



AnKliMoos

THE ROLE OF MOSSES ON WATER RETENTION, SOIL STABILITY AND CARBON STORAGE IN TEMPERATE FOREST SOILS

RESEARCH SITES



TÜ

Naturpark Schönbuch in Tübingen (TÜ)

- Annual average temperature: 8.7 °C
- Annual average precipitation: 760 mm
- Coniferous mixed forest
- Clayey loamy soils

Linde in Brandenburg (LI)

- Annual average temperature: 10.8 °C
- Annual average precipitation : 539 mm
- Pine forest
- Sandy soils



LI

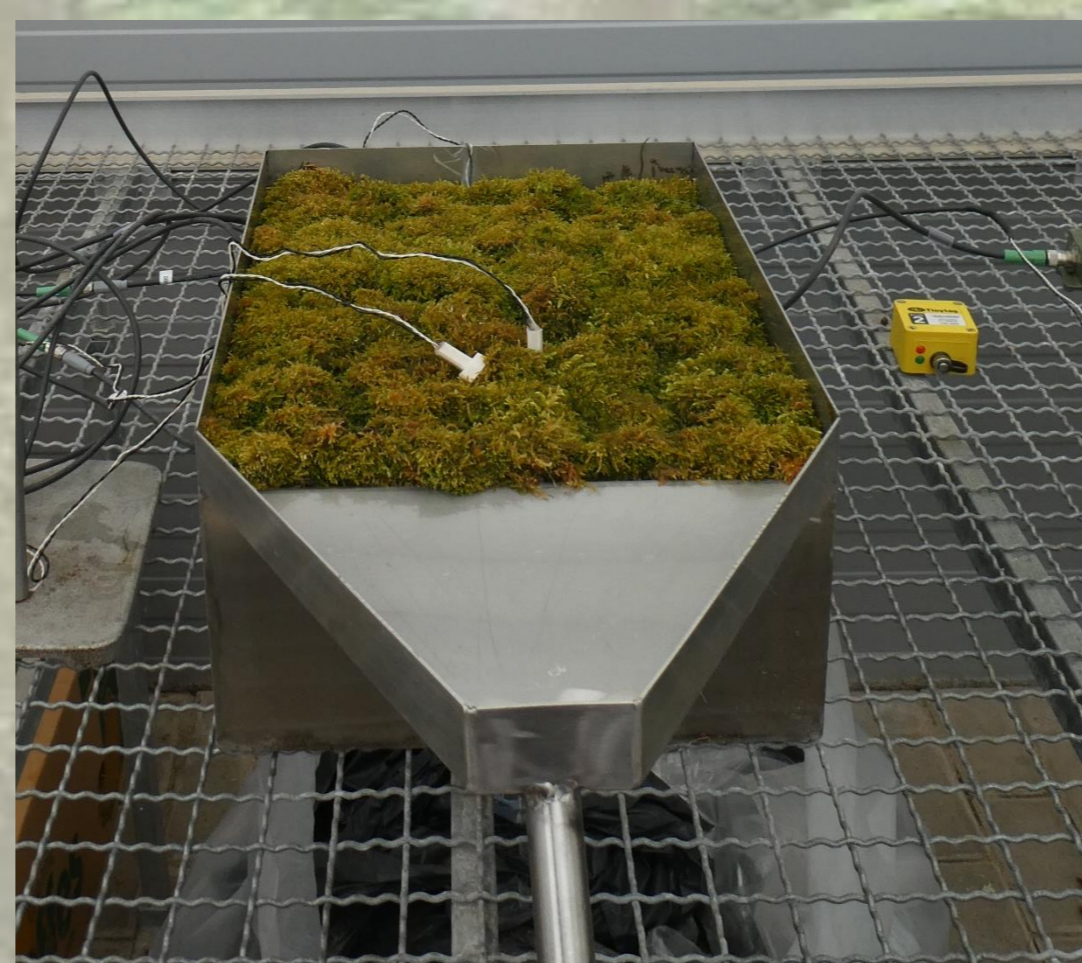
METHODOLOGY



Continuous measurement of climatic, hydrological and soil parameters



Rainfall simulation with different moss species



Lab experiments on water retention and evaporation

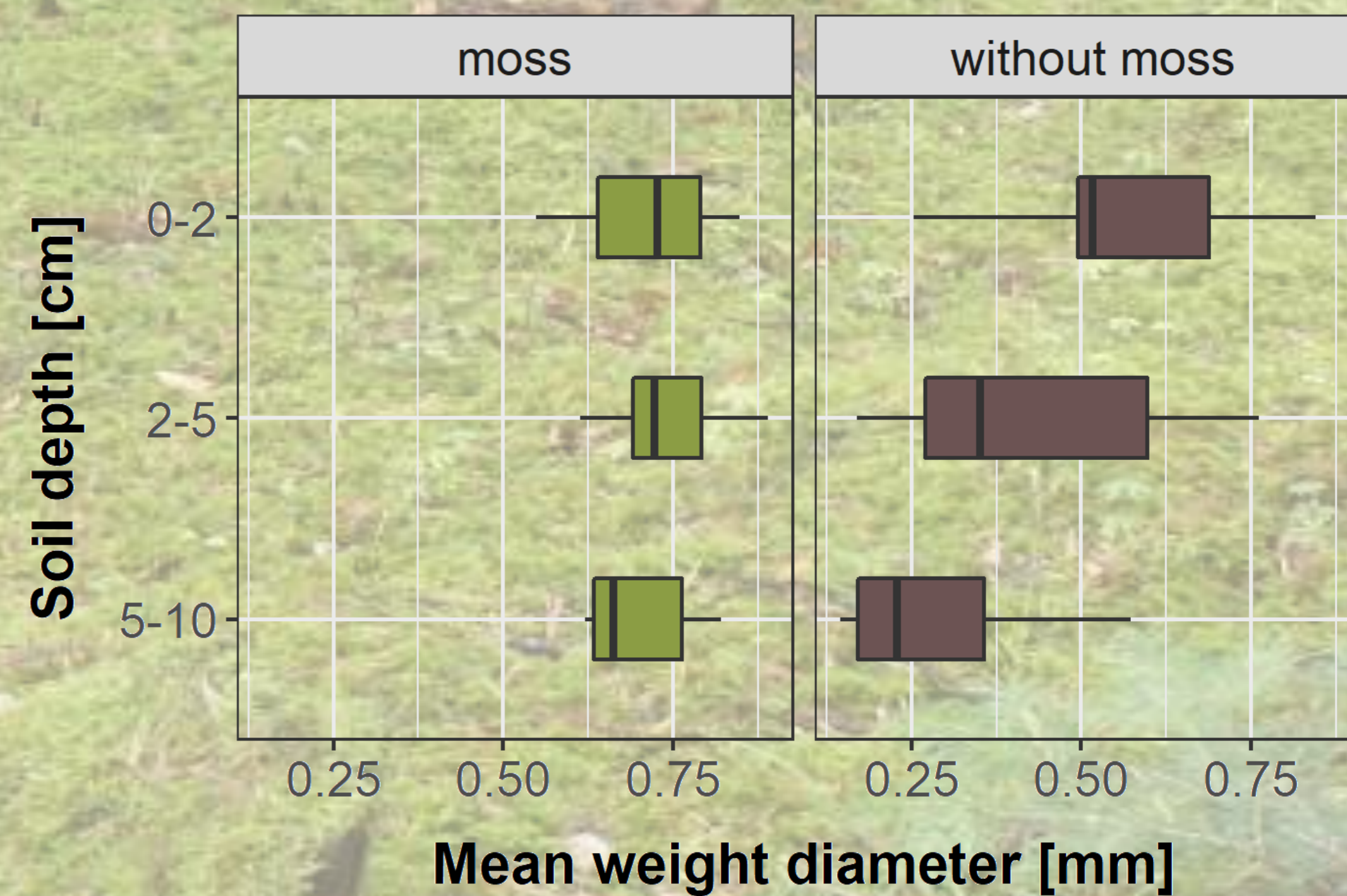
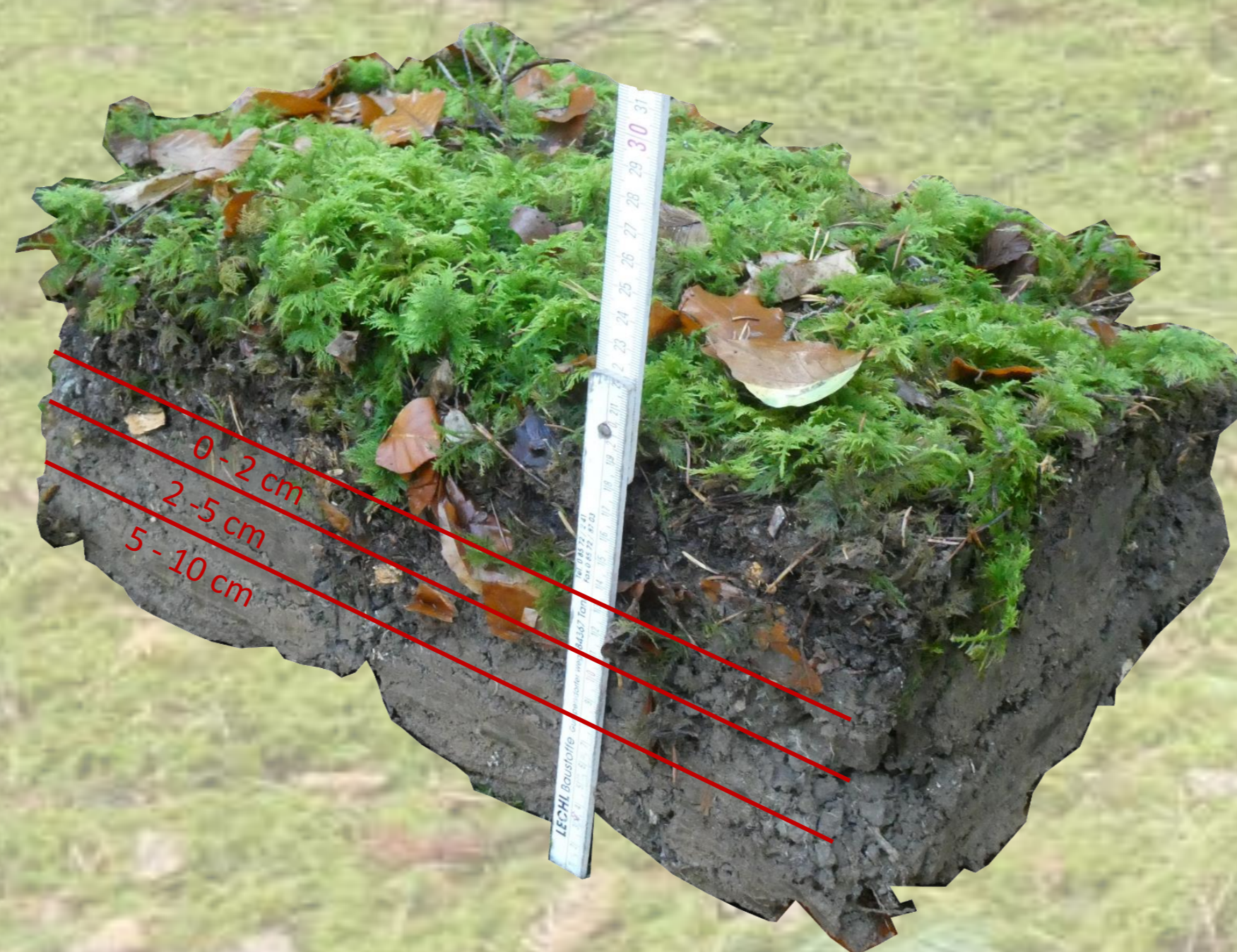
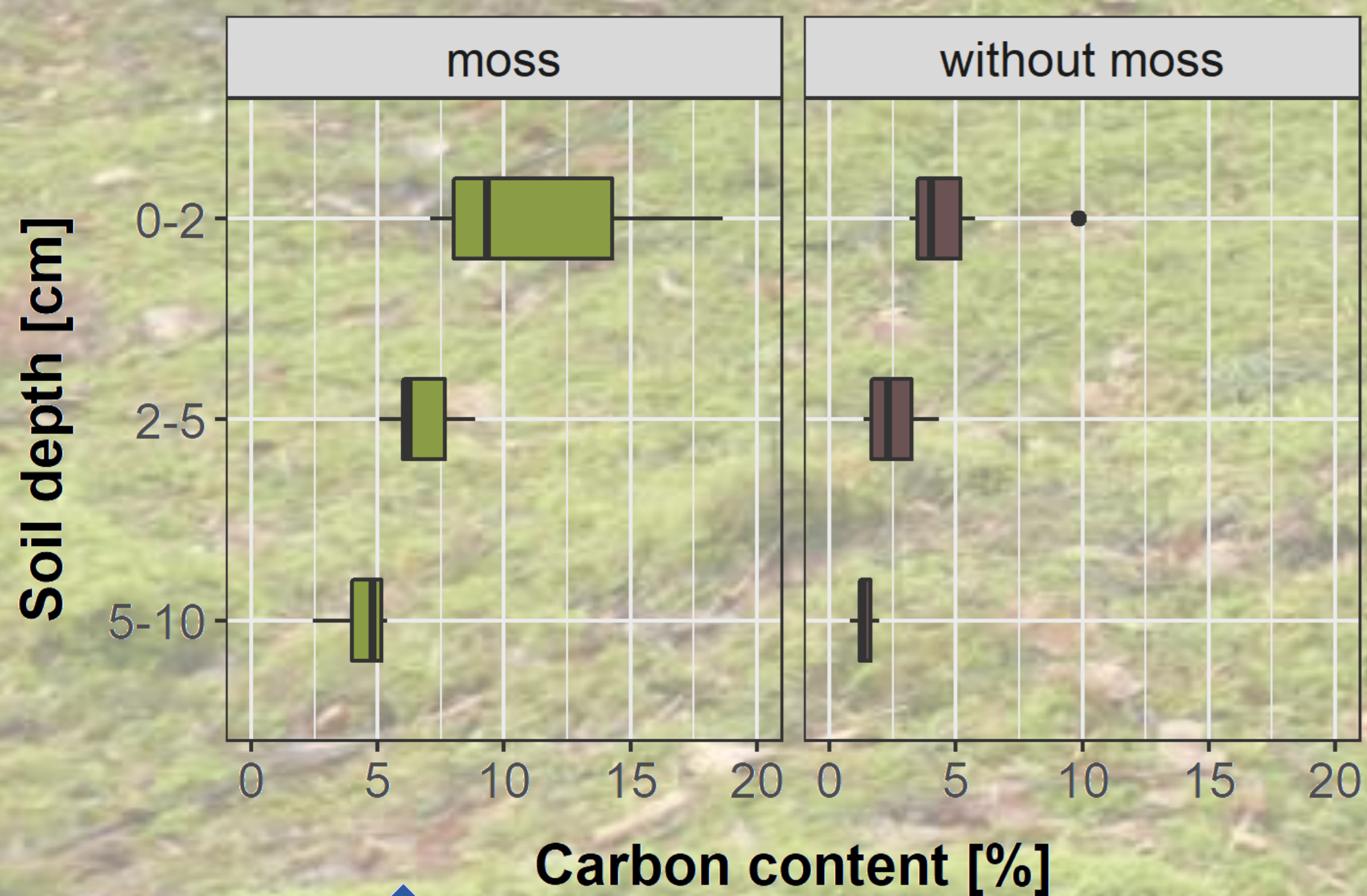


Microscopic studies of moss structural traits to determine effects on ecohydrology



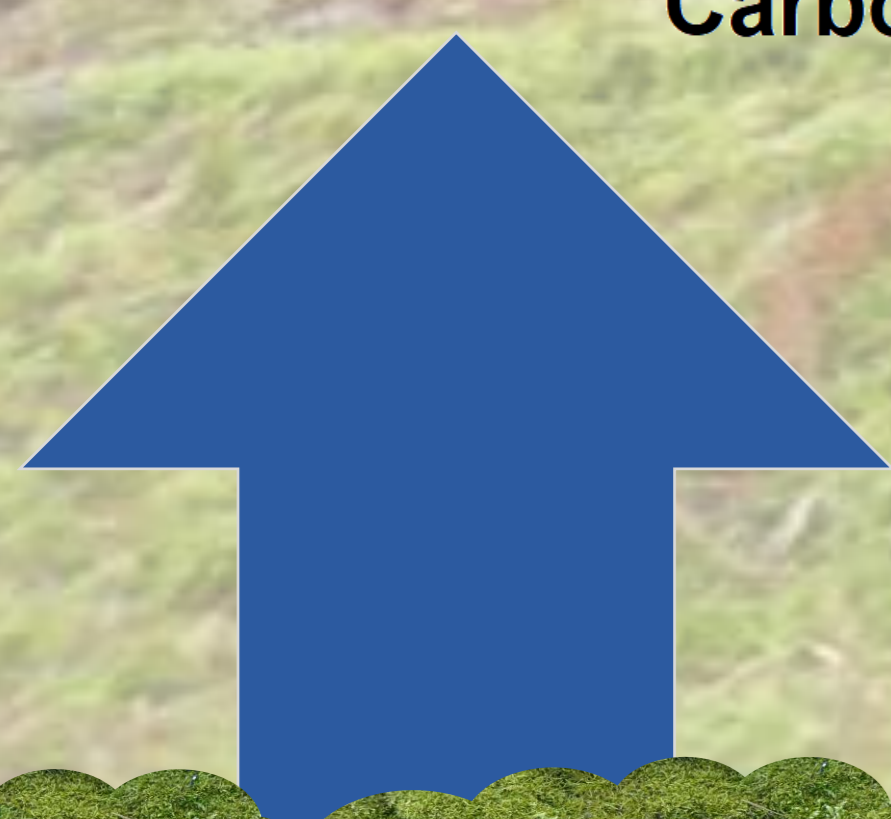
Cultivation of mosses

PRELIMINARY RESULTS FROM NATURPARK SCHÖNBUCH IN TÜBINGEN



Carbon content is 3.2 times higher under mosses than without mosses

MWD is 1.7 times higher under mosses than without mosses



H₂O



CO₂

MWD

How do mosses affect the soil water balance?

To what extent do mosses fix carbon in the soil?

What is the importance of mosses for soil structure?

What are the regional climatic differences?

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