

ABSTRACT SUBMISSION

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The effect of water level fluctuation on the competition between different Sphagnum species.

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This poster shows preliminary results on the effect of different fluctuating water levels on the competition between Sphagnum species.

The water table plays a key role in the functioning of bog ecosystems, as it determines the cover and the species of Sphagnum occurring. Sphagnum species have their optimal habitat in different ranges of the water table depth; so called hollow species mainly occur at high water levels, while lawn and hummock species grow at respectively medium and low water levels.

To examine the competition between hollow and lawn species in relation to the water table, we designed an experiment in which large containers, filled with intact peat columns, were exposed to three different water level regimes. The main species in the columns were Sphagnum cuspidatum (hollow) and Sphagnum magellanicum (lawn). We present the results of the first year of our experiment that started in July 2003. Measurements have been done on the percentage cover of the different Sphagnum and vascular plant species and height growth of the Sphagnum. Since Sphagnum is a very slow growing species, and other experiments with Sphagnum have shown that short and long term effects can be very different, the experiment will not be harvested until September 2006.