

Carbon cycling at woody plants invaded calcareous pastures of Podgorski kras

a joint excursion of

5th SLOVENIAN SYMPOSIUM ON PLANT BIOLOGY with international participation, Ljubljana, September 6 – 9, 2010

and

COST FP 0803: Belowground carbon turnover in European forests. 2nd meeting: BELOWGROUND COMPLEXITY, Ljubljana, September 1 – 4, 2010

Transition of grasslands to forests influences many processes of the ecosystem such as water and temperature regime and the cycling of nutrients. Different components of carbon biogeochemical cycle strongly respond to woody plants encroachment and as a consequence the carbon balance of the invaded grasslands can drastically change.

In the frame of excursion we will present you research activities at Podgorski kras (SW Slovenia) where species-rich calcareous grasslands of the *Scorzoneretalia* order have been to a large extent invaded by shrubs of early succession stages and also tree species of mid- and late succession (e.g. *Quercus pubescens*). At these sites two research plots (»pasture«, »invaded site«) with two Eddy covariance towers were set up. Continuous micrometeorological measurements have now been run for two years. Beside a direct estimations of net ecosystem exchange (NEE), we are performing other measurements addressing different stages of carbon cycle. The results on biomass estimations, decomposition, soil analyses (including soil air $\delta^{13}\text{C}$) and soil respiration will be presented. The contribution of biogenic and geogenic CO_2 sources to CO_2 efflux will be discussed.



Scientific part of excursion will be followed by dinner at the restaurant in nearby village Podgorje specialized in venison food.

Bus transfer will be organized from Ljubljana.