

## Structural Features of Unicellular Desmids (Desmidiales) when Examined in a Scanning Electron Microscope

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We have demonstrated the possibility of using scanning electron microscopy methods for studying the morphology and ornamentation of the cell wall of unicellular species of desmid algae (Charophyta, Zygnematomyceae). Scanning electron microscopy was used to confirm and refine the identification of taxa with 10 species as an example: *Cosmarium* sp., *C. anceps*, *C. granatum*, *C. nymannianum*, *C. pokornyanum*, *Euastrum bidentatum*, *E. crassicolle*, *E. luetkemuelleri*, *E. oblongum*, *Pleurotaenium ehrenbergii*.

The use of electron microscope enables a more subtle and qualitative study of the cell wall surface. We considered the difficulties arising when working with cells of desmids in scanning electron microscopy. Attention should be paid to the artifacts arising from the preparation of samples for the study of algae in scanning electron microscopy: mucus plugs and abundant accumulation of mucus on the cell surface, “molting” process and asymmetry in the development of the semicells.

**Keywords:** Charophyta, Zygnematomyceae, cell wall, morphology, taxonomy, scanning electron microscope

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