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## **ABSTRACTS OF THE 23<sup>rd</sup> MEETING OF THE GROUP OF EUROPEAN CHAROPHYTOLOGISTS (GEC)**

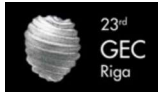
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## Diversity and ecology of charophytes in Vojvodina (Serbia) along the gradient of salinity

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**Key words:** charophytes, chlorophyll *a*, conductivity distribution, diversity, ion composition, nutrients.

In 2021 a charophyte survey was conducted in the southern part of the Carpathian Basin, the Vojvodina province (Serbia). We investigated 14 waterbodies that were different in origin (natural, natural degraded, artificial) and were chosen along the gradient of salinity. Furthermore, waterbodies were characterized according to their ion composition: cations (potassium, sodium, calcium, magnesium) and anions (carbonate, bicarbonate, chloride, sulfate). Several other environmental parameters were investigated, such as temperature, pH, conductivity, nutrient content (ammonia, nitrites, nitrates, total phosphorus) and chlorophyll *a*. A gradient of salinity, calculated from electrical conductivity (Boros et al. 2013), ranged from freshwater to mesosaline (Hammer 1986). Magnesium was the dominant cation in seven waterbodies, frequently in combination with calcium, while sodium prevailed in three waterbodies. Bicarbonate made up a major portion of anions in nine, sulfate in three, and chloride in two waterbodies. Altogether, seven charophytes species were found: *Chara canescens*, *Chara tenuispina*, *Chara connivens*, *Chara vulgaris*, *Chara globularis*, *Chara hispida* and *Chara papillosa*. All species were found in subsaline waters, except *C. papillosa*, found only in freshwaters. Only three species, *C. tenuispina*, *C. vulgaris* and *C. canescens*, were found in hyposaline waters. We found no charophytes in mesohaline

waters. Extremely rare male individuals of *C. canescens* were found in Pečena Slatina, a natural saline pond. This species showed a preference for hypertrophic and alkaline hyposaline aquatic habitats, with a different pattern of ionic predominance (sodium, magnesium, sulfate, bicarbonate, chloride). All species but *C. connivens* and *C. papillosa* were found in eutrophic waters. In addition, two species, *C. hispida* and *C. canescens*, showed tolerance to higher values of nitrates (> 3 mg L<sup>-1</sup>). In conclusion, we could state that inland saline habitats, despite their high productivity, represent important habitats for charophytes, especially for rare species such as *C. canescens* and *C. tenuispina*.

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