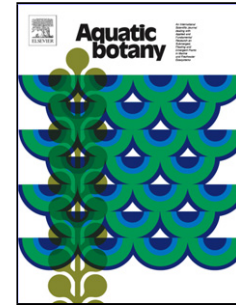


Accepted Manuscript

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PII: S0304-3770(17)30225-5
DOI: <https://doi.org/10.1016/j.aquabot.2018.01.007>
Reference: AQBOT 3013

To appear in: *Aquatic Botany*

Received date: 20-7-2017
Revised date: 28-1-2018
Accepted date: 31-1-2018

Please cite this article as: Sviben, Sanja, Kepčija, Renata Matoničkin, Vidaković-Cifrek, Željka, Perić, Mirela Sertić, Kružić, Petar, Popijač, Aleksandar, Primc, Biserka, *Chara* spp. exhibit highly heterogeneous light adaptation, calcite encrustation and epiphyton patterns in a marl lake. *Aquatic Botany* <https://doi.org/10.1016/j.aquabot.2018.01.007>

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Title

Chara spp. exhibit highly heterogeneous light adaptation, calcite encrustation and epiphyton patterns in a marl lake

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HIGHLIGHTS

- *Chara* calcite encrustation decreases with water depth and is higher in *C. subspinoso* than in *C. globularis*.
- Photosynthetic pigments differ between upper and lower thallus parts and between depths.
- Pigment ratios increase with depth indicating specific light adaptations.
- Excessive calcite encrustation negatively affects protozoans and micro-metazoans in epiphyton.

Abstract

The aim of this work was to determine the relationships between calcite encrustation, photosynthetic pigments and the epiphyton community of upper and lower thallus parts of *Chara* spp. from different depths of a marl lake (Lake Prošće, NP Plitvice Lakes, Croatia). Samples were taken from two *Chara* species, spread across three lake depths (*Chara subspinoso* at 1 and 5 m, and *Chara globularis* at 10 m), and analysed spectrophotometrically for photosynthetic pigment (chlorophyll *a*, chlorophyll *b* and total carotenoids) composition, and gravimetrically for

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