



The development of mire vegetation and water table in primary succession

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Mires are globally important carbon storage and an essential element of northern nature. They are associated with high watertable levels and accumulation of peat. During the mire primary succession, the plant community changes from the early sedge and shore plant dominated communities towards the Sphagnum moss dominated bog communities.

Different successional stages of aapamires can be found in the land uplift area in the Finnish coast of the Gulf of Bothnia . From this landscape (64°45'N, 24°42'E) we selected a set of undisturbed mires varying in their terrestrial age to form a successional transect from the early stages near the coast to the more ombrothrophic stages in the inlands. We collected macrofossil and modern vegetation data from the transect to compare the preceding communities to the communities found today in the transect. The comparison will be made using multivariate analysis methods. The water table and vegetation of the mire transect will be calibrated with the paleodata to get data of the past levels of water table.

The questions we wanted to examine were: Can the successional stages in the mire transect be found in the macrofossil data? How has the water table changed during the succession? Are the changes in plant communities and water table rapid or do they evolve gradually? Is there a trend in the mire succession that can be seen in both the hollow and hummock surfaces of the mire.

The preliminary results of the study indicate that the fen-bog transition seems to be very rapid at least in the older parts of the transect. Before the transition there was a clear peak in *Eriophorum vaginatum* abundance.