

P21.

The decomposition of reed leaves in the Scheldt-estuary: spotlight on the Fungi

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The poster presents preliminary results on a decomposition-study of reed leaves (*Phragmites australis*) in one site (PQ 206, near 'Schor van Doel'). In a brackish reed stand leaves make about 25 % of the above-ground reed biomass, being an important organic pool in the Scheldt-ecosystem and a potential substrate for phragmiticolous fungi. Fungal species composition and fungal biomass (and also some abiotic factors, not presented here) were followed during decomposition in litterbags on the sediment of a reed belt. Fungal biomass was measured using ergosterol quantification. During the survey 40 fungal taxa were found to colonize the leaves from standing green – to standing dead – to litterleaf-stage. Succession and vertical preference of fungal species is demonstrated during growth and decomposition. Leaves, although abscised from the culms, have an important standing dead decomposition with high fungal diversity and biomass (599 μg ergosterol/ g leaf, n = 10 corresponding with ! 0.12 g fungus/ g leaf) just before abscission. Leaves were almost totally fragmented after a 10 month incubation on the sediment. With fungal crop ranging from 142 μg ergo/ g leaf to 346 μg ergo/ g leaf showing a steep decline in fungal crop after leaf abscission, a gradual recovery followed by a final decline towards the final stage. Despite the fact that a serious amount of fungal biomass is developed, less species seem to be adapted to colonize the litter leaves.