912) which was first recorded for Poland.

28 **Keywords:** springs, algae, diatom assemblages, rare taxa
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